



Investing in Reproductive, Maternal, Newborn, Child, and Adolescent Health in Uganda

What Have We Learned, and
Where Do We Go from Here?

Julia Mensah, Stephen Kitembe Kiirya, Elizabeth Asege
Ekochu, Rogers Ayiko, Brendan Michael Hayes, Collins Chansa,
Richard Crabbe, and Marc DeFrancis, Editors



INTERNATIONAL DEVELOPMENT IN FOCUS

Investing in Reproductive, Maternal, Newborn, Child, and Adolescent Health in Uganda

What Have We Learned, and
Where Do We Go from Here?

JULIA MENSAH, STEPHEN KISEMBE KIIRYA, ELIZABETH ASEGE EKOCHU,
ROGERS AYIKO, BRENDAN MICHAEL HAYES, COLLINS CHANSA,
RICHARD CRABBE, AND MARC DeFRANCIS, Editors



WORLD BANK GROUP

© 2024 International Bank for Reconstruction and Development/The World Bank
1818 H Street, NW, Washington, DC 20433
Telephone: 202-473-1000; Internet: www.worldbank.org

Some rights reserved
1 2 3 4 27 26 25 24

Books in this series are published to communicate the results of World Bank research, analysis, and operational experience with the least possible delay. The extent of language editing varies from book to book.

This work is a product of the staff of The World Bank with external contributions. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent. The World Bank does not guarantee the accuracy, completeness, or currency of the data included in this work and does not assume responsibility for any errors, omissions, or discrepancies in the information, or liability with respect to the use of or failure to use the information, methods, processes, or conclusions set forth. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

Nothing herein shall constitute or be construed or considered to be a limitation upon or waiver of the privileges and immunities of The World Bank, all of which are specifically reserved.

Rights and Permissions



This work is available under the Creative Commons Attribution 3.0 IGO license (CC BY 3.0 IGO) <http://creativecommons.org/licenses/by/3.0/igo>. Under the Creative Commons Attribution license, you are free to copy, distribute, transmit, and adapt this work, including for commercial purposes, under the following conditions:

Attribution—Please cite the work as follows: Mensah, Julia, Stephen Kitembe Kiirya, Elizabeth Asege Ekochu, Rogers Ayiko, Brendan Michael Hayes, Collins Chansa, Richard Crabbe, and Marc DeFrancis, eds. 2024. *Investing in Reproductive, Maternal, Newborn, Child, and Adolescent Health in Uganda: What Have We Learned, and Where Do We Go from Here?* International Development in Focus. Washington, DC: World Bank. doi:10.1596/978-1-4648-1993-3. License: Creative Commons Attribution CC BY 3.0 IGO

Translations—If you create a translation of this work, please add the following disclaimer along with the attribution: *This translation was not created by The World Bank and should not be considered an official World Bank translation. The World Bank shall not be liable for any content or error in this translation.*

Adaptations—If you create an adaptation of this work, please add the following disclaimer along with the attribution: *This is an adaptation of an original work by The World Bank. Views and opinions expressed in the adaptation are the sole responsibility of the author or authors of the adaptation and are not endorsed by The World Bank.*

Third-party content—The World Bank does not necessarily own each component of the content contained within the work. The World Bank therefore does not warrant that the use of any third-party-owned individual component or part contained in the work will not infringe on the rights of those third parties. The risk of claims resulting from such infringement rests solely with you. If you wish to re-use a component of the work, it is your responsibility to determine whether permission is needed for that re-use and to obtain permission from the copyright owner. Examples of components can include, but are not limited to, tables, figures, or images.

All queries on rights and licenses should be addressed to World Bank Publications, The World Bank, 1818 H Street, NW, Washington, DC 20433 USA; e-mail: pubrights@worldbank.org.

ISBN: 978-1-4648-1993-3
DOI: 10.1596/978-1-4648-1993-3

Cover photo: © Irfan Quader / iStock. Used with permission; further permission required for reuse.
Cover design: Debra Naylor / Naylor Design.

Contents

<i>Foreword</i>	<i>ix</i>
<i>Acknowledgments</i>	<i>xi</i>
<i>About the Editors and Authors</i>	<i>xv</i>
<i>Introduction and Summary of Studies</i>	<i>xxiii</i>
<i>Abbreviations</i>	<i>xxxix</i>

PART I SERVICE DELIVERY

CHAPTER 1	Assessment of the Functionality of Health Center IV Facilities in Uganda and Suggestions for Improvement	3
	Executive summary	3
	Introduction	7
	Methodology	11
	Key findings	15
	Recommendations	25
	References	27
CHAPTER 2	Review of the RMNCAH Referral Pathway in Rural and Urban Settings in Uganda	29
	Executive summary	29
	Introduction	32
	Methodology	35
	Findings	41
	Recommendations	47
	References	52
CHAPTER 3	Assessment of the Implementation of Maternal and Perinatal Death Surveillance and Response in Uganda	55
	Executive summary	55
	Introduction	58
	Methodology	61
	Findings	64
	Recommendations	75
	Annex 3A Maternal and perinatal death surveillance and response model	77
	References	79

CHAPTER 4	Coverage, Delivery Approaches, and Utilization of Adolescent-friendly Health Services Related to Sexual and Reproductive Health in Uganda and Factors Influencing Their Expansion	81
	Executive summary	81
	Introduction	85
	Methodology	88
	Findings	93
	Recommendations	106
	Annex 4A Aspects of adolescent-friendly health services	108
	Annex 4B Assessing adolescent-friendly health services	109
	References	110
CHAPTER 5	Factors Contributing to RMNCAH and Family Planning Outcomes among the Batwa, Benet, and Ik in Uganda	115
	Executive summary	115
	Introduction	118
	Methodology	122
	Findings	128
	Recommendations	142
	References	142
CHAPTER 6	Factors Influencing the Use of Modern Family Planning Methods among Sexually Active Individuals in Uganda	147
	Executive summary	147
	Introduction	150
	Methodology	152
	Findings	156
	Recommendations	175
	Conclusion	176
	Notes	176
	Annex 6A Family planning use in Uganda	177
	References	182
PART II	HEALTH WORKFORCE	
CHAPTER 7	Factors Affecting Health Workers' Ability to Reduce Peripartum and Postnatal Morbidity and Mortality in Uganda	187
	Executive summary	187
	Introduction	190
	Methodology	194
	Findings	201
	Recommendations	209
	References	212
PART III	FINANCING	
CHAPTER 8	Situation Analysis of Results-Based Financing for RMNCAH Services in Uganda, 2014–21	219
	Executive summary	219
	Introduction	222
	Methodology	227
	Key findings	231
	Conclusion	244
	Recommendations	245
	References	247

PART IV HEALTH INFORMATION SYSTEMS

CHAPTER 9 Assessing the Quality of Birth and Death Registration and the Vital Statistics System in Uganda 251

Executive summary	251
Introduction	255
Methodology	257
Findings	261
Recommendations	279
Notes	281
Annex 9A Definitions of terms used in this study	282
References	282

CHAPTER 10 Enablers, Deterrents, Lessons Learned, and Recommendations Concerning the Use of the RMNCAH Scorecard at the District and Health Facility Levels in Uganda 285

Executive summary	285
Introduction	288
Methodology	291
Findings	294
Conclusion	302
Recommendations	302
References	304

PART V LEADERSHIP AND GOVERNANCE

CHAPTER 11 Factors Affecting the Functioning of District- and Community-Level Structures for Governance and Management of RMNCAH Services in Uganda 309

Executive summary	309
Introduction	312
Methodology	320
Findings	325
Recommendations	333
Conclusion	335
References	336

CHAPTER 12 Accountability Mechanisms in Uganda's RMNCAH Service Delivery: Practices, Challenges, and Implications 339

Executive summary	339
Introduction	343
Methodology	346
Findings	349
Recommendations	364
Notes	365
References	365

PART VI LESSONS LEARNED

CHAPTER 13 Lessons Learned from Implementing the RMNCAH Operational Research Program 371

Appendix A Summary of the Key Findings and Recommendations of the Studies 375

Appendix B Roles of Key Stakeholders in the RMNCAH Operational Research Program 389

Boxes

3.1	Best practices in MPDSR	74
5.1	Definitions of key terms	119
6.1	Sociocultural factors that promote FP and are changing perceptions: A view of the Wakiso district	160
6.2	Sociocultural factors that suppress FP use: A view of the Bududa district	167
11.1	An RBF success story	331
11.2	Perspectives of two district health officers in Uganda	334

Figures

1.1	WHO health system building blocks	10
1.2	Trends in HC IVs offering cesarean sections and CEmONC services	16
2.1	Applying the systems approach to referral pathways for RMNCAH	35
2.2	Most common ANC conditions referred	42
2.3	Referrals, in and out, for maternal complications	42
2.4	Referrals, in and out, for newborn complications	43
3.1	Uganda MPDSR implementation framework	59
3.2	Conceptual and analytical framework for study	61
3.3	Health facilities and MPDSR meeting attributes	71
3.4	Perceived extent to which MPDSR has improved the quality of maternal services at the facility level	73
5.1	Conceptual framework for assessing factors affecting MNH and family planning practices	123
5.2	Number of annual hospital-based maternal deaths in each subcounty of Kween district, 2016–20	129
7.1	Conceptual framework of factors that affect MNH service delivery	193
7.2	Antenatal care visits and deliveries at all study facilities, July–December 2019	198
7.3	Diagram of WHO's six health care system building blocks showing the interconnectedness of critical points of major weaknesses affecting maternal and newborn health in Uganda	210
8.1	Institutional arrangement of Uganda's national results-based financing programs	224
8.2	Performance-Based Financing Conceptual Framework	226
8.3	Days of stock-outs of essential medicine at Rukunyu HC IV, FY 2017/18	239
9.1	Trends in birth notification and registration versus expected births in Uganda	262
9.2	Trends in registered births versus notified births in Uganda	263
9.3	Birth and death registration reporting by district in Uganda	264
9.4	Distribution of births expected, notified, and registered in Uganda	266
9.5	Distribution of deaths expected, notified, and registered in Uganda	266
9.6	Distribution of births and deaths notified and registered in Uganda, by year and timing	269
9.7	Registration of births and deaths in Uganda, by timing of registration, 2016–20	270
10.1	Conceptual framework for adoption and utilization of the RMNCAH Scorecard	291
10.2	Percentage of public health facilities in study districts implementing the RMNCAH Scorecard	298
11.1	Conceptual framework for strengthening governance and management	319
12.1	Accountability triangle: Citizen-provider-state relationships	346
12.2	Percentage of health facilities with uninterrupted essential supplies, FY 2015/16 to 2019/20	362

Tables

I.1	Description of Ugandan health facility levels	xxv
I.2	List of studies supported by the RMNCAH Operational Research Program	xxviii
1.1	Research subregions and districts in Uganda	11
1.2	Methods and sources for data collection on the functionality of HC IV facilities	12
1.3	Percentage of HC IV facilities that provide CEmONC signal functions	15
1.4	Percentage of HC IVs that provide CEmONC services, by health subregion	16
1.5	Distribution of HC IV facilities with nonfunctional operating theaters, by district	24
2.1	Study site distribution, by facility type	36
2.2	Review of selected RMNCAH-related policies	45
2.3	General referral pathway challenges	48
3.1	Progress markers for the institutionalization conceptual model of MPDSR at the facility level	63
3.2	Facilities that achieved progress markers for each stage of MPDSR institutionalization	67
3.3	Enablers of and barriers to MPDSR implementation	72
3A.1	Detailed MPDSR institutionalization conceptual model	77
4.1	Summary of findings on enablers and hindrances to AFHS	84
4.2	Definition of terms used in the study	87
4.3	Sample sizes of research participants, by research method	89
4.4	Estimated AFHS coverage in Uganda, by literature source	94
4.5	Summary of factors hindering the utilization of AFHS, as reported by study respondents	106
4A.1	Characteristics of adolescent-friendly health services	108
4B.1	Tool for assessing adolescent-friendly health services	109
5.1	Methods used to obtain data for each research objective	125
5.2	MNH care and family planning cultural practices of the Batwa, Benet, and Ik	133
6.1	Study research participants, by data collection method and sample type	153
6.2	Reasons why women use FP methods in Uganda, by personal situation	164
6.3	Key stakeholder-cited challenges, potential resolutions, and desired outcomes for modern FP use in Uganda	174
6A.1	Factors affecting FP use in Uganda, by cultural group	177
7.1	Distribution of study sites, by region, district, and rural or urban setting	195
7.2	Research participants, by MNH agency, role and department, and research method	196
7.3	Demographic characteristics of research participants	197
8.1	Key informants from among the various types and levels of the RBF programs	228
8.2	Objectives and data collection methods	230
8.3	Design attributes of the four selected RBF programs in Uganda	232
8.4	Extent of RBF program alignment with the NRBF	235
8.5	Alignment of programs with the RBF principles	237
8.6	RBP-incentivized changes in use of service indicators for study programs	238
9.1	Study data collection methods and sources, as well as study population level, by research question	258
9.2	Study participants, by interview level and data collection method	259
9.3	Proportion of missing event-capturing variables in MVRs records	267
9.4	Birth and death events registered on time in Uganda	268
9A.1	Operational definitions for this study	282

10.1	Respondents and number of interviews conducted	292	
10.2	Data collection methods used to answer the research questions, by type of respondent	293	
11.1	Districts selected for the study, by inclusion criteria	321	
11.2	Methods used to answer the research questions	322	
12.1	Categories of primary respondents	347	
12.2	Study districts and health facilities	347	
12.3	Data variables extracted from DHIS2	348	
12.4	Study districts' overall and health sector scores on the LGPA, 2017–20	353	
12.5	National budget allocation relevant to RMNCAH services	359	
12.6	National staffing rates in government health services, 2015–20	360	
12.7	Staffing trends in the study districts	361	

Foreword

This compendium is a culmination of a process initiated in May 2018 by the Uganda Ministry of Health in collaboration with Sweden, the World Bank Group, and the Advisory Committee of the Reproductive, Maternal, Newborn, Child, and Adolescent Health (RMNCAH) Operational Research Program to generate evidence to inform the implementation of RMNCAH interventions.

The studies in this compendium offer recent findings on the factors affecting the delivery and utilization of services relevant to RMNCAH, particularly in the areas of governance and leadership; the health workforce; service delivery and referrals; financing and accountability; information management, including birth registration and vital statistics; and sociocultural and other demand-side issues relevant to the use of maternal and newborn care and family planning services. These studies also underscore the important lessons learned and offer suggestions for enhancing the delivery of interventions relevant to RMNCAH.

On behalf of the Advisory Committee and stakeholders of the RMNCAH Operational Research Program, I would like to thank the Uganda Ministry of Health for its leadership and vision, Sweden for its funding, and the World Bank and the Makerere University School of Public Health for the excellent collaboration in executing the program. The seamless coordination and collaboration between the partners enabled the researchers and their research assistants to collect the required information and complete their studies despite the challenges presented by the COVID-19 pandemic.

We implore health policy makers, development partners, planners, managers, practitioners, and academics in the health care system to read this document and transform the findings and recommendations in their jurisdictions into plausible actions to improve the implementation of RMNCAH services across Uganda.

Dr. Josaphat Byamugisha

Professor of Obstetrics and Gynecology, Makerere University
College of Health Sciences
Chairperson of the Advisory Committee of the RMNCAH
Operational Research Program

Acknowledgments

The World Bank served as the secretariat for the Reproductive, Maternal, Newborn, Child, and Adolescent Health Operational Research (OR) Program and would like to express its deepest appreciation to Dr. Josaphat Byamugisha, professor of obstetrics and gynecology, Makerere University College of Health Sciences, Uganda, who was chairperson of the program's Advisory Committee. Members of the committee were Dr. Gity Behravan, Sweden; Professor Anne Katahoire, Makerere University College of Health Sciences; Dr. Flavia Mpanga, health specialist, UNICEF; Dr. Olive Sentumbwe Mugisa, national program officer for family planning, World Health Organization, Uganda; Dr. Charles Olaro, director of clinical services, the Uganda Ministry of Health (MoH); and Dr. Jesca Nsungwa Sabiti, commissioner of health services, MoH.

The author team also wishes to extend thanks to Dr. Diana Atwine Kanzira, permanent secretary of the MoH, for her strategic guidance and unstinting support of the study. The editors are equally grateful to Dr. Livingstone Makanga, former assistant commissioner, Reproductive Health, Department of Reproductive and Child Health. The team is indebted to Dr. John Ssengendo, program coordinator of the Uganda Reproductive, Maternal and Child Health Services Improvement Project, for providing information on lessons learned in supporting and strengthening health-sector governance and management structures in RMNCAH services delivery.

The OR Program's technical and coordinating team at the World Bank was led by Julia Mensah, senior health specialist; Collins Chansa, senior economist; and Rogers Ayiko, senior health specialist. The other members were Elizabeth Ekochu, consultant; Rogers Enyaku (deceased; rest in peace), consultant; Brendan Michael Hayes, senior health specialist; Stephen Kisémbé Kiirya, consultant; and Grace Murindwa, consultant. Special credit goes to Son Nam Nguyen, lead health specialist, and Peter Okwero, senior health specialist, who conceptualized and designed the OR program. The team is grateful for the insightful comments received from World Bank peer reviewers of the studies in the compendium, namely Danielle Suzanne Charlet, health consultant; Munirat Iyabode Ayoka Ogunlayi, senior health specialist; Bernard Olayo, senior health specialist; Abeyah A. Al-Omair, public health specialist; Chiho Suzuki, senior health specialist; and Sameera Maziad Al Tuwaijri, lead health specialist. The following specialists also provided invaluable technical guidance on draft

protocols for the studies: Di Dong, senior economist; Lombe Kasonde, senior health specialist; Opope Oyaka Tshivuila Matala, senior health specialist; Maletela T. Nkhasi, senior health specialist; Elina Pradhan, senior health specialist; and Ali Sy, consultant.

The team would also like to thank Francisca Ayodeji Akala, practice manager; Anne Margrethe Bakilana, program leader; Amparo Elena Gordillo-Tobar, senior health economist; and Rosemary Mukami Kariuki, country manager, Uganda. Their leadership, guidance, and helpful advice was greatly appreciated.

Special appreciation goes to Sweden for providing the funding for this program and for sustained technical support. We are grateful for the partnership with the embassy of Sweden in Kampala and the direct efforts of Dr. Gity Behravan, senior advisor for research, and Adam Kahsai-Rudebeck, first secretary and deputy head of cooperation, health, and social protection.

A team from Makerere University School of Public Health in Uganda, led by its dean, Professor Rhoda Wanyenze, facilitated the implementation of the OR Program. She was assisted by Michael Edia, research associate and project coordinator; Stella Kakeeto, grants manager; Elizabeth Nambi, finance manager and the head of Finance Management Unit; Davidson Ndyabahika, communications officer, and a team of technical reviewers, including Dr. Dinah Amongin, lecturer; Associate Professor Lynn Atuyambe; Associate Professor Justus Barageine; Dr. Simon Peter Kibira, senior lecturer; Professor Fredrick Makumbi; Dr. Joseph Matovu, senior research associate; Dr. Elizabeth Nabiwemba, senior lecturer; Professor Christopher Garimoi Orach; Dr. Ononge Samuel, senior lecturer; Associate Professor Peter Waiswa; Dr. Maina Wamuyu, honorary lecturer; and Professor Rhoda Wanyenze. The Uganda National HIV/AIDS Research Committee reviewed and approved the studies in collaboration with the Uganda National Council for Science and Technology. The team is thankful for their review, guidance, and clearances, especially in light of the unique data collection challenges presented by the COVID-19 pandemic.

Immense gratitude also goes to all the researchers who supported the delivery of this ambitious study, along with the district research facilitators, research supervisors, and research assistants who worked tirelessly amid pandemic restrictions to collect and transcribe the data that formed the basis of the findings in this report. They are as follows:

- *For Jolly Beyeza-Kashesya*— Acaye James, Akugizibwe Mathias, Angella Nalwanga, Atukunda Pamela, Ocen Tony, and Deo Tumusange.
- *For Simon Kasasa*—Jannette Abalo, Simon Bakabulindi, Naika Dennis, Awor Eres, Atala Margaret, Michael Muhoozi, Hilda Namakula, Mackline Victorious Ninsiima, Andrew Sewannonda, and Joan Tusabe.
- *For Richard Kibombo*—Aanyu Christine, Jwenjwe Francis, Nabasirye Jane, Okumu Joseph, Etiang Moses, Naturinda Racheal, Nyinokwikiriza Shallon, and Nandege Shifah.
- *For Elizabeth Kwagala*—Carolyn Atayo, Femier Chelimo, Lenny Chepkwemoi, David Cherotich, Charity Kesande, Alex Kibet, Lucius Lomilo, Scholes Lopian, Clement Mugisha, Geoffrey Mutole, Juliet Nkuraija, and Jude Otim.
- *For Chrispus Mayora*—Rachel Bakubi, Edith Kabughu, and George Okitoi, all of MakSPH.
- *For Simon Muhumuza*—Okello David, Ngonzi Cinderella Muhangi, and Birungi Patience.

- *For Nicolette Nabukeera-Barungi*—Akullo Norah Alice, Richard Amone, Jacky Auma, Arach Jesca, and Dr. Robert Kimara Kidega, all of the Gulu Team; Sylvia Malemo, Hannah Mirembe, Aisha Nalugya, Godfrey Nyanja, and Moses Timbiti, all of the Luweero Team; Dennis Magino, Julius Mubanda, Catherine Naleba, Rachael Namono, and Rose Nauma, all of the Mayuge Team; and Rita Busingye, Arnold Ainamani Kanyonyozi, Isaac Kwesiga, Julian Mugumya, and Flavia Muhumuza, all of the Mbarara Team.
- *For Gorrette K. Nalwadda*—Mary Grace Akao, Agnes Winfred Nakibuule Kayondo, Ashley Nagawa, Desire Naigaga, Eyul Patrick, and Dominic Savio.
- *For Nathan Nshakira*—Kabajungu Enid, Kabagaya Miriam Janet, Betungura Milton Kusasira, and Tumwebaze Maxwell, all of the Hoima District Team; Joseph Isiko Balisanyuka, Ayanga Christine, Justine Kaudha Inhesiko, Tabwenda Lillian, and Kisa Micheal, all of the Jinja District Team; Balikuddembe Ambrose, Annet Namuli Christine, Andrew Kibuuka, and Allen Ashaba Magezi, all of the Kampala Team; Muhindo Joshua, Scovia Masikaall, Baluku Moses, and Sylvia Muhindo, all of the Kasese District Team; Eboku Alex, Stephen Anolo, Akello Esther, Amongin Harriet, and Elayeete Sarahall, all of the Katakwi District Team; Gabriel Alucu, Sarah Auma, Stella Akoli Ogwal, Jangeyanga Patrick, and Ajok Sandra, all of the Lira District Team; Agaba Gloria, Bakanansa Joan, Julius Mutoro, Josephine Ssentongo Naluwugge, and Ntege Wilson, all of the Luwero District Team; and Scovia Ajo, Hellen Ayozi, Keith Gordon Lagu, Odokodit Muhammad, and Ajidiru Scovia, all of the Moyo District Team.
- *For Xavier Nsabagasani*—Syauswa Aida (Kasese), Ann Jane Francis Amuron (Soroti), Charlotte Apat (Gulu), Robert Bakanoma (Iganga and Wakiso), Sharon Buwala, Winnie Candiru, Comfort Chuna (Kotido), Doreen Drabo (Arua), Isaac Drani (Arua), Bernard Emachu (Soroti), Amuron Jane (Francis Ann Sorority), Grace Kabasinguzi (Kabarole), Juliet Kaketo (Kampala), Gorette Korobe (Kotido), Robinah Kyomuhendo (Kabarole), Brenda Mbabazi (Kabale), Aye-Rwot Angel Mercy, Susan Mutesi (Eastern), Aisha Nabagala (Kampala), Jackline Nabuwala (Bududa), Florence Namaganda (Wakiso), Jackline Ngabirano, William Sande (Kasese), Tommy Ssebunya (Wakiso), Susan Togo (Bududa), David Tsimba (Western), and Peter Waiswa (Iganga).
- *For Hizaamu Ramadhan*—Mathias Akugizibwe, Doreen Apolot, Rita Ayero, Ayeeta Joshua, Sylvia Kasumba, Titus Kyobe, Nanzoi Margaret, Ramla Nabiwemba, Amina Naiga, Agnes Nansubuga, Businge Otto, and Scofield Arthur Wamboka.
- *For Symon Peter Wandiembe*—Kevin Bwongyezibwa, Dr. Paul Isabirye, and Scovia Kyomugisha.

Finally, the team is indebted to Richard Crabbe who, along with a team of editors comprising Marc DeFrancis, Catherine Lips, and Katherine Hutt Scott, prepared the studies for publication and dissemination. The team is grateful to Greg Berger for design and to Frederick Sebuuma for translating the study questionnaires into local languages. A special thanks goes to the World Bank's Publishing Program for support with preparing and finalizing the publication.

About the Editors and Authors

Joseph Akuze is a researcher with experience in maternal, newborn, and child health and in community-based measurement of stillbirths and neonatal deaths in standardized surveys. He has published in the *Lancet: Global Health* (2020) on improving metrics on stillbirths and neonatal deaths in demographic and health surveys. He has a bachelor's degree and a postgraduate diploma in statistics from Makerere University, a master of public health from the Hebrew University of Jerusalem, and a methodological PhD from the London School of Hygiene and Tropical Medicine.

Moses Arinaitwe is a Ugandan physician and public health specialist. He is also currently a fellow of the USAID-sponsored Global Health-Strengthening Technical and Analytic Resources Project serving as a monitoring and evaluation technical advisor for the Uganda National Tuberculosis and Leprosy Program. He has supported the surveys for the World Bank World Development Indicators in health service delivery for countries in East and West Africa. He has lectured on public health disciplines at the university level and has 12 years' experience in public health expertise at the district, subdistrict, General Hospital, and national levels. He holds a master of science degree in public health from Umeå University, Sweden, and a bachelor's degree in medicine and surgery from Makerere University.

Rogers Ayiko is a senior health specialist at the World Bank. He has worked for almost 17 years on policy and systems strengthening for reproductive, maternal, and child health; infectious and noncommunicable diseases; and public health emergencies, including publishing on these areas in peer-reviewed journals. He served previously as a principal health systems and policy officer in the East African health community and as a senior program officer for family and reproductive health in the East Central and Southern Africa health communities. Prior to that, he worked as a national monitoring and evaluation officer, a technical advisor for district health services, and a clinician in a General Hospital. He has trained as a medical physician and has pursued postgraduate training in tropical medicine, international health, business administration, and health and pharmaco-economics. He holds a masters of management in business administration from the Uganda Management Institute; a joint MSc in international

health from University College London, Karolinska Institutet, and Charite Universitätsmedizin, Berlin; and a bachelor of medicine and surgery from the Mbarara University of Science and Technology.

Anthony Begumisa is a researcher with 20 years' practical experience relevant to basic and operations research. He designs studies and also develops data collection tools, conducts fieldwork management and quantitative and qualitative data analysis, and produces reports in line with conventional and prescribed formats. He has served as a team leader or member for development and operations research in various service delivery and academic fields. He began his research career at the Makerere Institute of Social Research, starting as a research assistant and then becoming a research associate working on research grants as well as leading research consultancy assignments. He has bachelor's and master's degrees in sociology, both from Makerere University.

Jolly Beyeza-Kashesya is a physician with research interests in reproductive medicine with emphases on fertility and infertility, family planning, maternal health, and HIV/AIDS in the context of sexual and reproductive health (SRH) and rights. She has a medical degree from Makerere University, a master of medicine in obstetrics and gynecology from China Medical University, a joint PhD from Makerere University and the Karolinska Institutet, Sweden, and an MBA from the Eastern and Southern African Management Institute, Tanzania.

Collins Chansa is a senior health economist at the Health, Nutrition, and Population Global Practice of the World Bank. He has more than 24 years of wide-ranging experience in agribusiness, health systems development, governance, and health financing in several countries in East, West, and Southern Africa, including 12 years of service at the middle-management level working for the government of Zambia in the agriculture and health sectors. He is also a researcher focusing on health policy and planning, health financing, and applied health systems research and has published several articles in leading peer-reviewed journals. He has a master's degree in health economics from the University of Cape Town and a degree in economics and statistics from the University of Zambia.

Richard Crabbe is an editorial consultant with more than 40 years' experience in book publishing and communications. He joined the World Bank in 2002 as head of client relations in the Office of the Publisher and for 9 years led the team that prepared the bank's Annual Report. Prior to joining the World Bank, he was chief executive officer and general manager of Africa Christian Press in Ghana as well as chairperson of the African Publishers Network. He also served as an Executive Committee member of the International Publishers Association and held board memberships in media and publishing organizations in Canada, the United Kingdom, and the United States. He has a bachelor's degree in biochemistry from the University of Ghana, Legon, and a master's degree in communications from Wheaton College.

Marc DeFrancis is an independent writer and editor based in Baltimore, Maryland; his specialty is working with authors in international development

and social sciences research. He has undertaken editing projects for a variety of programs at the World Bank since 2007, predominantly in public health, early childhood education, and climate change response and mitigation. Other clients have included the National Academy of Science's Division of Behavioral and Social Sciences and Education, the International Monetary Fund, and the Brookings Institution. He has gained direct knowledge of life in a traditional agrarian society from his time as a volunteer with the United States Peace Corps in Tonga. He has a BA in the humanities and an MAT in English from the University of Chicago.

Elizabeth Ekirapa-Kiracho is a senior lecturer in the Department of Health Policy, Planning, and Management, Makerere University School of Public Health, where she has worked since 2007. Prior to that, she worked at a rural hospital in Uganda, an experience that enabled her to understand the context in which health services in rural Africa are delivered. She has training and expertise in health systems, health financing (particularly performance-based financing), costing, economic evaluation, and maternal and newborn health (MNH). She has also been a team leader for several research projects that sought to better understand and influence implementation processes while demonstrating their impact on MNH. Her academic responsibilities at the School of Public Health include lecturing, supervising, and mentoring undergraduate and postgraduate students in health economics, health policy, and health systems research. She has a medical degree and a master of public health, both from Makerere University; a master of health economics from the University of Cape Town; and a PhD in health financing from Trinity College, Dublin.

Elizabeth Asege Ekochu is a public health consultant based in Kampala. She has taken on various project and research assignments to support the World Bank office in Kampala and other government and nongovernment agencies. Her consulting work is backed by more than 35 years' experience in health systems strengthening at the national, subnational, and facility levels. She has held leadership roles in USAID-funded projects for 16 years, providing valuable health systems support in Kenya, Lesotho, Rwanda, and Uganda. Prior to that, she worked as a health subdistrict manager in Kampala and as a medical officer in the Mulago National Referral Hospital. She has a bachelor's degree in medicine and surgery and a master of public health, both from Makerere University.

Peter Elyanu is the director of research and knowledge management at Baylor College of Medicine Children's Foundation–Uganda. Previously, he was the national coordinator for the pediatric and adolescent HIV care and treatment program in the AIDS Control Program of the Uganda Ministry of Health. Prior to that, he managed a Baylor-Uganda regional program to scale up pediatric HIV care and treatment in seven districts in Eastern Uganda. This experience, along with his early-career experience as a medical officer in Bududa Hospital and as health subdistrict head, has given him in-depth knowledge and understanding of Uganda's health care system. His research interests are the prevention of mother-to-child HIV transmissions; pediatric and adolescent HIV; maternal, newborn, child, and adolescent health; and implementation science research. He has a bachelor's degree in medicine and surgery and a master's degree in pediatrics and child health from Makerere University. He also has a master of public health

and a PhD in epidemiology from the University of Texas Health Science Center at Houston.

Brendan Michael Hayes is a health specialist focusing on SRH and rights for the Global Financing Facility (GFF) based with the World Bank in Kampala. Before joining the GFF in 2017, he spent 8 years working for Marie Stopes International (MSI), leading private sector service delivery of family planning and reproductive health services. Prior to that, he had spent 4 years working in MSI's program in Malawi. He began his career working on HIV prevention and impact mitigation efforts in Swaziland. He holds an undergraduate degree from St. Lawrence University and a master's degree from University College Dublin.

Simon Kasasa is a researcher with experience in Bayesian modeling of malaria; community-based surveys, such as the Tuberculosis Prevalence Survey; improvement of household surveys to capture pregnancy outcomes; the epidemiology of HIV/AIDS, tuberculosis, and malaria (morbidity and mortality trends); health systems research, especially promoting health facility routine data analysis for use in decision-making; geospatial cancer research; and implementation research targeting better outcomes from civil registration and vital statistics systems. He holds a bachelor's degree in statistics from Makerere University; a master of science in epidemiology and biostatistics from Case Western Reserve University, Cleveland; and a PhD focusing on malaria modeling and mapping from the University of Basel.

Mesarch Walto Katusimeh is a researcher with interests in governance, public administration, and public service delivery. He has published on civil society and democratization, the politics of health sector provisioning and of resource mobilization, and urban environmental infrastructure. He has a bachelor's degree in social sciences, a master's degree in public administration and management, both from Makerere University, and a PhD with a focus on urban governance from Wageningen University, the Netherlands.

Samuel K. Kayabwe is a senior research associate at the Development Research and Social Policy Analysis Center, Kampala. His research experience includes tracking HIV/AIDS financing and spending; examining advocacy issues involving child care, child abuse, girl-child protection, HIV/AIDS, and children in armed conflict situations in northern Uganda; and analyzing the design and operation of government programs, focusing on the reform processes influencing basic services delivery in the health and agricultural sectors. He has a bachelor's degree in economics and rural economy from Makerere University and a master's degree in public policy and administration from the University of Wisconsin, Madison.

Richard Kibombo is a senior research fellow at the Development Research and Social Policy Analysis Center, Kampala. He has used his experience in qualitative and quantitative research and evaluation to conduct multidisciplinary and multicountry studies, in particular on health and education. He has worked as a principal investigator and evaluation specialist in several countries, including Botswana, Ethiopia, Ghana, Sierra Leone, and Uganda. He has a bachelor's degree in statistics from Makerere University and a master of science in statistics from the University of Wisconsin, Madison.

Stephen Kisembe Kiirya is a consultant with the World Bank and a senior research fellow with the Development Research and Social Policy Analysis Centre in Uganda, focusing on population health. He specializes in social and behavioral research, as well as design and evaluation of HIV and sexual and reproductive health programs for vulnerable communities. He has published several papers and abstracts on these topics and also has reviewed manuscripts submitted to related scholarly publications. He is a member of the African Network for Care of Children Affected by AIDS, the International AIDS Society, the International Association for Cross-Cultural Psychology, and other professional associations. He holds a PhD in psychology from the University of Pretoria.

Elizabeth Kwagala is a researcher with interests in gender, health, and ethics, particularly in sexual and reproductive health (SRH) and issues concerning disadvantaged groups. She has published on maternal and child health, family planning, adolescent SRH, sexually transmitted diseases, and intimate partner violence. She has a master's degree in development studies (women and development) from the Institute of Social Studies, the Netherlands, and a PhD in sociology from the University of Vienna.

Chrispus Mayora is a lecturer in the Department of Health Policy, Planning, and Management at the Makerere University School of Public Health, where he has taught since 2008. His research interests include costing health services interventions, health financing, health system performance assessment, and economic evaluation. He has bachelor's and master's degrees in economics, both from Makerere University; a master of health economics from the University of Queensland, Australia; and a graduate certificate in economic policy from the Australian National University. He holds a PhD in public health from the University of Witwatersrand.

Julia Mensah is a senior health specialist with the World Bank. During her career at the World Bank, she has worked in a variety of domains in public health, encompassing reproductive, maternal, newborn, child, and adolescent health; outbreak preparedness and response; noncommunicable disease (NCD) control; and a broader policy dialogue on health systems strengthening. She has authored or coauthored reports assessing the effectiveness of the World Bank's operations in the health sector, as well as technical papers on NCDs. She holds a master's degree in public policy from Harvard University.

Flavia Nakayima Miiro is a researcher with interests in health and social development, HIV care and management, and reproductive health. She held a two-year fellowship in HIV/AIDS with the U.S. Centers for Disease Control and Prevention's School of Public Health. She has a bachelor's degree in social sciences and a master of science in clinical epidemiology and biostatistics, both from Makerere University, and a postgraduate diploma in project planning and management from the Uganda Management Institute.

Paul Mubiru is a researcher with interests in health systems strengthening; maternal, child, and newborn research; tuberculosis; and behavioral interventions. In addition, he focuses on statistical modeling and the use of data and evidence to make informed decisions and actions. He has bachelor's and master's degrees in statistics from Makerere University.

Simon Muhumuza is a researcher with interests in HIV/AIDS; reproductive, maternal, newborn, child, and adolescent health; and neglected tropical diseases. He has published in peer-reviewed journals, and his recent publications have covered the monitoring of HIV programs in Uganda; the care, including antiretroviral therapy, of pregnant and breast-feeding women with HIV; and increasing access to children's medicine. He has a bachelors' degree in medicine and surgery, a master of public health, and a PhD in public health, all from Makerere University.

Grace Murindwa is a health planning and management specialist working as a liaison officer for the Global Financing Facility (GFF) in Uganda. He has more than 30 years' experience in the Ugandan health sector, initially as a medical officer in a rural public hospital, then as a district medical officer in a decentralized district, and after that as a senior medical officer and principal health planner with the Ministry of Health in Kampala. He also worked as a director of planning, monitoring, and evaluation (strategic information) with the Uganda AIDS Commission and as a technical advisor for the Ministries of Health in South Sudan and in Sierra Leone, at the World Health Organization office in Sierra Leone, and for the International Finance Corporation/World Bank Group in the Uganda office. He has worked extensively with development partners at the national level and with global health initiatives, among them Gavi, the Vaccine Alliance, as a member of the Independent Review Committee, and with GFF, as a member of the Technical Review Panel at the international level. He has a bachelor of medicine and surgery from Makerere University and a master of arts in health management, planning, and policy from the Nuffield Institute for Health, University of Leeds.

Miriam Gesa Mutabazi is a researcher with interests focused on maternal and child health. Her key publications cover improving maternal health and reducing mortality, access to clean safe water, SRH and rights, and innovations for better maternal and family health. She has a bachelor of medicine and surgery and a master of medicine in obstetrics and gynecology from Makerere University, as well as a diploma in health systems management from the Galilee International Management Institute, Israel.

Nicolette Nabukeera-Barungi has worked at the HIV clinic of the Baylor College of Medicine Children Foundation–Uganda since 2005, providing care for children and adolescents. Her research interests include adolescent health, HIV/AIDS, and malnutrition in children; she participates in clinical research as well as in community studies. She has a bachelor's degree in medicine and surgery from Mbarara University of Science and Technology, Uganda, and a master of medicine in pediatrics and child health from Makerere University. She holds a PhD from the University of Copenhagen.

Olivia Nakisita has expertise in monitoring and evaluation, planning for sustainable development, disaster resilience leadership, public health in complex emergencies, and project planning and management. She is a project manager for the Communities Where Mothers and Newborns Thrive, a project at the Makerere University School of Public Health. She has worked on several projects that focused on capacity building for health systems development and MNH. She has a bachelor's degree in social sciences, a master's degree in public health in

disaster management, and a diploma in project planning and management, all from Makerere University.

Gorrette K. Nalwadda is a nurse-midwife, reproductive public health specialist, researcher, and educationist based at the Makerere University College of Health Sciences. She is a founding member of the Luziibangi Foundation, which empowers local communities and leverages private investment to better the lives of women and children in hard-to-reach communities. She has 20 years' expertise in reproductive, maternal, newborn, child, and adolescent health (RMNCAH) as well as expertise in public and international health, population and development, HIV/AIDS, ethics, design and implementation of health capacity development programs, health communication, health systems strengthening, and advocacy and policy analysis in both the public and private sectors. She has served as principal investigator for studies on RMNCAH services in Kenya, Uganda, and Zambia and on child immunization in rural and urban health care settings. She has a BSc in nursing and midwifery and an MScPRH in reproductive health and population studies from Makerere University, a diploma in bioethics and research ethics from the Johns Hopkins Bloomberg School of Public Health, and a PhD in international public health/international health from Karolinska Institutet.

Xavier Nsabagasani has research interests in information management, monitoring, and evaluation, as well as health, education, and livelihood analysis. He holds a PhD in policy analysis, focusing on medicines for children, from Makerere University; a master's degree in development studies from the International Institute of Social Studies in the Netherlands; postgraduate diplomas in health policy analysis and health research methodology from Karolinska Institute and from the Danish Bilharzia Laboratory at the University of Copenhagen, respectively; and a bachelor's degree in sociology and social administration from Makerere University.

Nathan Nshakira is a Ugandan physician and public health specialist who has worked since 1988 in health care and management, health research and training, and integrated health and development consulting, with experience across Sub-Saharan Africa and in Asia. He is currently a lecturer at Kabale University, Uganda, and has authored key publications on the modeling effect of HIV interventions, such as medical male circumcision, alcohol epidemiology, the cost-effectiveness of health interventions, the effect of interventions in clinical and field trials, and SRH. He has a bachelor's degree in medicine and surgery and a master's degree in public health, both from Makerere University.

Hizaamu Ramadhan is a writer and researcher who has written key publications on human resources for health, public administration, HIV prevention, and community health insurance. He has a fellowship in HIV/AIDS program management at the Makerere University School of Public Health's HIV/AIDS Fellowship Program and a bachelor's degree in veterinary medicine from Makerere University. He holds a PhD in administration and management (public administration) from the Uganda Management Institute (UMI) as well as a master in public health from the Makerere University School of Public Health and diplomas in organizational development and project planning and management from UMI.

Aloysius Ssenyonjo is a lecturer at the Makerere University School of Public Health. He is a medical physician, a public health policy and systems specialist, and an expert in monitoring and evaluation. He has a broad interest in the critical appraisal and analysis of complex health systems and policy issues and in development challenges at the global, national, and subnational levels. He is particularly interested in governance, organizational development, universal health coverage, community engagement, community systems strengthening, and health financing. His work experience includes coordinating several research and capacity-building projects. He has a master's degree in global health from the University of Edinburgh and a postgraduate diploma in monitoring and evaluation from the Uganda Management Institute. He is currently pursuing a PhD in development studies at the University of Antwerp.

Symon Peter Wandiembe is a lecturer at the Makerere University School of Statistics and Planning. His areas of expertise include the use of qualitative and quantitative methods in program evaluations and health services programming; implementation science research in maternal and child health and HIV/AIDS; the design and analysis of complex sample surveys; the design of program monitoring and evaluation plans as well as of information management systems; case study methodology; report writing and grant narratives; and statistical methodology. He has more than 15 years' experience in conducting and supporting performance evaluations and programming in public health, health care quality; HIV/AIDS; maternal, child, and adolescent health; gender mainstreaming and gender-responsive budgeting; orphans and vulnerable children; and education. He has a master's degree in statistics from the University of Natal in South Africa and a PhD in statistics from the University of London.

Introduction and Summary of Studies

This compendium presents the results of a 3-year program instituted in Uganda to assess the status of reproductive, maternal, newborn, child, and adolescent health (RMNCAH) services and to propose recommendations to improve their delivery and uptake. It was made possible through the collaborative contributions and shared direction of the Uganda Ministry of Health (MoH), the World Bank, and Sweden.

The studies in the compendium were drafted between 2019 and 2021 and finalized and disseminated in October 2022. Since then, the MoH in Uganda has updated its RMNCAH statistics through a demographic and health survey, with reports released in September 2023 (UBOS 2022). The studies in the compendium used data from the 2016 Demographic and Health Survey (DHS 2016), which was the latest available data at the time. The findings and recommendations of the studies remain pertinent for Uganda's RMNCAH reform agenda.

BACKGROUND

In Uganda, reproductive, maternal, newborn, child, and adolescent health (RMNCAH) conditions remain the primary drivers of morbidity and mortality, accounting for 60 percent of the years of life lost. The high burden of RMNCAH conditions can be attributed to poor quality of care, which in turn stems from inadequate financial, human, and material resources compounded by weak multisectoral coordination. Furthermore, the combination of Uganda's high population growth rate (3 percent) and its young population, the second youngest in the world,¹ suggests that RMNCAH service delivery will continue to dominate reforms in the health sector—even within the context of a growing dual burden of the increasing prevalence of noncommunicable diseases and the increasing incidence of emerging and re-emerging infectious diseases.

Over the past two decades, Uganda has increasingly focused on improving the quality of RMNCAH service delivery. As a result of these increased investments, the RMNCAH has witnessed important achievements. The 2016 Uganda Demographic and Health Survey² indicates that between 2001 and 2016,

the maternal mortality ratio declined by one-third, from 524 to 336 per 100,000 live births, and the infant mortality ratio declined by half, from 88 to 43 per 1,000 live births. During the same period, the under-five mortality ratio declined even more dramatically, from 152 to 64 per 1,000 live births. Further, the use of modern contraception among married women more than doubled during the period, rising from 14 percent in 2011 to 35 percent in 2016 (UBOS and ICF 2012, 2018).

On the other hand, the neonatal mortality rate and teenage pregnancy rate both stagnated over the period, with the former hovering around 27 per 1,000 live births and the latter at 25 percent since 2011. Civil registration and vital statistics (CRVS) also remain areas where Uganda faces challenges, with the births of only 32 percent of children younger than age 5 being registered, while just 24 percent of all deaths are registered (UBOS and ICF 2018).

DELIVERY OF HEALTH SERVICES IN UGANDA

The policy environment and service delivery settings are important considerations in the delivery of health services in Uganda.

Policy environment

The Uganda Vision 2040 presents the government's overarching ambition to transform the nation from a peasant to a modern economy by 2030. Underpinning this ambition is a strong focus on human capital development, driven by investments in health and other social sectors. A series of National Development Plans (NDPs) further define strategic indicators and targets for achievement within various sectors. The current version, the NDP III (2020/21–2024/25), prioritizes reductions in stunting prevalence, neonatal mortality, and maternal mortality. The NDP III also seeks to increase the uptake of family planning methods, to reduce teenage pregnancy rates, and to expand universal health coverage access to at least 67 percent, from the current level of 44 percent (NPA 2020). The targets outlined in the NDP III are further reflected in the National Health Policy III (MoH 2021b), the *Health Sector Development Plan 2015/16–2019/20* (MoH 2015), and the Human Capital Development Program (MoFPED 2021).

Service delivery

As per the Constitution of the Republic of Uganda (1995) and the Uganda Local Government Act (1997, 2015), health services are delivered through a decentralized system, by local governments (LGs) under the direction and guidance of the central government. Starting from the lowest level in the community, the public health service delivery infrastructure consists of health care facilities—Village Health Teams (VHTs); Health Center (HC) IIs, HC IIIs, and HC IVs; and General Hospitals (GHs), all located within district local governments (DLGs). National Referral Hospitals (NRHs) and Regional Referral Hospitals (RRHs), which provide services for several DLGs, are managed at the central government level. Each level of care is responsible for preventive, promotive, and curative services for a designated geographical area and population, with a mandate to refer to the next level if its services are unable to address a health problem. All levels in the health system—national, regional, district, and subdistrict (parishes, villages)—have mutual accountability responsibilities for

TABLE I.1 Description of Ugandan health facility levels

LEVEL	ESTIMATED POPULATION	SERVICES OFFERED
Clinic	Not defined	Community-based preventive and promotive services, with village health community or similar status
Health Center II	5,000	Preventive, promotive, and outpatient curative services, outreach care, and emergency care
Health Center III	20,000	Preventive, promotive, outpatient curative, maternity, and inpatient services in addition to laboratory services
Health Center IV	100,000	Preventive, promotive, outpatient curative, maternity, and inpatient services in addition to emergency surgery and blood transfusion and laboratory services
General Hospital	500,000	Same services as offered at Health Center IVs in addition to other general services as well as community-based in-service training, consultation, and research
Regional Referral Hospital	2,000,000	Same services as offered at General Hospitals in addition to such specialist services as psychiatry; ear, nose, and throat; ophthalmology; dentistry; intensive care; radiology; pathology; and higher-level surgery
National Referral Hospital	10,000,000	Comprehensive specialist services as well as teaching and research

Source: Uganda Ministry of Health, National Health Facility Master List, 2018.

service delivery and utilization inputs and outcomes, which cut across citizens, service providers, and different institutions of the state (see table I.1).

TACKLING CHALLENGES IN RMNCAH SERVICE DELIVERY

As noted earlier, RMNCAH conditions are a primary driver of death and illness in Uganda. To combat these conditions more effectively, the Government of Uganda (GoU), in partnership with the Global Financing Facility for Women, Children and Adolescents (GFF), the World Bank, and other bilateral and multilateral development partners, initiated an effort to identify, prioritize, and fund high-impact interventions for RMNCAH reform. This initiative was driven by the persistent high burden of RMNCAH conditions in Uganda; the limited progress made in the achievement of key indicators in the Millennium Development Goals; the priority of these conditions in the national sector strategic documents; and the potential for high-impact, cost-effective interventions to accelerate the pace of reform.

Through these engagements, the Ministry of Health (MoH) developed the RMNCAH Sharpened Plan 2013–2017 (MoH 2013), which was later elaborated into a five-year Sharpened Plan published as *Investment Case for Reproductive, Maternal, Newborn, Child and Adolescent Health Sharpened Plan for Uganda 2016/17–2019/20* (MoH 2016). These strategic documents were anchored in several broader national health and development plans adopted since 2013. Last updated in March 2021, the Sharpened Plan II remains the overriding framework for guiding priority setting for RMNCAH reforms in Uganda (MoH 2021a).

Supporting those reforms, the Uganda Reproductive, Maternal and Child Health Services Improvement Project (URMCHIP) was approved in 2016. URMCHIP is a US\$180 million operation cofinanced by the World Bank, the GFF, and Sweden. URMCHIP's objectives are to (a) improve utilization of essential health services, with a focus on RMNCAH services in target districts; (b) scale up birth and death registration services; and (c) provide immediate and effective responses to an eligible crisis or emergency. Linked to the priority areas identified in the Sharpened Plan, URMCHIP provides substantial financing to

enhance quality of care by addressing gaps across all building blocks of health system strengthening. It also introduces the use of results-based financing (RBF) as a tool to drive greater efficiency and improvements in service delivery. During the development of the project, the GoU envisioned the need for an accompanying Operational Research program that would help generate real-time data and practical lessons to inform ongoing project implementation as well as ongoing policy discourse.

UGANDA RMNCAH OPERATIONAL RESEARCH PROGRAM

The RMNCAH OR Program in Uganda was initiated by the MoH and executed by the World Bank Group, with financial support from Sweden. The objectives of the program were to (a) assist Uganda in generating practical and actionable evidence to inform implementation and policy dialogue for RMNCAH services and (b) further strengthen the capacity of Ugandan researchers in operational research. Launched in 2018, the program sought to investigate the implementation of key interventions in RMNCAH, including those supported through URMCHIP and prioritized under the Sharpened Plan. Technical and strategic oversight for the program was provided by an Advisory Committee, while the Makerere University School of Public Health (MakSPH) coordinated the research training, data collection and validation, and dissemination of study findings and recommendations. (See appendix B in the compendium for a detailed outline of the roles and responsibilities of each of the major stakeholders in the OR program, namely, the Uganda MoH, the World Bank, Sweden, and the research consultants.)

In all, the program supported the development of 12 studies, pursuing topics identified by the MoH and other stakeholders and led by national researchers. The overarching focus of the studies was to assess the key challenges for RMNCAH services in Uganda.

OPERATIONAL RESEARCH PROGRAM DESIGN PRINCIPLES, IMPLEMENTATION, AND STUDY OBJECTIVES

This section discusses the RMNCAH OR Program’s design principles and study implementation process.

Design principles

The design of the RMNCAH OR Program was based on four underlying principles: (a) the studies would focus on priority areas requiring new evidence, with immediate feedback into policy and planning; (b) the researchers would involve the implementers in the design, execution, and dissemination of the findings; (c) the studies would incorporate, to the extent possible, existing information systems and administrative data; and (d) the studies would adopt mixed-methods, rapid, and pragmatic adaptive research designs.

Implementation process

Implementation of the OR program followed seven steps (and timelines), explained as follows:

- (1) **Establishment of the Advisory Committee:** An Advisory Committee of RMNCAH experts drawn from the MoH, academia, development partners, and civil society organizations (CSOs) was established in April 2018 to provide support and advice for the program.
- (2) **Stakeholder consultation on research topics:** The MoH, in partnership with the World Bank, convened a Stakeholder Workshop in May 2018 to formulate research questions in seven thematic areas, linked to the primary bottlenecks articulated in the Sharpened Plan. The areas were (a) stewardship and management, (b) health financing, (c) service delivery, (d) human resources for health, (e) supply chain management, (f) health management information systems (HMIS) and CRVS, and (g) demand-side and gender issues. Stakeholders identified a list of 45 topics around which OR was recommended.
- (3) **Recruitment of researchers:** In February 2019, the World Bank invited expressions of interest, and more than 70 researchers applied across the seven thematic areas; 23 were selected to develop protocols for 12 research topics identified in six of the seven thematic areas. No researchers were selected under the thematic area of supply chain management.
- (4) **Clearance from the Institutional Review Board and translation of research tools:** Draft research protocols and tools were reviewed and approved by the Uganda National HIV/AIDS Research Council (NARC) and registered by the Uganda National Council of Science and Technology (UNCST). By March 2020, all study protocols had been approved by the NARC and registered with the UNCST. However, the COVID-19 outbreak in Uganda in March 2020 and restrictions on travel, public gatherings, and face-to-face meetings interrupted the approved data collection processes and necessitated adaptations of all research protocols to incorporate virtual data collection methods and other appropriate COVID-19 risk mitigation measures. Consequently, all protocols were revised, resubmitted, and reapproved by the NARC and UNCST by September 2020. Selected studies were also translated into a total of 15 local languages.
- (5) **Data collection:** The World Bank engaged MakSPH to provide updated training in qualitative data collection and analysis methods to researchers; recruit and train research assistants and district-level research facilitators in virtual data collection methods; and coordinate access to digital tools and platforms for virtual interviews. With MakSPH support, researchers completed data collection by December 2020 and initiated data analysis, synthesis, and report writing.
- (6) **Quality assurance of studies:** The Advisory Committee of the OR program, as well as technical experts from the World Bank, MakSPH, and the MoH, reviewed all draft research reports and provided technical inputs. In addition, all the revised draft research reports were peer reviewed by the team of principal investigators.
- (7) **Validation of research findings:** Results from the 12 studies were presented and discussed in two separate virtual validation meetings in May and June 2021 attended by the permanent secretary for the MoH, senior technical experts from the MoH, and various RMNCAH stakeholders in Uganda. Also in attendance were members of the OR Program's Advisory Committee, DLG authorities, development partners, academia, and CSOs. The validation meetings provided an opportunity for stakeholders to (a) discuss research findings and recommendations and (b) identify practical

approaches for linking research findings and recommendations with the broader national RMNCAH policy dialogue.

- (8) **Finalization and editing of studies:** Following the validation of study findings, researchers finalized their studies and submitted them to the World Bank. The World Bank hired technical editors to review and edit the studies with the objective of packaging them into a compendium and disseminating it for stakeholder use.
- (9) **Dissemination of studies:** Following the finalization of the studies and clearances by all partners and the researchers, the studies were disseminated to stakeholders nationally through a combination of workshops, online publications, and social media engagement.

SELECTED STUDIES AND THEIR OBJECTIVES

The OR program supported studies dedicated to five of the six health systems building blocks identified by the World Health Organization (WHO): (a) service delivery, (b) health workforce, (c) health information systems, (d) access to essential medicine,³ (e) financing, and (f) leadership and governance. In each case, the researchers not only examined the evidence of practice and outcomes but also sought to offer recommendations for improving or expanding the service or approach based on extensive feedback from stakeholders. A list of the studies and their research objectives is provided in table I.2.

TABLE I.2 List of studies supported by the RMNCAH Operational Research Program

STUDY TITLE	STUDY OBJECTIVES
Service delivery	
1. Assessment of the Functionality of Health Center IV Facilities in Uganda and Suggestions for Improvement	(a) Determine the level of functionality of HC IV facilities across Uganda, (b) identify the key challenges in health service delivery at HC IV facilities, and (c) solicit stakeholders' perspectives on how to ensure sustained improvement in the delivery of RMNCAH services at HC IV facilities
2. Review of the RMNCAH Referral Pathway in Rural and Urban Settings in Uganda	(a) Examine the RMNCAH referral pathway, from the community level to the various health system facility levels; (b) identify the enablers of and hindrances to an effective RMNCAH referral pathway; and (c) identify practical ways of improving the referral pathways for better RMNCAH service delivery outcomes in Uganda
3. Assessment of the Implementation of Maternal and Perinatal Death Surveillance and Response in Uganda	(a) Assess progress on the implementation of MPDSR at different levels of health care delivery, (b) identify factors that have affected the uptake and sustainability of the MPDSR system at the health facility level, (c) assess the perceptions of health workers regarding the contribution of MPDSR to improving the quality of maternal and perinatal care and outcomes at the health facility and district levels, (d) describe best practices that facilitate the implementation of the recommendations and response subcomponents of the MPDSR system at the health facility level, and (e) propose strategies for improving and sustaining MPDSR in Uganda
4. Coverage, Delivery Approaches, and Utilization of Adolescent-friendly Health Services Related to Sexual and Reproductive Health in Uganda and Factors Influencing Their Expansion	(a) Describe the coverage, delivery approaches, and utilization of AFHS in Uganda and (b) explore factors that enable or hinder the delivery and expansion of AFHS services in regard to RMNCAH
5. Factors Contributing to RMNCAH and Family Planning Outcomes among the Batwa, Benet, and Ik in Uganda	(a) Examine the MNH care and family planning status of Batwa, Benet, and Ik female and male adolescents and adults; (b) examine the MNH and family planning practices among Batwa, Benet, and Ik adolescents and adults; (c) assess the familial, cultural, religious, and other factors that influence MNH care and family planning practices in these communities; and (d) provide recommendations for enhancing the delivery of services to the Batwa, Benet, and Ik

continued

TABLE I.2, continued

STUDY TITLE	STUDY OBJECTIVES
6. Factors Influencing the Use of Modern Family Planning Methods among Sexually Active Individuals in Uganda	(a) Assess the contextual, sociocultural, religious, gender, and human rights factors that explain the use of family planning among sexually active women and men, including adolescents, across Uganda; (b) examine the sociocultural, religious, gender, and human rights factors that explain the nonuse of family planning among this population; and (c) identify ways to improve uptake and use of modern family planning methods in these populations
Health workforce	
7. Factors Affecting Health Workers' Ability to Reduce Peripartum and Postnatal Morbidity and Mortality in Uganda	(a) Identify factors that enable health workers to carry out quality peripartum and postnatal health services in Uganda, (b) identify factors that hinder health workers from carrying out quality peripartum and postnatal health services in Uganda, and (c) explore how health workers can be enabled to deliver quality peripartum and postnatal health services in Uganda
Financing	
8. Situation Analysis of Results-Based Financing for RMNCAH Services in Uganda, 2014–21	(a) Identify and describe the most recent (2015–20) donor-financed and national RBF programs, mainly within the RMNCAH domain in Uganda, with respect to design, implementation, target population, and service packages; (b) examine the extent to which RBF design and implementation arrangements are consistent with the National RBF Framework; (c) assess the perceived extent and mechanisms of RBF's influence on the delivery and use of RMNCAH services; (d) explore the factors that facilitate or constrain RBF implementation; and (e) identify key lessons learned in the implementation of RBF initiatives to inform their scale up and institutionalization in existing performance management and public finance improvement programs
Health information systems	
9. Assessing the Quality of Birth and Death Registration and the Vital Statistics System in Uganda	(a) Establish the current performance (coverage, completeness, timeliness, and accuracy) of civil registration in Uganda; (b) assess the status of the national vital statistics systems; (c) document factors that impact the performance of the civil registration system in Uganda; (d) document lessons learned in implementing the civil registration system in Uganda; and (e) establish existing opportunities and capacities in terms of linkages and technologies that are currently utilized in civil registration in the country
10. Enablers, Deterrents, Lessons Learned, and Recommendations Concerning the Use of the RMNCAH Scorecard at the District and Health Facility Levels in Uganda	(a) Examine the strategies and processes or procedures used to implement the RMNCAH Scorecard in selected districts and health facilities, (b) assess the extent to which the scorecard has been adopted and utilized in selected districts and health facilities of Uganda, (c) investigate the factors that enable and deter use of the scorecard in these districts and health facilities and the lessons learned, and (d) propose practical recommendations for improving the use and institutionalization of the scorecard at the district and health facilities
Leadership and governance	
11. Factors Affecting the Functioning of District- and Community-Level Structures for Governance and Management of RMNCAH Services in Uganda	(a) Establish the current governance and management structures in Uganda's health system; (b) assess the formation, membership, competencies, and functioning of these structures at the community level; (c) describe enabling and hindering factors for the functioning of these management and governance structures; (d) understand stakeholder perspectives on these structures; and (e) provide recommendations for improvements
12. Accountability Mechanisms in Uganda's RMNCAH Service Delivery: Practices, Challenges, and Implications	(a) Review the current definition and structuring of accountability mechanisms at the different levels of Uganda's health care system; (b) examine the factors influencing accountability implementation at the different levels of the health system; (c) describe the specific relationships and influences between current health accountability processes and results in RMNCAH service delivery and utilization; and (d) generate recommendations for strengthening health accountability and enhancing its specific influence on RMNCAH service delivery, utilization, and results

Source: This table is original to this publication.

Note: AFHS = adolescent-friendly health services; HC = health center; MNH = maternal and newborn health; MPDSR = maternal and perinatal death and surveillance reviews; RBF = results-based financing; RMNCAH = reproductive, maternal, newborn, child, and adolescent health.

SUMMARY OF CROSS-CUTTING FINDINGS AND RECOMMENDATIONS

A summary of the study findings follows and is organized according to the WHO health systems building blocks.

Service delivery

Service delivery considerations include enablers and challenges, as well as recommendations.

Enablers

Across the studies, a fundamental enabler for service delivery is *adequately resourced health facilities*. When health facilities have critical inputs—that is, competent personnel, medicine and equipment, diagnostic and other medical supplies, blood products, infrastructure, and updated standard operating procedures (SOPs)—and effective management, including regular mentorship and supervision of service providers, they can deliver a high quality of services, even at the lower levels of care. For example, investments made to improve the functionality of HC IVs enhanced delivery of interventions for the major obstetric and newborn causes of morbidity and mortality, particularly blood transfusions, and the number of cesarian sections provided between 2016 and 2020.

Additionally, *improved referral pathways for RMNCAH*, including the provision of updated guidelines (MoH 2020), are improving the referral processes and outcomes—albeit at a slow pace. Contributing to this is *improved supervision of health care workers* to ensure use of referral notes and adherence to the formal referral pathway across the levels of care. The use of electronic platforms to *improve communication and real-time data sharing* across health facilities in a referral network has ensured quick referrals and timely care where it has been piloted. Empowerment of community actors, such as VHTs and traditional birth attendants, through *training and incentives* has also helped improve provision of basic information on RMNCAH referrals to the appropriate levels of care.

Challenges

Suboptimal quality of health care service delivery is currently reflected in the long wait times for receiving care; poor attitudes of health workers toward patients; misdiagnoses and delayed referrals (resulting in preventable complications and deaths); and inequity in delivery of services, notably to marginalized minorities. Despite increased investments in the construction of health facilities, the *number of HCs remains inadequate* for meeting the needs of the growing population. Furthermore, with a growing population as well as redistricting, the *catchment areas are expanding*, thereby necessitating upgrades to existing HCs—including the provision of maternity and neonatal wards as well as the accompanying equipment. Also, health workers' *housing remains inadequate*, creating a disincentive for the recruitment and retention of core personnel (for example, physicians, midwives, and nurses) and hampering the rapid deployment of providers in cases of emergencies.

Unreliable transport, insufficient road networks, and poor availability of ambulances to facilitate the transfer of patients remain challenging, especially in hard-to-reach areas. Linked to these challenges is the *limited appropriation of resources for maintenance of road infrastructure and ambulances*, which

impedes the long-term sustainability and availability of this infrastructure and service even when it is provided. In addition to the issues highlighted earlier, a common theme is the *dearth of inputs to deliver services at the HC IV level and below*. While improvements have been made at the levels of GHs and RRHs, enhanced investments are still needed at the lower levels of care. The wide disparity in quality of services rendered between the levels of care compounds the weaknesses in the referral system, as it creates significant burdens on GHs and RRHs. Finally, the studies illustrate that *inadequate support for populations with unique needs* remains.

Services for the unique needs of historically marginalized groups (for example, Batwa, Ik, and Benet), adolescents seeking sexual and reproductive health services, and sexual minorities remain inconsistent and do not follow harmonized guidelines and processes. Furthermore, treatment of these groups is often influenced by individual or community prejudices and perceptions, which influence the provision of health and counseling services as well as accentuate associated stigma and social exclusion.

Recommendations

The studies recommend that the GoU and MoH take the following actions to address service delivery bottlenecks:

GoU

- Increase its budgetary allocations to the health sector to support improved service delivery. Additionally, intergovernmental transfers to the districts—and subsequently to the lower LGs—should also be increased in line with population growth trends, expansion in catchment areas, and with an increasing proportion of allocations going toward core operational investments critical to improve quality of care (such as financing, training, inputs, and governance). These investments should be combined with strengthening accountability for results.

MoH

- Reinforce the National Quality Steering Committees and national and subnational Health Services Quality Departments; invest in training health managers, supervisors, and health workers in quality improvement; and provide the requisite tools for quality monitoring.
- Enhance capacity building for VHTs and other community health care workers, including provision of financial and nonfinancial incentives and formalized training and mentorship to improve the quality and consistency of services rendered.
- Monitor HC compliance with referral guidelines as well as expand the fleet of ambulances, strengthen national call center networks, prioritize the maintenance of existing ambulance and related equipment, enforce guidelines on the appropriate use of ambulances (including penalties for violations), and ensure the adequate provision of emergency medical services personnel to escort patients.
- Widely disseminate, train, and monitor adherence and implementation of policies, guidelines, and SOPs for managing patients with unique needs, including adolescents, historically marginalized communities, sexual minorities, and people seeking specialized services, such as family planning.
- Provide training, sensitization, and incentives to promote better health worker attitudes toward patients, reward effective leadership at the facility level, and emphasize improved sociocultural awareness in managing patients.

- Strengthen collaboration with DLGs to ensure an improved balance in construction of physical facilities with the adequate provision of commensurate inputs (for example, health workers, medicine and supplies, equipment, and utilities).
- Sustain increased investments in the provision of housing for health workers, including exploring innovative and modern technologies that reduce the cost of construction.

Health workforce

Health workforce considerations include enablers and challenges, as well as recommendations.

Enablers

Increased availability of training—on the job and through formal continuing education—has helped improve the technical capacity of the health staff. *Mentorship* by experienced practitioners and *enhanced support supervision* have provided critical guidance for health workers at lower-level facilities, especially in the delivery of comprehensive emergency obstetric and newborn care services, and for recent graduates or less-experienced practitioners. Provision of *scholarships for training* in specific areas of specialization, particularly in anesthesiology, critical care, and nursing, have helped address gaps in the cadre of health personnel. Finally, *development assistance, coupled with financing* from multilateral development banks and government cofinancing, have contributed toward capacity building and expansion of the health workforce.

Challenges

A major challenge has been the persistent *dearth of critical health personnel*, especially physicians, anesthesiologists, midwives, and intensive care nurses. This challenge is compounded by frequent absenteeism of providers and poor leadership by health facility administrators. *Low remuneration* (and limited non-financial incentives) of public health care workers has resulted in high staff turnover, low morale, socioeconomic hardship, “moonlighting,” and—in some cases—poor commitment to the delivery of high-quality services. *Weak customer service orientation and poor attitudes among staff* have resulted in low satisfaction among some patients, especially those from minority and marginalized communities, who may feel discriminated against. Additionally, *minimal on-the-job training, mentorship, and support supervision* exists for specialized training and advanced education. *Outdated staffing norms* have failed to reflect the increasing size of catchment areas, and growing vertical programs have stretched the capacity of personnel. Finally, the application of the “no blame, no shame” approach to investigating and resolving causes of maternal and perinatal deaths has been inconsistent, *undermining a culture of accountability, transparency, ownership* of success or failure, and openness to learning and improving.

Recommendations

The studies propose that the MoH take the following actions to strengthen the health workforce:

- Maintain efforts to provide advanced training for staff as well as to institutionalize the bonding requirement to help improve overall staff competencies, especially at the lower levels of care.

- Leverage development partner assistance to expand systematic mentorship and support supervision to health care workers and, over time, identify approaches for mainstreaming such programs sustainably through domestic health financing.
- Develop and roll out systematic training and sensitization of VHTs and other community-level stakeholders to enhance their knowledge and contribution to the overall health workforce.
- Beyond technical knowledge, train health care workers in sociocultural awareness as well as in good patient-centered practices in line with the principles of quality of care.
- Increase the wages for health care workers (including the provision of non-financial incentives) and standardize remuneration for cadres with similar levels of responsibility.
- Explore the option to recruit health care workers on term appointments or as contractors, with a guaranteed transition to permanent status upon satisfactory performance.

Financing

Financing considerations include enablers and challenges, as well as recommendations.

Enablers

Development partner assistance (donor funds) has helped fill critical gaps in health financing, especially in marginalized areas, such as family planning, adolescent health, community-based health, and support for indigenous communities. Through a combination of partners—multilateral development banks, bilateral partners, global organizations (including Gavi, the Vaccine Alliance, the GFF, the Global Fund, and UN agencies)—the MoH has piloted various tools and filled service delivery gaps. *Programs such as the U.S. President’s Emergency Plan for AIDS Relief*, together with Uganda’s NARC, have contributed to addressing adolescent health issues and filling a gap in adolescent-friendly health services. The design, piloting, and scale up of *performance-based financing* (PBF), while imperfect, have demonstrated both the vital need for increased financing at the frontlines (health facilities) and the potential role for enhancing the quality of health care delivery through incentives that reward strong performance. PBF models have complemented primary health care grants and have been widely used—on the supply side—to support the procurement of medicine and supplies, train health care workers, and procure equipment. On the demand side, PBF models have helped secure vouchers for patients, incentivize VHTs, and support community dialogue activities.

Challenges

All studies emphasize the underlying constraints to service delivery and health systems strengthening as a result of the *severe, chronic underfunding of the sector*. Total spending on health accounts for only 4.3 percent of the gross domestic product (GDP), which is below the average in low- and middle-income countries (estimated at 5.3 percent), lower than the Sub-Saharan Africa regional average of 4.95 percent, and below the WHO recommended minimum of 5 percent of GDP. Further, the average expenditure on the health sector as a proportion of overall government spending since 2016 is 7.8 percent, 2 points short of the Health

Sector Development Plan 2015/16–2019/20 target of 9.8 percent and much lower than the Abuja Declaration of 15 percent per year. Per capita spending on health in Uganda (US\$36) is less than half the WHO recommendation of at least US\$86 (MoH 2019).

Further compounding the limited budgetary allocation for health is the *high level of external financing in the sector*, a majority of which is off budget and thus not consistently tracked. Currently, the proportion of health financing provided by the government of Uganda is 17 percent, compared with 41.4 percent by external funders and by households (out-of-pocket payments). The *overreliance on donor support for health care*, including RMCNAH, limits the capacity of the health sector to decisively lead and coordinate the implementation of activities in the sector. Furthermore, this dependence is not a sustainable position given the uncertainty arising from shocks external to the economy.

Beyond the financial constraints, scope exists for improved *budget performance and execution* within the MoH to ensure that limited resources are optimized. Performance of the health sector budget has increased in nominal terms, but budget execution has hovered between 80–98 percent over the past five years, with an execution of about 81 percent during 2020 (possibility attributable to COVID-19 lockdowns and service delivery constraints).

Recommendations

The studies offer the following cross-cutting recommendations for improving RMNCAH:

- The MoH and the Ministry of Finance, Planning and Economic Development (MoFPED) should fully operationalize the National Health Financing Strategy.
- The MoH and the MoFPED should review existing national, regional, and global evidence on the use of PBF to improve the quality of health service delivery and complement traditional models of health financing. Such evidence and analysis could help inform the adaptation of a PBF or alternative model to improve health financing.
- The MoH should strengthen sectoral reforms that improve efficiency in the use of scarce resources, including in those improving forecasting and quantification to minimize the waste of medicine and other supplies in the face of high unmet needs.
- The MoH should sustain advocacy efforts to secure additional budgetary allocation for health and explore multisectoral collaboration as an approach to leverage resources across sectors to achieve health sector outcomes.

Health information systems

Health information systems considerations include enablers and challenges, as well as recommendations.

Enablers

Increasing use of health management information has helped improve availability of data for stakeholder engagement and decision-making, especially at the district management level. This has been borne out by use of the maternal and perinatal death and surveillance response and the RMNACH Scorecard.

Consistent application of data reports—such as the MPDSR and the Scorecard—is helping improve routine reporting and helping providers appreciate the value of data-driven decision-making.

Challenges

Limited knowledge at the health facility level on the generation, synthesis, and analysis of health data remains a challenge. The use of HMIS data tends to be limited to reporting and compliance, with minimal effort to incentivize, encourage, and promote innovative synthesis of the information to inform decision-making, guide reforms, and make overall inferences that inform health system performance. This problem is compounded by *lack of stock of HMIS tools* and *scarcity of critical inputs*, such as internet access, equipment (laptops and tablets), reliable electricity, and an adequate supply of trained personnel. A *multiplicity of data-reporting systems* has resulted in increased fragmentation in data analysis and reporting, posing additional reporting burdens on facility staff. *Overreliance on biostatisticians and data officers* to generate HMIS data limits the opportunities for other health care providers to quickly generate data in real time and use that information to guide their own actions.

Recommendations

The studies outline the following actions for the MoH to take:

- Scale up the use of electronic medical records in all HC IV facilities, ensure bulk procurement and distribution of HMIS tools to minimize lack of stock, and harmonize data-reporting tools and requisites demanded by implementing partners.
- Provide on-the-job training of health workers in the analysis of monthly service data and identification of issues for immediate action. Also, increase dissemination of data management guidelines and clinical handbooks.
- Leverage development partner financing to provide data tools—computers, tablets, and the internet—as well as to develop a long-term strategy for investing in the provision and maintenance of information communication technology.

Governance and leadership

Governance and leadership considerations include enablers and challenges, as well as recommendations.

Enablers

At the policy level, the GoU has in place *adequate national-level strategies, frameworks, and roadmaps* for different aspects of RMNCAH, including the Sharpened Plan, which provides a harmonizing framework, prioritizing critical interventions across the RMNCAH continuum. National development efforts, including Vision 2040, the NDP III, and sectoral strategies, such as the National Health Policy and the MoH Strategic Plans, all prioritize RMNCAH and provide an *enabling policy environment* for reforms. *Effective District Council and District Health Team leadership* combine to engender an organizational culture that motivates managers to effectively carry out their duties. The recruitment of *competent, high-caliber, and dedicated personnel*, where available, to hospital boards

and Health Unit Management Committees (HUMCs) positively influences the relationships and performance of members in these governance and management structures.

Transformational leadership skills and dynamism have helped select district health officers guide their health teams and managers to improve delivery of health services in resource-constrained environments. *Collaboration between HUMCs and VHTs* can contribute to enhanced community-level engagement on issues, including potentially sensitive areas, such as sexual health and family planning. *Adherence to attending meetings*, as well as *enforcement of regular reporting*, helps create an enabling environment for feedback and accountability. Finally, *effective support supervision and mentorship*, focused on leadership and managerial development, can be vital in strengthening the capacity of facility leaders and of governance and management structures.

Challenges

National-level documents are not always updated or translated into practical guidelines and SOPs for easy access and reference at the point of care (particularly at the lower levels of care). There remains a *dearth of training and sensitization* on the roles, responsibilities, and accountability of governance and management structures, leaving these committees and structures with limited efficacy to provide effective or even adequate oversight. In-charges and other facility-level leadership *lack adequate training in leadership* and face considerable resource constraints, which together inhibits their ability to oversee the delivery of services at health facilities and hold their staff accountable for results. Finally, HUMC meetings, while essential, are *not always fully attended* because of a variety of issues, such as inadequate facilitation and lack of access to transportation. Furthermore, the meetings are also not regularly convened because of financial constraints in organizing and facilitating participants. As a result, while a variety of governance and management structures exist, they are *not always functional or consistently impactful*.

Recommendations

The studies broadly show that more consistent efforts are needed to translate (and update) high-level policy and strategic documents into practical reference guides for practitioners at the district and subdistrict levels. They recommend that the MoH do the following:

- Enhance investments in training for leadership and managerial skills, in addition to the traditional training in clinical competencies, to equip health personnel to take on or appropriately perform leadership and governance roles.
- Establish and routinely update a roster of “master coaches” comprising clinical professionals, district leadership, and retired personnel and district officials to train and guide lower-level health sector governance and management committees and structures.
- Identify alternative means of organizing HUMC meetings (including incorporating virtual meetings) to help incentivize participation as well as minimize the costs of organization.
- Simplify the Public Service Standing Orders and disseminate these to health sector managers and workers at all levels of the health care delivery system to improve the overall understanding of rights and responsibilities.

ORGANIZATION OF THE COMPENDIUM

This compendium presents the results of all 12 studies of the RMNCAH Operational Research Program, with each chapter representing a single study. The chapters are organized into six parts to discuss service delivery, the health workforce, financing, health information systems, and leadership and governance. A separate chapter discusses the lessons learned from all the findings. The compendium also includes two appendixes, one summarizing the key findings and recommendations of each study and one describing the roles of the key stakeholders in the RMNCAH Operational Research Program.

NOTES

1. Uganda has the second youngest population in the world; 50.3 percent of the population is younger than age 15 years (NPA 2020).
2. The new round of the survey being finalized by the government will provide updated information on the actual progress made in RMNCAH to date.
3. No dedicated studies were done on access to essential medicine due to challenges in identifying authors for the proposed studies. Related key issues on medicines' availability and supply chain management emerged, however, in other studies' analyses.

REFERENCES

- MoFPED (Ministry of Finance, Planning and Economic Development). 2021. *Human Capital Development Program: Handbook for Implementation of NDPIII Gender and Equity Commitments*. Kampala: MoFPED. <https://www.finance.go.ug/publication/handbooks-implementation-ndp-iii-gender-and-equity-commitments>.
- MoH (Ministry of Health). 2013. *A Promise Renewed: Reproductive Maternal, Newborn and Child Health Sharpened Plan for Uganda*. Kampala: MoH. https://www.healthynetwork.org/hnn-content/uploads/RMNCH_UG_APR_Nov2013.pdf.
- MoH (Ministry of Health). 2015. *The Health Sector Development Plan 2015/16–2019/20*. Kampala: MoH.
- MoH (Ministry of Health). 2016. *Investment Case for Reproductive, Maternal, Newborn, Child and Adolescent Health Sharpened Plan for Uganda 2016/17–2019/20*. Kampala: MoH.
- MoH (Ministry of Health). 2019. *National Health Accounts 2016–2019*. Kampala: MoH.
- MoH (Ministry of Health). 2020. *National Referral Guidelines*. Kampala: MoH.
- MoH (Ministry of Health). 2021a. *Reproductive, Maternal, Newborn, Child, Adolescent, and Healthy Aging Sharpened Plan II 2022/23–2027/28*. Kampala: MoH. https://www.globalfinancingfacility.org/sites/gff_new/files/Uganda-GFF-Investment-Case-2022-2027.pdf.
- MoH (Ministry of Health). 2021b. *Third National Health Policy: Towards Universal Health Coverage*. Kampala: MoH.
- NPA (National Planning Authority). 2020. *Third National Development Plan (NDP III) 2020/21–2024/25*. Kampala: NPA. http://www.npa.go.ug/wp-content/uploads/2020/08/NDPIII-Finale_Compressed.pdf.
- UBOS (Uganda Bureau of Statistics). 2022. *Uganda Demographic and Health Survey 2022*. Kampala: UBOS. https://www.ubos.org/wp-content/uploads/publications/09_2023UDHS_2022_Key_Findings_Presentation_B.pdf.
- UBOS (Uganda Bureau of Statistics) and ICF. 2012. *Uganda Demographic and Health Survey 2011*. Kampala: UBOS; Rockville, MD: ICF.
- UBOS (Uganda Bureau of Statistics) and ICF. 2018. *Uganda Demographic and Health Survey 2016*. Kampala: UBOS; Rockville, MD: ICF.

Abbreviations

ACHP	African Commission on Human and Peoples' Rights
ACP	AIDS Control Program
ADHO	assistant district health officer
AFHS	adolescent-friendly health services
AHSPR	Annual Health Sector Performance Report
AIDS	acquired immunodeficiency syndrome
ANC	antenatal care
APH	antepartum hemorrhage
ART	antiretroviral therapy
ASRH	adolescent sexual and reproductive health
AWARE	Action for Women and Awakening in Rural Environment
BDR	birth and death registration
BEmONC	basic emergency obstetric and neonatal care
BTC	Belgian Technical Cooperation
CAO	chief administrative officer
CBO	community-based organization
CDC	Centers for Disease Control and Prevention (United States)
CEmOC	comprehensive emergency obstetric care
CEmONC	comprehensive emergency obstetric and newborn care
CFIR	Consolidated Framework for Implementation Research
CI	confidence interval
CME	continuing medical education
COP	communities of practice
COVID-19	coronavirus disease 2019
CRIMS	Civil Registration Information Management System
CRO	Civil Registration Office
CRVS	civil registration and vital statistics
CSO	civil society organization
DALY	disability-adjusted life years
DEC	District Executive Committee
DFID	Department for International Development
DH	District Hospital
DHIS2	District Health Information Software Version 2.1
DHMT	District Health Management Team

DHO	district health officer
DHT	District Health Team
DIT	diffusion of innovations theory
DLG	district local government
EDHMT	Expanded District Health Management Team
EHA	Enabling Health in Acholi
EID	early infant diagnosis
EmOC	emergency obstetric care
EmONC	emergency obstetric and newborn care
EMS	emergency medical services
FGC/M	female genital cutting/mutilation
FGD	focus group discussion
FHI	Family Health International 360
FP	family planning
FY	fiscal year
GFF	Global Financing Facility
GH	General Hospital
GoU	Government of Uganda
HC	Health Center
HCW	health care workers
HIV	human immunodeficiency virus
HMIS	Health Management Information System
HRH	human resources for health
HPV	human papillomavirus
HRIS	Human Resource Information System
HSD	health subdistrict
HUMC	Health Unit Management Committee
ICBII	Institutional Capacity Building (Project) II
ICD	International Classification of Diseases
ICT	information and communication technology
IDI	in-depth interview
IDSR	integrated disease surveillance and response
IFMS	integrated financial management system
IGG	Inspector General of Government
iHRIS	integrated Human Resource Information System
IMR	infant mortality rate
INASP	International Network for Advancing Science and Policy
IPT	intermittent preventive treatment
IUD	intrauterine device
IPV	intimate partner violence
IVEA	Independent Verification and Evaluation Agency
KCCA	Kampala Capital City Authority
KII	key informant interview
KMC	Kangaroo Mother Care
LAM	lactational amenorrhea method
LC	local council
LG	local government
LGPA	Local Government Performance Assessment
M&E	monitoring and evaluation
MakSPH	Makerere University School of Public Health
MCH	maternal and child health

MCSP	Maternal and Child Survival Program
MDAs	ministries, departments, and agencies
MDG	Millennium Development Goal
MDSR	maternal death surveillance and response
MIA	Ministry of Internal Affairs
MJCA	Ministry of Justice and Constitutional Affairs
MMR	maternal mortality ratio
MNCH	maternal, newborn, and child health
MNH	maternal and newborn health
MoDVA	Ministry of Defense and Veteran Affairs
MoES	Ministry of Education and Sports
MoFPED	Ministry of Finance, Planning and Economic Development
MoGLSD	Ministry of Gender, Labour and Social Development
MoH	Ministry of Health
MoICT	Ministry of Information Communication and Technology and National Guidance
MoLG	Ministry of Local Government
MoPS	Ministry of Public Service
MPDSR	maternal and perinatal death surveillance and response
MVRS	Mobile Vital Records System
NARC	National HIV/AIDS Research Committee
NCD	noncommunicable disease
NDP	National Development Plan
NGO	nongovernmental organization
NICU	neonatal intensive care unit
NID	national identification
NIN	national identification number
NIRA	National Identification and Registration Authority
NITA-U	National Information Technology Authority–Uganda
NMR	neonatal mortality rate
NMS	National Medical Stores
NPA	National Planning Authority
NRBFF	National Results-Based Financing Framework
NRH	National Referral Hospital
NTIHC	Naguru Teenage Information and Health Centre
OAG	Office of the Auditor General
OECD	Organization for Economic Co-operation and Development
OPD	outpatient department
OPM	Office of the Prime Minister
OR	Operational Research
PAC	postabortion care
PBF	performance-based financing
PDSR	perinatal death surveillance and response
PEPFAR	Presidential Emergency Plan for AIDS Relief
PFM	public financial management
PFP	private for-profit
PHC	primary health care
PNC	postnatal care
PNFP	private not-for-profit
PPH	postpartum hemorrhage
QI	quality improvement

RBF	results-based financing
RHU	Reproductive Health Uganda
RMNCAH	reproductive, maternal, newborn, child, and adolescent health
ROPA	Registrations of Persons Act
RRH	Regional Referral Hospital
SAMRC	South African Medical Research Council
SARA	service availability and readiness assessment
SDG	Sustainable Development Goals
SDP	Safe Deliveries Project
SDS	Strengthening Decentralization for Sustainability
SGBV	sexual and gender-based violence
SHOPS	Strengthening Health Outcomes through the Private Sector Project
SHRH	Strengthening Human Resources for Health Project
SMGL	Saving Mothers, Giving Life
SOP	standard operating procedures
SRH	sexual and reproductive health
SSI	semi-structured interview
STI	sexually transmitted infection
TBA	traditional birth attendant
TCMP	traditional and complementary medicine practitioner
ToT	training of trainers
UBOS	Uganda Bureau of Statistics
UBTS	Uganda Blood Transfusion Services
UDHS	Uganda Demographic and Health Survey
UgIFT	Uganda Intergovernmental Fiscal Transfers Program
UGX	Ugandan shilling
UMHCP	Uganda Minimum Health Care Package
UNCST	Uganda National Council of Science and Technology
UNFPA	United Nations Population Fund
UNICEF	United Nations Children’s Fund
UOBDU	United Organisation for Batwa Development in Uganda
URHVP	Uganda Reproductive Health Voucher Project
URMCHIP	Uganda Reproductive, Maternal and Child Health Services Improvement Project
URSB	Uganda Registration Services Bureau
USAID	United States Agency for International Development
USSD	Unstructured Supplementary Service Data
UVPA	Uganda Voucher Plus Activity
UVRI	Uganda Virus Research Institute
UWA	Uganda Wildlife Authority
VHT	Village Health Team
VMA	voucher management agent
VSPI	Vital Statistics Performance Index
WHO	World Health Organization
YAPS	Young Adolescent Program Support



**Service
Delivery**

1 Assessment of the Functionality of Health Center IV Facilities in Uganda and Suggestions for Improvement

SIMON MUHUMUZA AND ANTHONY BEGUMISA

EXECUTIVE SUMMARY

In Uganda's tiered health system, Health Center IV (HC IV) is the level of care mandated to provide preventive, promotive, outpatient, curative, maternity, inpatient, laboratory, ultrasound, emergency, surgical, and blood transfusion services. As such, HC IV facilities are critical to the delivery of quality comprehensive emergency obstetric and newborn care (CEmONC) services—a set of lifesaving interventions that treat the major obstetric and newborn causes of morbidity and mortality. Such services comprise cesarean sections and blood transfusions in addition to a set of seven basic obstetric services, or “signal functions,” defined by the World Health Organization (WHO) and the United Nations as being critical to basic emergency obstetric and newborn care:

- Administration of parenteral antibiotics to prevent infection and treat abortion complications;
- Administration of parenteral anticonvulsants for treatment of eclampsia and preeclampsia;
- Administration of parenteral uterotonic medications for postpartum hemorrhage;
- Manual removal of the placenta;
- Assisted vaginal delivery;
- Removal of retained products of conception; and
- Neonatal resuscitation (WHO et al. 2009).

The provision of high-quality CEmONC services is fundamental to addressing the high burden of maternal and newborn care in Uganda because, despite of important progress in maternal and neonatal mortality and morbidity, outcomes remain relatively poor. Uganda's maternal mortality ratio of 336 deaths per 100,000 live births is more than 4 times higher than the United Nations Sustainable Development Goal (SDG) of 70 deaths per 100,000 live births. Moreover, progress on neonatal deaths has been very slow, stagnating at around 27 per 1,000 live births (UBOS and ICF 2018) over the past decade. Importantly, the primary causes of death and illness for both mothers and newborns are

largely preventable and could be addressed through improved provision of CEmONC services at the HC IV level, which is intended to be the first point of care and referral for these services.

Study objectives

The study objectives are as follows:

- To determine the level of functionality of HC IV facilities across Uganda;
- To identify the key challenges in health service delivery at HC IV facilities; and
- To solicit stakeholders' perspectives on how to ensure sustained improvement in the delivery of reproductive, maternal, newborn, child, and adolescent health (RMNCAH) services at HC IV facilities.

Methodology

This cross-sectional study used a mixed-methods approach to collect data—including key informant interviews (KIIs), a review of relevant literature, and a retrospective analysis of data from HC IV facilities from the District Health Information Software Version 2.1 (DHIS2). KII participants included managers for reproductive health and for maternal and child health (MCH) programs in the Ministry of Health (MoH) and health development partners; members of the District Health Teams (DHTs), including the district health officers (DHOs) and assistant DHOs in charge of MCH; and HC IV facility managers. The research was conducted in all 204 HC IV facilities across the 15 subregions nationwide.

Functionality of HC IV facilities was assessed along two main dimensions: (a) their ability to provide the signal functions for CEmONC and (b) the capacity across the six WHO building blocks for health system strengthening (leadership and governance, supply chain management, financing, human resources for health, health information systems, and service delivery).

Key findings

Key findings include those for the provision of CEmONC services and HC IV performance on health system building blocks.

Provision of CEmONC services (signal functions)

This study reveals weak delivery of CEmONC services to address the major causes of maternal and neonatal deaths in Uganda, which cluster around labor and delivery management and include hemorrhage, obstructed labor, complications of abortion, birth asphyxia, trauma, and sepsis. Of the 204 HC IV facilities assessed, only half (103) provide all seven signal functions. This finding suggests that functionality of the HC IVs still falls short of the 60 percent target outlined in the *Health Sector Development Plan 2015/16–2019/20* (MoH 2015).

The provision of cesarean sections and, even more importantly, blood transfusions, remain a central challenge for HC IVs, with only 77.9 percent and 50.5 percent of facilities providing those services, respectively. Basic neonatal resuscitation is also below the 100 percent target, with only 88 percent of facilities having the capacity to deliver this service. All HC IVs provide other basic emergency obstetric

and neonatal care, notably uterotonic medications, parenteral antibiotics, manual removal of the placenta, and removal of uterine products.

Further, the study illustrates that while some improvements have been made over the past decade in enhancing the delivery of CEmONC services in HC IVs, the pace of improvement is relatively slow and unlikely to generate the level of transformative change in MCH outcomes needed to achieve the targets of the National Development Plan (NDP III) and the SDGs.

HC IV performance on health system building blocks

Health system building blocks include leadership and governance, access to essential medicines, financing, the health workforce, health information systems, and service delivery.

Leadership and governance. Leadership of HC IV facilities remains weak, impacting the ability to effectively manage service delivery. Key constraints include limited training of health facility leadership, weak functioning of Health Unit Management Committees (HUMCs), political influence in facility-level decision-making, poor engagement of stakeholders, inadequate capacity in budget planning and execution, poor support supervision and mentorship of personnel, and lack of accountability for results.

Access to essential medicines. Even though Uganda's process for pharmaceutical procurement and supply chain management has improved over time, the system still faces many challenges, including late delivery of medicine and supplies from the National Medical Stores and from the Joint Medical Stores to the districts, discrepancies in quantities ordered and delivered and delays in resolution, delivery of medicines that are near expiration, delays in responding to emergency orders due to fixed order schedules, and health facilities' use of out-of-date procurement plans. These challenges impact the ability to ensure the availability, quality, and predictability of the critical medicine necessary to deliver CEmONC services, including oxytocin, a tracer commodity on the National Essential Medicine List and an essential uterotonic medication.

Financing. Limited health sector financing constrains the ability to ensure adequate supplies of critical inputs for service delivery. The current level of resource allocation to HC IV facilities not only makes it difficult for health managers to adequately plan for all essential health services, but also contributes to the lack of essential infrastructure for CEmONC, such as laboratories and operating theaters for surgical operations; frequent shortage of essential medical equipment and supplies; and suboptimal provisioning of several CEmONC services, particularly cesarean sections and blood transfusions.

Health workforce. Insufficient staffing, a poor work environment, inadequate training, and a staff recruitment structure that does not reflect the expanded role of HC IV facilities or the number of people they serve are additional challenges affecting the optimal provision of CEmONC and other RMNCAH services. These findings agree in part with earlier studies that found that the staffing norms for the health sectors are static, restrictive, and not aligned with the needs of the country's growing population and the rising demand for services (Munabi-Babigumira et al. 2019).

The study also found that HC IV facilities do not have the basic requirements for a functional referral system, such as properly equipped standby ambulances and guidelines for emergency health services to follow when making referrals. These deficiencies often lead to delays in referrals to the higher-level facilities

and poor obstetric outcomes, including the death of women and infants during labor and delivery.

Health information systems. Despite ongoing efforts by the MoH to scale up automation of the Health Management Information System (HMIS) to enable effective management of large volumes of health data at various health system care levels, several challenges hinder the collection, analysis, and use of quality HMIS data to improve programming and delivery of CEmONC functions and other RMNCAH services at HC IV facilities. These include multiple data collection and reporting systems; regular stock-outs of HMIS tools; insufficient data management infrastructure and equipment, such as computers, electricity, and internet connectivity; and lack of data officers and health workers skilled in electronic data management and use. These challenges must be overcome to allow for improved collection, analysis, and use of health information for timely and accurate decision-making.

Service delivery. Although the study findings imply that HC IVs are not operating optimally, the facilities remain an important level of health care delivery for scaling up emergency obstetric and newborn health services because of their proximity to the population. Hence, investment is necessary in key interventions that can reduce the gaps in HC IV capacity to provide optimal blood transfusions, cesarean sections, and neonatal resuscitation. The primary areas of investment include refurbishment of operating theaters; recruitment of all essential maternity staff, including anesthesiologists; and provision of equipment for resuscitation and refrigerators for blood storage.

Recommendations

Recommendations in this section include those for the health system building blocks.

Leadership and governance

The MoH should coordinate with the existing training institutions to design and roll out an in-service capacity-building program for all health workers in the governance, leadership, and management of decentralized health services as part of the mentorship program. This program should include training courses in planning and budgeting for health services, medicine forecasting and ordering, documenting performance management, support supervision, and accountability for results.

District and local governments should adopt innovative approaches, such as high-frequency short messaging of important aspects of the HUMC guidelines, to improve communication with HUMC members and ensure that part of the Primary Health Care Non-Wage Recurrent Budget is allocated to support the oversight activities of the HUMC.

Access to essential medicines

The MoH should consider integrating the various medical logistics management information systems in the MoH and National Medical Stores to enable real-time supply and monitoring of medicine and supply stock to ensure sustained availability at all facility levels. It should also establish performance-based pharmaceutical contracts with health facilities and provide incentives to those facilities to adequately manage their supplies to minimize stock-outs and ensure sustained delivery of RMNCAH services.

Financing

The MoH should strengthen and sustain resource mobilization and strategic purchasing in all HC IVs by institutionalizing the results-based financing (RBF) program to raise adequate resources, optimize results, and achieve better financial risk protection. This work would help enhance not only the effectiveness, efficiency, and equity of the maternal and newborn health services delivered, but also their outcomes at this level of the health care system. In addition, the MoH should continuously lobby the Ministry of Finance, Planning and Economic Development (MoFPED) and Parliament to allocate sufficient funding for RMNCAH services, ensure timely release of funding for their implementation, and monitor its use and impact as part of the state-to-provider and provider-to-citizenry accountability mechanism.

Health workforce

The MoH should coordinate with the Ministry of Public Service to review the staffing structure for HC IV facilities and lower-level facilities and to prioritize the recruitment and sustained training of all personnel who are essential for providing CEmONC and other RMNCAH services, such as physicians, anesthetic officers, and midwives, at all HC IV facilities by including them in the ongoing RMNCAH mentorship activities under the Uganda Reproductive, Maternal and Child Health Services Improvement Project (URMCHIP) and other projects.

The MoH, Regional Referral Hospitals (RRHs) and District Health Offices should reinforce good client-centered clinical practices through training, mentorship, and support supervision of health workers—an important, practical approach for addressing some health facility barriers to RMNCAH service delivery and use.

Health information systems

The MoH should scale up the use of electronic medical records in all HC IV facilities, ensure bulk procurement and distribution of HMIS tools to minimize stock-outs, and harmonize data-reporting tools and requisites for implementing partners, as these strategies would not only help improve the quality of data and facilitate evidence-based management decision-making but also ensure timely and proper monitoring and evaluation of health supplies, staff workload, and utilization and outcomes of services delivered at HC IV facilities.

Service delivery

The MoH should work with health development and implementing partners to prioritize support for closing the infrastructure gaps at HC IV facilities by renovating or completing and equipping operating theaters; establishing suitable blood transfusion amenities; improving work conditions, including staff housing and amenities; and strengthening patient referral services by putting into practice the newly approved emergency medical services (EMS) policy.

INTRODUCTION

Globally, an estimated 330,000 women die from complications related to pregnancy and childbirth each year. Nearly all these deaths (99 percent) occur in developing countries (WHO 2019), with about two-thirds of global maternal deaths occurring in Sub-Saharan Africa. Similarly, neonatal and under-five mortalities are highest in Sub-Saharan Africa, estimated at 27 and 39 deaths per

1,000 live births, respectively (UNICEF 2018). Uganda ranks among the top 10 countries worldwide with the highest maternal, neonatal, and under-five mortality rates (MoH 2016b; UBOS 2016), and the abortion rate, 39 per 1,000 women ages 15–49 in 2013, representing approximately 314,300 abortions, which is higher than the estimated rate for the East African region at 34 per 1,000 women between 2010 and 2014 (Sedgh et al. 2016).

A review of the existing literature indicates that the major causes of maternal mortality in Uganda include hemorrhage, obstructed labor, and complications from abortion. The primary causes of neonatal mortality include prematurity and its complications, birth asphyxia and trauma, and sepsis. These causes are preventable and attributable to poor management of labor and delivery (Chaka et al. 2019; Maswime and Buchmann 2017a, 2017b; Noubiap et al. 2019). Whereas basic emergency obstetric and newborn care capacities exist in HC IIIs, it is the HC IVs, General Hospitals (GHs), and Regional Referral Hospitals (RRHs) and National Referral Hospitals that are designed to provide *comprehensive care*. These health facilities also experience higher levels of institutional maternal and perinatal deaths due to the delayed arrival of pregnant women at these referral facilities and other systemic bottlenecks.

CEmONC services are lifesaving interventions that treat the major obstetric and newborn causes of morbidity and mortality. CEmONC services comprise cesarean sections and blood transfusions in addition to the seven basic obstetric services, or “signal functions,” defined by the WHO and United Nations as critical to basic emergency obstetric and newborn care: (a) administration of parenteral antibiotics to prevent infection or treat abortion complications, (b) administration of parenteral anticonvulsants for treatment of eclampsia and preeclampsia, (c) administration of parenteral uterotonic medications for post-partum hemorrhage, (d) manual removal of the placenta, (e) assisted vaginal delivery, (f) removal of retained products of conception, and (g) neonatal resuscitation (WHO et al. 2009).

National response

In recognition of generally poor outcomes in RMNCAH, the government of Uganda (GoU) and health partners developed the RMNCAH Sharpened Plan to address underlying constraints within the context of the NDP II, the SDGs, and the 2016–30 Global Strategy for Women’s, Children’s and Adolescents’ Health (Kuruville et al. 2016). An overriding goal across these documents has been the identification of core indicators, tracked at the national and global levels to drive improvements in service delivery, notably in quality of care.

To complement these policy directions, the GoU also designed the US\$180 million URMCHIP, which provides resources to directly improve quality of care, including the provision of key inputs (such as personnel, equipment, and infrastructure) necessary to deliver CEmONC services at HC IVs. The government is also working with a broad array of development partners, including civil society actors, to address challenges across the RMNCAH spectrum.

Design of Uganda’s health care system

Uganda’s health care system is governed at the *national level* by the MoH, which oversees, sets policies for, and supervises all health care services. At the *regional level*, RRHs train service providers and supervise service delivery in specific

districts within a subregion. Local government oversees primary health care (PHC) service delivery in GHs at the district level and in HC I–IVs at the subdistrict level (MoH 2016b).

The division of districts into health subdistricts was initiated in 1999 to enhance effectiveness and efficiency in the planning, provision, and monitoring of health services at health facilities closest to the population, creating a hierarchical health care system. The system was designed to integrate services, boost coordination, and fortify linkages between the various health care facility types and levels as well as increase community involvement. Under the health subdistrict structure, the health care system defines the functions of each type of health facility and estimates the patient population of its catchment area as follows:

- The community health workers (considered HC I but without a static facility) are responsible for primary prevention efforts, such as mobilizing the community, treating uncomplicated childhood diseases, and recommending for referral those exhibiting danger signs at the village level.
- HC IIs provide similar care and serve a catchment population of about 5,000 people at the parish level.
- HC IIIs are intermediate referral facilities, offering health care services between those of HC IIs and HC IVs—including antenatal, delivery, newborn care, and postnatal care services—and serve a catchment population of about 20,000 people at the subcounty level.
- HC IVs are the referral facilities for the health subdistrict and serve a catchment population of about 100,000 people at the county or constituency level. In addition to the routine preventive, promotional, curative, maternity, inpatient, and emergency health services, HC IVs are specifically established to provide CEmONC services to reduce maternal and perinatal deaths at the county level where there are no hospitals.

In general, health subdistricts are responsible for routine health service delivery functions, specifically (a) planning and managing health services; (b) monitoring and evaluating the services; (c) ensuring provision of quality health services; (d) supervising and training lower-level health workers; and (e) fostering community involvement in the planning, management, and delivery of health care.

Study rationale

This research was motivated by the persistent challenges Uganda faces in addressing preventable maternal and neonatal deaths. National data point to gaps in quality of care, particularly in CEmONC services provided at health facilities, which influence the poor outcomes observed in maternal and neonatal mortality and morbidity. Following a period of dedicated efforts by Uganda to invest in RMNCAH, the study sought to better understand how HC IV facilities are performing in delivering CEmONC services.

Objectives of the study

In view of the articulated motivation, the specific objectives of the study are to accomplish the following:

- Determine the level of functionality of HC IV facilities across the country;

- Identify the key challenges in health service delivery at HC IV facilities; and
- Establish stakeholders' perspectives on how to ensure sustained improvement in the delivery of RMNCAH services at HC IV facilities.

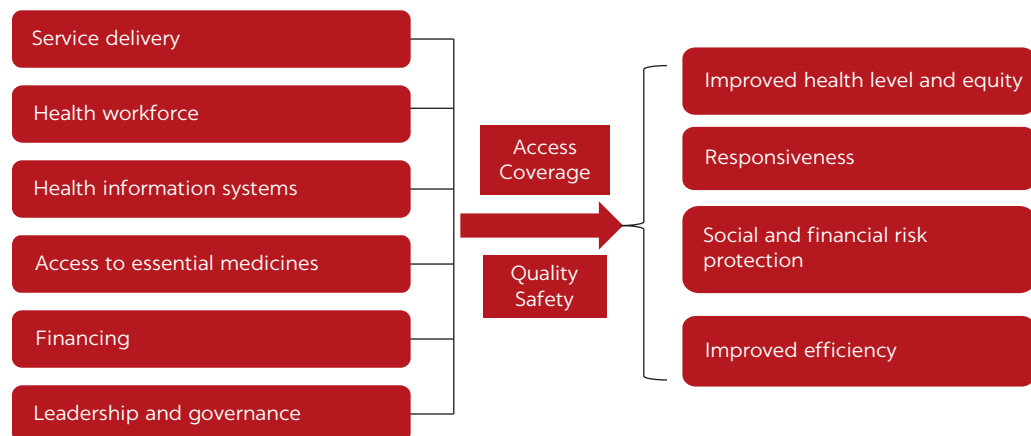
Conceptual framework

The study used the WHO health system building blocks (figure 1.1) as the theoretical framework for the study (WHO 2010). The WHO framework posits that improved access to coverage of quality health services depends on six core elements that work together: (a) leadership and governance to ensure that strategic policy frameworks are in place, that plans and budgets are developed, and that key stakeholder engagement, performance management, support supervision, and accountability for results exist; (b) access to essential medicines to ensure equitable access to medical products, vaccines, and technologies of assured quality, safety, and efficacy and their cost-effective use; (c) financing, which is fundamental to the ability of health systems to maintain and improve human welfare, adequate workforces, medicine and essential commodities, and laboratory diagnostics; (d) a health workforce that is knowledgeable, skilled, motivated, available, and well deployed to deliver quality and equitable health services; (e) health information systems that generate, compile, analyze, and communicate data for use by health providers and managers; and (f) service delivery.

Measurement variables

This study primarily assessed the functionality of HC IV facilities based on their capacity to provide seven of the nine CEmONC signal functions: (a) blood transfusions, (b) basic neonatal resuscitation, (c) uterotonic medications, (d) parenteral antibiotics, (e) manual removal of the placenta, (f) parenteral anticonvulsants, and (g) removal of uterine products of conception. As a result of limited data, the study did not examine functionality of HC IV facilities in assisted vaginal delivery and parenteral anticonvulsants. In addition to the signal functions, the study also looked at HC IV

FIGURE 1.1
WHO health system building blocks



Source: WHO 2010, vii.

functionality by gauging capacity based on the six WHO health system building blocks.

METHODOLOGY

This section discusses study design, sites, and population; data collection methods, tools, techniques, and procedures; data management and analysis; ethical considerations and quality assurance; and study limitations.

Study design

This cross-sectional study used a mixed-methods approach—including KIIs, a review of relevant literature, and a retrospective analysis of data from HC IV facilities using DHIS2. Data sources included managers of reproductive health and MCH programs in the MoH and among health development partners, DHOs and in-charges of MCH services, and in-charges of HC IV facilities.

Study sites

The study used purposive and stratified random sampling techniques to select research sites and participants. The research was conducted in 15 subregions and districts, including Kampala, and in the 204 HC IV facilities nationwide, as indicated in table 1.1.

The Kampala district was purposely selected for being the location of the national offices for the MoH and development agencies involved in the research, while other districts were selected using stratified random sampling. All districts were stratified into 15 health subregions, and 1 district was randomly selected from each health subregion, for a total of 15 districts. In each district, the existing public and private HC IV facilities were stratified by urban and rural characteristics in the same way as in the *Uganda Demographic Health Survey* (UBOS 2016) to allow for geographical representation.

Each facility in the urban and rural strata was assigned a unique number, which was written on a piece of paper, folded, placed in a box, and shuffled; 1 HC IV was randomly selected in each stratum, producing 2 HC IV facilities per district and a total of 30 HC IV facilities for the entire research. The total represents 15 percent of the 204 HC IV facilities that had reported outputs through DHIS2 by the end of June 2020; 87 percent of these were public, 9 percent were private not-for-profit, and 4 percent were private for-profit.

TABLE 1.1 Research subregions and districts in Uganda

SUBREGION	DISTRICT	SUBREGION	DISTRICT	SUBREGION	DISTRICT
Acholi	Gulu	6. Busoga	Mayuge	11. North Central	Mityana
Ankole	Mbarara	7. Kampala	Wakiso	12. South Central	Lwengo
Bugisu	Mbale	8. Karamoja	Kotido	13. Teso	Soroti
Bukedi	Tororo	9. Kigezi	Kabale	14. Tooro	Kabarole
Bunyoro	Hoima	10. Lango	Oyam	15. West Nile	Arua

Source: This table is original to this publication.

Note: Two HC IV facilities were sampled in each district.

Study population

All research participants at the national, district, and health facility levels were selected purposively based on their role and knowledge of the implementation of RMNCAH services. A total of 50 research participants were interviewed: 2 reproductive health and MCH program managers in the MoH, 1 member of the Advisory Committee for the RMNCAH Operational Research Program, 2 managers of MCH and family planning programs in key development agencies supporting RMNCAH service delivery, 15 DHOs, and 30 managers of HC IV facilities.

Data collection: methods, tools, and techniques

The methods used to collect data for each research objective are summarized in table 1.2.

Review of relevant literature

The published and unpublished literature reviewed relates to CEmONC and other RMNCAH services. The researchers accessed the literature from various websites by searching for information on the provision of cesarean sections, blood transfusions, basic neonatal resuscitation, uterotonic medications, parenteral antibiotics, manual removal of the placenta, and removal of uterine products of conception in health facilities. They also searched the literature for information concerning leadership and governance, access to essential medicines, health information systems, health workforce, and financing for RMNCAH at the HC IV level. The key documents reviewed included the MoH's *Annual Health Sector Performance Report (AHSPR)* for 2015–20, the RMNCAH investment case, or Sharpened Plan for 2016–20, URMCHIP's performance management reports, findings of WHO's service availability and readiness assessment (SARA) for 2014.

Retrospective review of DHIS2 data

A structured data extraction form was used to abstract service statistics data on the seven CEmONC signal functions from DHIS2 and the AHSPRs for 2015–20. The data set of each selected HC IV facility for the period covered

TABLE 1.2 Methods and sources for data collection on the functionality of HC IV facilities

OBJECTIVE	RESEARCH METHOD	DATA SOURCE
Determine the level of functionality of HC IVs in Uganda	Review of DHIS2 data	DHIS2 and AHSPRs, 2015–20
Identify the key challenges in health service delivery at HC IVs	Literature review, KIs	RMNCAH National Advisory Committee members, MCH program managers in the MoH, and health development partners; DHT members; HC IV in-charges; national documents related to RMNCAH
Establish stakeholders' views on how to ensure sustained improvement in the delivery of RMNCAH services at HC IVs	Literature review, KIs	RMNCAH National Advisory Committee members, RNs, MCH program managers in the MoH, and health development partners; DHT members; HC IV facilities managers; national documents related to RMNCAH

Source: This table is original to this publication.

Note: AHSPRs = Annual Health Sector Performance Reports; DHIS2 = District Health Information Software Version 2; DHT = District Health Team; HC = Health Center; KIs = key informant interviews; MCH = maternal and child health; MoH = Ministry of Health; RMNCAH = reproductive, maternal, newborn, child, and adolescent health; RNs = registered nurses.

was downloaded from DHIS2 and then reviewed for the provision of key CEmONC services, particularly cesarean sections, blood transfusions, basic neonatal resuscitation, uterotonic medications, parenteral antibiotics, manual removal of the placenta, and removal of uterine products in health facilities. These data were used primarily to assess the functionality of HC IVs in providing CEmONC services.

KIIs

KII guides were used to obtain information from the research participants. The guides consisted of questions about the availability of CEmONC service standards and clinical guidelines handbooks, equipment, medicine, and supplies; infrastructure; staffing levels and health worker competencies, motivation, and remuneration; CEmONC coverage and quality, including referral systems; leadership and governance, including supervision, financing, and delivery challenges and opportunities; and suggestions for improving CEmONC services at HC IVs.

The objective of the KIIs was to obtain information on the challenges of and suggestions for improving delivery of CEmONC services. The interviewees consisted of reproductive health and MCH managers in the MoH, members of the Advisory Committee for the RMNCAH Operational Research Program, MCH and family planning managers in key health development agencies supporting RMNCAH service delivery, District Health Management Teams (DHMTs), and managers of HC IV facilities. National research participants were interviewed by investigators, while research officers or assistants conducted interviews with participants at the district and facility levels.

Data collection procedures

All qualitative data were collected virtually during the period October–December 2020 using telephones and internet-based platforms, particularly Zoom and Microsoft Teams for meetings to prevent the spread of COVID-19. The research team was trained in administering the study instruments and in virtual means of data collection. The tools were then pilot tested among health managers, HC IV facility in-charges, and health service providers in a district that was not included in the study, revised in accordance with the feedback from the pilot testing, and used for actual data collection. Thereafter, the investigators obtained the names and contact information of the key informants from the MoH. Each key informant was individually telephoned, briefed about the research, and asked to suggest a convenient interview date and time for their individual interview.

Before each interview, the identified participant was telephoned and asked to find a quiet and private place to sit. The interviewer explained the purpose of the study and procedure of the interview before obtaining the key informant's consent to participate in the study, after which the interview commenced. The investigators conducted the interviews iteratively, allowing unscripted follow-up questions to emerging issues. The discussions were handwritten and audio-recorded concurrently to ensure full documentation.

Data management and analysis

This section discusses quantitative and qualitative data.

Quantitative data

Data for each selected HC IV facility were downloaded from DHIS2 and exported to Microsoft Excel. Afterward, univariate analyses (frequencies and percentages) were run on the quantitative indicators for HC IV facilities' provision of CEmONC and other RMNCAH services to identify trends. Categorical, nominal, and ordinal variables were presented using bar charts and pie charts.

Qualitative data

Data obtained from interviews were transcribed verbatim and manually coded by paraphrasing the messages into short concepts in the margins of the text. The messages were categorized according to the predetermined and emerging themes of each research objective. Relevant quotes were extracted verbatim from the transcribed text and used to substantiate the relevant findings.

Ethical considerations and quality assurance

The ethical and quality aspects of the study were ensured throughout the proposal development, appraisal, and implementation stages. The RMNCAH Operational Research Program team—representatives from the National Advisory Committee, the MoH MCH Technical Working Group, and the World Bank along with technical experts from the Makerere University School of Public Health—reviewed the entire technical proposal, including all data collection tools, and provided inputs that helped strengthen the study's ethical and scientific components. The National HIV/AIDS Research Committee and the Uganda National Council for Science and Technology reviewed and approved the revised protocol together with all data collection instruments and informed consent forms for ethical and scientific standards. In addition, permission to collect data at HC IV facilities was obtained from the MoH, the sampled district, and HC IV authorities.

During the implementation stage of the protocol, the investigators trained the research teams in the data collection methods, pretested all measurement instruments, and ensured that informed-consent forms were signed before data collection. All research officers signed confidentiality agreements, and informed verbal consent was obtained from all research respondents prior to the interviews. The investigators participated in some of the virtual interviews to ensure adherence to the scientific and ethical standards and procedures. They also supervised the research officers and held daily meetings with them to discuss and provide feedback on the data collection process.

Study limitations

The study relied on a retrospective review of the available data in DHIS2 and national reports to assess HC IVs provision of CEmONC signal functions. The data sources were limited to only seven of the nine CEmONC signal functions, thus quantitative findings on the capacity of HC IV facilities to provide parenteral anticonvulsants and assisted vaginal delivery were omitted from the study. In addition, the availability of only limited quantitative data concerning specific measures for some health system building blocks impeded certain analysis.

Some of the selected research participants at the national level proved unable to honor the appointments for virtual interviews; consequently, either they were not interviewed, or they delegated the interview to other staff, who could not respond to some of the questions. The inability of some critical informants to participate in the interviews might have deprived this study of some additional important information and perspectives.

KEY FINDINGS

This section presents the key findings of study objectives 1 and 2.

1. Determining the functionality of HC IV facilities

Objective 1 of the study was to determine the level of functionality of HC IVs. This objective was assessed based on the percentage of HC IV facilities that offer the seven CEmONC services and the percentage of deliveries handled relative to other health facilities.

Provision of CEmONC services

The study findings indicate the following:

- Of the 204 HC IV facilities, only half (103) provided *all* seven signal functions assessed. This finding suggests that the functionality of the HC IVs still falls short of the 60 percent target outlined in the *Health Sector Development Plan 2015/16–2019/20* (MoH 2015).
- As noted in table 1.3, 100 percent of the facilities provided four of the *basic emergency obstetric and neonatal services* (uterotonic medications, parenteral antibiotics, manual removal of the placenta, and removal of uterine products), and 88.2 percent provided basic neonatal resuscitation.
- The provision of *cesarean sections* and—even more importantly—*blood transfusions* remain a challenge for HC IVs, with only 77.9 percent and 50.5 percent of facilities providing those services, respectively.

Further analysis by health subregion showed that the percentage of HC IV facilities that provide CEmONC services varied considerably, from 22.2 percent in Kigezi to 77.8 percent in Lango subregion (table 1.4).

TABLE 1.3 Percentage of HC IV facilities that provide CEmONC signal functions

CEmONC SIGNAL FUNCTION	HC IV FACILITIES (N = 204)	HC IV FACILITIES (%)
Cesarean section	159	77.9
Blood transfusion	103	50.5
Basic neonatal resuscitation	180	88.2
Uterotonic medications	204	100.0
Parenteral antibiotics	204	100.0
Manual removal of the placenta	204	100.0
Removal of uterine products	204	100.0

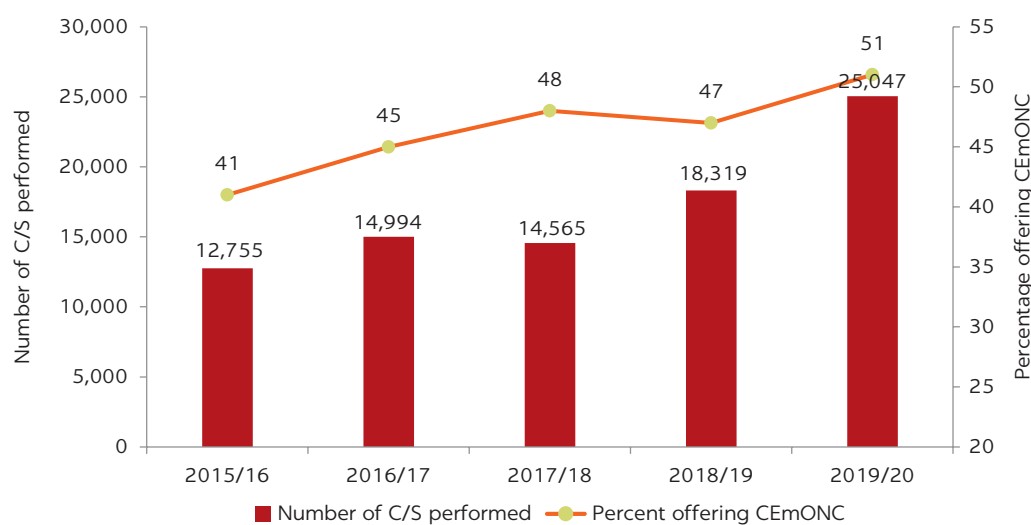
Source: District Health Information Software Version 2.1, 2019–20.

Note: CEmONC = comprehensive emergency obstetric and newborn care.

TABLE 1.4 Percentage of HC IVs that provide CEmONC services, by health subregion

HEALTH SUBREGION	HC IVs THAT PROVIDE CEmONC SERVICES (%)
Acholi	50.0
Ankole	45.8
Bugisu	58.3
Bukedi	50.0
Bunyoro	50.0
Busoga	50.0
Kampala	50.0
Karamoja	50.0
Kigezi	22.2
Lango	77.8
North Central	38.1
South Central	54.2
Teso	63.6
Tooro	63.2
West Nile	58.3

Source: District Health Information Software Version 2.1, 2019–20.

FIGURE 1.2 Trends in HC IVs offering cesarean sections and CEmONC services

Source: Data from Ministry of Health, *Annual Health Sector Performance Report*, select fiscal years.
 Note: CEmONC = comprehensive emergency obstetric and newborn care; C/S = cesarean sections; HC = Health Center.

A trend analysis of data for 2015–20 further shows that the percentage of HC IV facilities that offered CEmONC progressively increased from 41 percent in 2015–16 to 48 percent in 2017–18, dropped slightly to 47 percent in 2018–19, and increased considerably to 51 percent in 2019–20 ($p = 0.04$) (figure 1.2). Similarly, the number of cesarean sections performed at the HC IV facilities progressively increased from 12,755 in 2015–16 to 12,944 in 2016–17, to 14,565 in 2017–18,

and steadily increased in the successive fiscal years up to 25,047 in 2019–20. This steady increase is attributed to the increase in functionality of HC IVs in the same period and is also noted in the 2019 AHPSR, which estimates the functionality of HC IVs at 51 percent and highlights wide regional variations in their functionality.

Overall, the study's findings on the functionality of HC IVs across the signal functions agree with the findings of other studies and assessments. For example, a SARA conducted by WHO in 2014 noted that (a) only half of the HC IVs in the country had adequate capacity to offer CEmONC services, and (b) HC IVs lacked the essential amenities for the provision of critical CEmONC services, such as blood transfusion equipment and supplies; an operating theater; and key staff, particularly medical officers, anesthetists, and midwives (MoH 2020a). The study findings are also consistent with the existing literature, which notes the insufficient provisioning of CEmONC services to address the major causes of maternal deaths, which cluster around labor and delivery management, including hemorrhage and obstructed labor, and the complications of abortion (Chaka et al. 2019; Noubiap et al. 2019). Further, the study illustrates that while some improvements have been made over the past decade in enhancing the delivery of CEmONC services in HC IVs, the pace of improvement is relatively slow and unlikely to generate the level of transformative change in MCH outcomes necessary to achieve NDP and SDG targets.

2. Key challenges in health service delivery at the HC IV level

Objective 2 was to identify the key challenges in health service delivery at HC IVs. The findings are presented within the framework of the six WHO building blocks for health system strengthening.

Leadership and governance

Governance and leadership at the HC IVs was undermined by four factors: (a) weak managerial and leadership skills, (b) weak capacity of the HUMCs, (c) inadequate financial and logistical support for management meetings and stakeholder engagement, and (d) political interference.

Weak managerial and leadership skills. Most in-charges of HC IVs did not have formal training, mentorship, or meaningful experience in the governance, leadership, and management of a health facility. This affected their ability to effectively plan, budget, and manage the implementation of health services in the respective health subdistricts, as one in-charge pointed out:

We are not trained as managers [and] as such we do not have skills in health administration and management of human and financial resources for health . . . Most of us need support in this area.

One DHO corroborated this statement:

In-charges of HC IV facilities are medical officers and knowledgeable in clinical care but do not have the leadership and management skills . . . They need specific training in leadership and management of human, financial, and other resources for health.

Weak capacity of the HUMCs. Although members of the HUMCs are supposed to review and approve work plans and budgets for health facilities, they

were not trained in their roles and responsibilities, and they were neither convened regularly by the health facilities nor periodically supervised by the DHTs. Due to their limited understanding of their mandate and scope of work, coupled with the irregularity of meetings, they often clashed with the health facility technical teams, as one DHO noted:

Some members of the HUMCs have limited knowledge about their work, were not trained in their roles . . . and lack the capacity to oversee the health facilities . . . So, they sometimes overstep their mandate and conflict with other facility technical and management teams.

Inadequate financial and logistical support for management meetings and stakeholder engagement. Although HC IV facilities had schedules for management meetings and other activities, the gatherings seldom took place due to inadequate funds or logistical requirements, such as available means of transportation. Hence, some HUMC members, particularly those who lived far from the health facilities, did not usually attend the quarterly meetings. This was the thrust of the statement of an in-charge for one of the sampled health facilities:

Funding to this health facility is little and often sent late . . . Some of the HUMC meetings and activities are sometimes convened haphazardly, and members are paid a very small sitting allowance. So, some members do not attend meetings due to the meager sitting allowance we usually give them when funds are available.

Similarly, these resource and logistical constraints impacted other stakeholder engagements, including DHMT meetings, as well as direct and open engagement with community actors. Beyond the funding constraints, there were also issues of time and availability of facility personnel to meaningfully prepare for and convene the meetings and community engagements.

Political interference. Health facility leadership also noted the challenges created by politicians in influencing decisions, including hiring of personnel, at the facility level. This degree of interference and influence, which is often beyond the control of health facility management, impacted the quality of staffing as well as other areas of facility management, as one in-charge noted:

Some of our staff were recruited after excessive pressure from political leaders [and] some of these workers do not work to our expectation, and we at times feel like transferring them, but when we try to do so, we are stopped by some powerful people and our powers are undermined.

This issue of interference also influenced other processes, such as annual performance reviews, in which conflicts of interest stood to influence decision-making.

Access to essential medicines

Uganda has an elaborate system for the procurement and distribution of medical and nonmedical supplies to districts and ultimately to health facilities. The sampled HC IV facilities obtained various health supplies using a “pull” system, in which the health facility specifies and orders required supplies from either the National Medical Stores or Joint Medical Stores. This is different from a “push” system, often used in lower-level health facilities and by which supplies are periodically allocated and distributed to health facilities based on the types and burden of diseases treated.

Even though Uganda's process for pharmaceutical procurement and supply chain management has improved over time, the system still faces numerous challenges including the following:

- Late supply deliveries from the National Medical Stores and Joint Medical Stores to the districts;
- Discrepancies in quantities ordered and delivered and delays in resolution;
- Delivery of medicines that are near expiration;
- Inability of the National Medical Stores and Joint Medical Stores to respond to emergency orders due to fixed order schedules; and
- Health facilities' use of out-of-date procurement plans that do not reflect population increases.

These concerns were corroborated in an interview with one DHO:

I have always complained about the inefficiencies of national medical stores . . . We prepare and submit delivery schedule[s] on time to either National Medical Stores or Joint Medical Stores, but they do not usually follow them . . . They usually delay to deliver the required medicines and supplies, and at times do not deliver them in the quantity and types they were ordered . . . The time it takes to follow up and rectify the anomalies is usually long and leads to stock-outs of medicines and supplies.

Similar supply chain concerns were mentioned in an interview with an in-charge of a sampled HC IV facility:

Some drugs are essential for performing cesarean sections, but they don't supply them as expected. Imagine, in a whole cycle they did not supply some items. Sometimes the whole region is not supplied with a particular drug, and that means we cannot perform major surgery. The funds allocated for supplies every two months are very little compared to the current population, and in most cases, what we order for is not supplied, but they will never tell you the reasons why they have not supplied that particular item.

Besides the main supplies from the National Medical Stores, health facilities obtain additional resources through the RBF program of URMCHIP. In participating facilities, part of the RBF program funds can be used to procure medicine specifically from the Joint Medical Stores. This requirement, stipulated in the program's guidelines, is to ensure uniformity in cost and quality across the facilities benefiting from the program. However, some informants at HC IVs complained that Joint Medical Stores prices tend to be higher, which then limits the quantities of medicine and supplies that can be procured, as well as the fixed supply dates for health facilities to receive their orders, which results in occasional stock-outs of some essential medicine and supplies. This concern was corroborated by an HC IV facility in-charge:

We received results-based financing from URMCHIP, and we were allowed to use part of the funds to procure some medicines, . . . but we were told to strictly procure them from Joint Medical Stores, which we found very expensive . . . and limited the quantity of medicines and supplies we were able to buy.

Financing

Health sector financing in Uganda is insufficient, and this limits the coverage and delivery of quality RMNCAH services. Other studies have noted that the current level of resource allocation to HC IV facilities makes it difficult for health managers to adequately plan for all essential health services (Zikusooka et al. 2009a, 2009b), including for those areas that are most instrumental to reducing maternal and neonatal deaths. For example, in 2019–20, the health sector was allocated only 7.2 percent of the total national budget, which is half the Abuja health sector allocation target of 15 percent. The current per capita allocation is US\$17, which is approximately 2.5 times lower than the WHO’s recommended US\$46 needed to achieve universal health coverage.

To address the financing constraints, the GoU, as part of its overall health financing strategy, introduced performance-based financing on a limited scale to generate greater value from the constrained budgetary resources. To this end, the Uganda Intergovernmental Fiscal Transfers Reform Program (UgIFT), approved in 2017, aims to improve the adequacy and equity of fiscal transfers and improve fiscal management of resources by local governments for health and education services. The program is built on a performance-based financing model for service delivery at the decentralized level. URMCHIP, through the use of its RBF scheme, also aims to improve performance in the delivery of RMNCAH services, including CEmONC.

While both these programs and the existing GoU funds for PHC are vital for service delivery at the HC IV level, they still fall short of the needs of the 204 HC IV facilities. Most of the PHC budgetary allocations to the decentralized health system are for staff salaries and other administrative costs. Without a long-term strategy that is fully operationalized to address the systemic bottlenecks in health service delivery, including along the continuum of care for RMNCAH conditions, HC IVs will continue to face challenges in delivering CEmONC services. While the RBF model has helped increase resources at the HC IVs and improve service delivery, its contributions fall significantly short of what is needed for wholesale improvements. Further, URMCHIP closed and the UgIFT is scheduled to end in June 2024, more holistic and long-term planning on the future of health financing in Uganda is sorely needed, specifically for the health sector response to the high RMNCAH disease burden.

Funding constraints coupled with disintegrated budgeting and financing systems create further uncertainties and inefficiencies in the use of the meager resources. Several of the HC IV in-charges made observations similar to that of one particular in-charge who stated the following:

The funds we are always given [are] not enough to carry out all services at this HC IV and other activities, especially the community mobilization and outreach services . . . These activities require a lot of money, which is not provided through budget support. We are just lucky to have implementing partners that support specific services or activities such as immunization, which are usually integrated with family planning and antenatal services through outreaches.

Health workforce

Challenges to the health workforce include inadequate staff, outdated staffing norms, poor work environment, and inadequate training.

Inadequate staff. Although the overall staffing level for HC IV facilities is high, at 88 percent, some facilities lacked essential staff, such as medical officers and anesthetists, negatively affecting the delivery of CEMONC services, particularly cesarean sections. The study found that 73 percent of the HC IVs had the required number of medical officers, while only 47 percent had anesthetic officers. Similarly, the other essential cadres of staff for RMNCAH service delivery, such as midwives and nurses, were insufficient to cope with community demand, as one in-charge of an HC IV facility noted:

This health facility has three midwives, yet it assists over 120 mothers to deliver in a month, which is approximately 40 mothers per month. This is too much workload . . . These midwives do not rest . . . They do not even go on leave . . . If they do so, many pregnant women and newborns would die in labor or in delivery or after delivery . . . This is how bad the staffing situation is at this facility.

Due to the limited staffing at many HC IV facilities, the women who seek various maternal and newborn health services wait for hours to receive what is needed, which discourages some of them from even seeking facility-based services. The in-charge for one of the sampled health facilities shared the following:

In this facility, pregnant women who come for services wait for very long due to the congestion. Some women prefer to either deliver at home or at other places . . . We are only left with those who have no option.

Outdated staffing norms. The current staffing norms for HC IV facilities are outdated and match neither the load of services they are supposed to offer nor the increasing population in the catchment areas of these facilities, as confirmed by one DHO:

The staffing structure for HC IV facilities recommends three enrolled midwives and one nursing officer. This staffing structure was developed when HC IVs were required to provide few services . . . A lot has changed since then . . . More services have been included and yet the staffing structure has not changed. The current number of available health workers at these facilities does not match with the volume of services they are expected to provide.

These findings concur in part with an earlier study, which found that staffing norms for the health sectors are static, restrictive, and not aligned with the needs of Uganda's growing population and the subsequent rising demand for services (Munabi-Babigumira et al. 2019). While the study confirmed that the Ministry of Public Service, in collaboration with the MoH, is updating staffing norms (MoH 2020b), implementing these reforms will necessitate budgetary increases for all health facilities. This is an important consideration, given the historical financial constraints in the sector (as noted earlier), the high burden of wages on current health expenditures, and the need to balance staffing needs with other critical inputs for comprehensive and effective service delivery.

Poor work environment. Although a good work environment encourages health care providers to do their job better, this study found that some health workers at the HC IVs do not provide sleeping accommodations at the facilities although they often must travel long distances from their homes to work and incur high transportation costs; such situations negatively affect their work. In addition, the lack of reliable water and power supplies at some HC IVs

exacerbates work conditions. A poor work environment has demotivated staff at some places, according to the in-charge for one of the HC IV facilities:

Lack of staff housing makes service delivery very difficult. Sometimes we have nobody to attend to pregnant women in the night because some health staff members live far away from the health facilities. Therefore, it is very [inconvenient to summon] them at night to attend to emergencies.

Inadequate training of health workers in the use of tools for RMNCAH service improvement. Although several tools for monitoring maternal and perinatal deaths and responses (such as the maternal and perinatal death surveillance response tool) and improving the quality of RMNCAH service delivery (such as the RMNCAH Scorecard) have been developed and distributed to health facilities, service providers have not been trained in the tools' purposes and how to use them. Therefore, they are rarely employed to improve their work, as one staff member in MoH explained:

Several technical tools have been developed and disseminated to health workers by MoH to enable delivery of quality RMNCAH services, for instance, the Maternal and Perinatal Death Surveillance Response (MPDSR) tool that is used to document mortality and [to] use the data to improve [the] quality of maternal and perinatal services. But most health workers, especially those [who] have just enrolled in the health service, do not know [it] [nor] use it in their work . . . There is [a] need to continuously mentor health workers, especially in HC IV facilities, on use of these tools.

Health information data collection and use

Uganda's HMIS has four primary functions essential for health-related planning and decision-making: (a) data generation, (b) compilation, (c) analysis and synthesis, and (d) communication and use. Despite ongoing efforts by the MoH to scale up automation of health information systems to enable effective management of large volumes of health data at various health system care levels, several challenges hinder the collection, analysis, and use of quality HMIS data to improve programming and delivery of CEmONC functions and other RMNCAH services at HC IV facilities. These challenges include multiple data collection and reporting systems; regular stock-outs of HMIS tools; insufficient data management infrastructure and equipment, such as computers, electricity, and internet connectivity; and lack of data officers and health workers skilled in electronic data management and use.

Findings show that nearly all sampled HC IV facilities collected routine data on a range of indicators in DHIS2, analyzed them according to the desired service coverage and quality indicators, and used the results to determine their performance in service delivery in collaboration with the District Health Department. In addition, the in-charges of HC IV facilities conducted quarterly performance review meetings, during which results of the data analysis, gaps in service delivery, and appropriate responses and resource requirements were discussed. These findings are illustrated in this statement by one DHO:

The HMIS helps to provide data which is used to inform planning. When we review the data, we are able to identify the specific RMNCAH areas that are poor and need emphasis in programming . . . At some point, we observed many pregnancies in a particular subcounty and on the basis of which developed and introduced family planning activities in the area.

Similar findings were also noted by one of the in-charges of HC IV facilities:

We usually organize quarterly meetings to review the performance in delivery of different services and to disseminate results. In the same meetings, we discuss and identify the gaps, develop action plans for addressing the gaps, and set targets for the next quarter and strategies for achieving those targets.

Another in-charge stated the following:

We [have] the obligation to compile and submit different reports to various partners on a weekly and monthly basis. For instance, our records officers compile the Maternal and Perinatal Death Surveillance Report and Option B+ Report on [a] weekly basis, complete the multiple patient registers in all departments, and prepare [the] HMIS 105 report, which is long and cumbersome to fill [out] on a monthly report . . . The records officers [are] overburdened and do not rest during the reporting time.

Another in-charge observed this:

The Ministry of Health does not provide sufficient quantities of all data tools of the HMIS. So, we sometimes experience stock-outs of some data tools. In such instances, whenever the tools stock out, we seek assistance from implementing partners.

The study identified other challenges that affect the quality of data collected, including work overload and lack of training of health information assistants, who are the custodians of data at the health facilities; poor data management practices, such as incomplete and inaccurate entries; and poor storage and recordkeeping. An in-charge of a HC IV facility in another district noted the following:

We only have one health information assistant, who is responsible for summarizing data from the registers and compiling the periodic reports. Because of too much work, the health information assistant sometimes makes mistakes in data entries, takes a long time to correct them, and submits the reports late.

Service delivery

Although the proportion of HC IV facilities that offered CEmONC services increased overall by 10 percent between 2015–16 and 2019–20, the current level of CEmONC services is not sufficient to address the major causes of maternal deaths, which cluster around labor and delivery management and include hemorrhage, obstructed labor, and complications of abortion (Chaka et al. 2019; Noubiap et al. 2019). The major reasons for the nonprovision of cesarean section services include malfunctioning operating theaters and lack of wards for postoperative care.

Nonfunctional operating theaters. The study found that the operating theaters of some HC IVs were nonoperational due to a lack of equipment, supplies, anesthetists, and wards for postoperative care. A review of the national reports showed that 78 percent of HC IV facilities had functional theaters, while 47 percent had anesthetic officers. More than 10 percent of the nonfunctional theatres were in Kigezi subregion, which could explain the low HC IV functionality there (MoH 2020a). The in-charges of some sampled health facilities also reported

TABLE 1.5 Distribution of HC IV facilities with nonfunctional operating theaters, by district

NO.	HC IV FACILITY	DISTRICT	REASON FOR NONFUNCTIONALLY
1.	Bushenyi HC IV	Bushenyi	No theater equipment
2.	Nabiganda HC IV	Butaleja	No theater equipment
3.	Butebo HC IV	Butebo	No anesthetists; lack of equipment (surgical bed, operational sets); poor state of the theater
4.	Maddu HC IV	Gomba	No anesthetists; no functional equipment
5.	Kigorobya HC IV	Hoima	No anesthetists; theater building requires major renovations
6.	Bugono HC IV	Iganga	No anesthetists
7.	Nyamuyanja HC IV	Isingiro	No anesthetists
8.	Rugaga HC IV	Isingiro	No anesthetists; no theater equipment
9.	Mpumudde HC IV	Jinja	No anesthetists; no theater equipment
10.	Kamukira HC IV	Kabale	No anesthetists; no theater equipment; no power supply; no running water
11.	Kataraka HC IV	Kabarole	No theater
12.	Bukasa HC IV	Kalangala	No medical officer; no anesthetists; theater needs major repair; no theater equipment; no power supply; no running water
13.	Nankandulo HC IV	Kamuli	No anesthetists
14.	Kanungu HC IV	Kanungu	Theater under construction; no anesthetists
15.	Nyamirami HC IV	Kasese	No postoperative surgical ward; no running water; no power supply
16.	Bbale HC IV	Kayunga	Theater undergoing renovation
17.	Kikuube HC IV	Kikuube	No anesthetists
18.	Busanza HC IV	Kisoro	No theater
19.	Kumi HC IV	Kumi	No anesthetists; theater incomplete, with no equipment, running water, or power supply
20.	Kaproron HC IV	Kween	No anesthetists; no theater equipment
21.	Ntwetwe HC IV	Kamanzi	No anesthetists
22.	Lwengo HC IV	Lwengo	No anesthetists
23.	Rhino Camp HC IV	Madi-Okollo	No anesthetists; no power
24.	Bubulo HC IV	Manafwa	No anesthetists
25.	Maracha HC IV	Maracha	No theater
26.	Ssekanyonyi HC IV	Mityana	No theater equipment
27.	Semuto HC IV	Nakaseke	Theater is poorly constructed: cracked floor, poor ventilation, poor drainage system, and no wall tiles
28.	Ngoma HC IV	Nakaseke	Theater is poorly constructed: cracked floor, poor ventilation, and poor drainage system
29.	Nabiswera HC IV	Nakasongola	No theater
30.	Rubaare HC IV	Ntungamo	Theater is poorly constructed: cracked floor, poor ventilation, and poor drainage system
31.	Rukungiri HC IV	Rukungiri	No theater
32.	Mwizi HC IV	Rwampara	No anesthetists
33.	Mukuju HC IV	Tororo	No anesthetists
34.	Mulanda HC IV	Tororo	No anesthetists
35.	Kajjansi HC IV	Wakiso	Theater under construction
36.	Yumbe HC IV	Yumbe	Theater under construction
37.	Warr HC IV	Zombo	No anesthetists

Source: Uganda Ministry of Health, Assessment of HC IV Functionality, 2019.

that theaters were either under construction or poorly constructed, with cracked walls, sagging ceilings, poor ventilation and drainage, or untilted floors, or they lacked water and a reliable power supply and hence were unsuitable for surgery. Table 1.5 provides a summary of 37 HC IV facilities with nonfunctional theaters by district and the reason for nonfunctionality.

Lack of blood transfusion services. Some sampled health facilities lacked blood transfusion services. This was attributed to the lack of blood banks (refrigerators), poor blood storage facilities, and the lack of major laboratory equipment and reliable power supply or backup to maintain the blood bank. As such, these health facilities were not accredited by the Uganda Blood Transfusion Services to provide blood transfusions.

Inadequate staff housing, water, sanitation, and hygiene facilities. Some of the facilities lacked staff housing, safe water sources, and well-constructed sanitation facilities for staff and patients; whether adequate or inadequate, they were not protected from intrusion by neighboring families. Some amenities were dilapidated or not regularly cleaned. Hand-washing facilities with soap were commonly not available at many HCs. The shortcomings in staff housing and sanitary facilities not only make it difficult to attract and retain highly skilled personnel, but to also provide quality health services.

Poor referral services. HC IV facilities serve as referral centers for lower-level facilities, as well as referring centers for higher levels of care. However, many HC IVs did not have ambulances or the other requisite elements for a functional referral system. This issue often led to delays in referrals to higher-level facilities, resulting in poor obstetric outcomes. The in-charge for one of the HC IV facilities stated the following:

In most cases, we do not have money for fuel for the ambulance. The health facility does not have a driver for the ambulance . . . The available ambulance is in bad mechanical condition . . . The clients who are referred usually get their [own] means of transport.

RECOMMENDATIONS

Objective 3 of the study was to provide recommendations for strengthening HC IV functionality. The recommendations that follow are categorized under the health system building blocks which, if strengthened, will positively impact outcomes in the signal functions core to HC IV functionality.

Leadership and governance

The MoH should coordinate with the existing training institutions to design and roll out a capacity-building program for pre- and in-service health workers in the governance, leadership, and management of decentralized health services to equip them with basic knowledge, which they can then further develop through mentorship and learning by doing. This program should include training courses in planning and budgeting for health services, medicine forecasting and ordering, documentation of performance management, support supervision, and accountability for results. In addition, the MoH should develop and provide terms of reference with clear job descriptions and deliverables to health workers so they can better understand and implement their governance and management roles.

The district local governments should adopt innovative approaches, such as high-frequency short messaging of important aspects of the HUMC guidelines, to improve communication with HUMC members and ensure that part of the PHC non-wage recurrent budget is allocated to support oversight activities of the HUMC.

Access to essential medicines

The MoH should consider integrating the various medical logistics management information systems in the MoH and National Medical Stores to enable real-time supply and monitoring of medicine and stock to ensure sustained availability at all facility levels. It should also establish performance-based pharmaceutical contracts with health facilities and provide incentives to those facilities to adequately manage their supplies to minimize stock-outs and ensure sustained delivery of RMNCAH services.

Financing

The MoH should strengthen and sustain resource mobilization and strategic purchasing in all HC IVs by institutionalizing the RBF program to raise adequate resources, optimize results, and achieve better financial risk protection. This work would help enhance the effectiveness, efficiency, and equity of the maternal and newborn health services delivered and improve outcomes at this level of the health care system. In addition, the MoH should continuously lobby MoFPED and Parliament to allocate sufficient funding for RMNCAH services, ensure timely release of funding for their implementation, and monitor the use and impact of funding as part of the state-to-provider and provider-to-citizenry accountability mechanism.

Health workforce

The MoH should coordinate with the Ministry of Public Service to review the staffing structure for HC IV facilities as well as lower-level facilities, and prioritize recruitment and sustained training of all personnel essential for providing CEmONC and other RMNCAH services—such as physicians, anesthetic officers, and midwives—by including them in the ongoing RMNCAH mentorship activities under URMCHIP and other projects.

The MoH, RRHs, and district health offices should reinforce good client-centered clinical practices through training, mentorship, and supervision of health workers—an important practical approach for addressing some health facility barriers to RMNCAH service delivery and use.

Health information systems

The MoH should scale up the use of electronic medical records in all HC IV facilities, ensure bulk procurement and distribution of HMIS tools to minimize stock-outs, and harmonize data-reporting tools and requisites for implementing partners. These strategies would not only help improve the quality (accuracy, timeliness, and analysis) of data and facilitate evidence-based management decision-making, but also ensure timely and proper monitoring and evaluation

of health supplies, staff workload, and utilization and outcomes of services delivered at the health facilities.

Service delivery

The MoH should work with health development and implementing partners to prioritize support for closing the infrastructure gaps at HC IV facilities by renovating or completing and equipping operating theaters; establishing suitable blood transfusion amenities; improving work conditions, including staff housing and amenities; and strengthening patient referral services by putting into practice the newly approved EMS policy.

REFERENCES

- Chaka, E. E., M. Mekurie, A. A. Abdurahman, M. Parsaeian, and R. Majdzadeh. 2019. "Association between Place of Delivery for Pregnant Mothers and Neonatal Mortality: A Systematic Review and Meta-Analysis, 2020." *European Journal of Public Health* 30 (4): 743–48.
- Kuruville, S., et al. 2016. "The Global Strategy for Women's, Children's and Adolescents' Health (2016–2030): A Roadmap Based on Evidence and Country Experience." *Bulletin of the World Health Organization* 94 (5): 398–400.
- Maswime, S., and E. J. Buchmann. 2017a. "A Systematic Review of Maternal Near Miss and Mortality Due to Postpartum Hemorrhage." *International Journal of Gynaecology and Obstetrics* 137 (1): 1–7.
- Maswime, S., and E. J. Buchmann. 2017b. "Why Women Bleed and How They Are Saved: A Cross-Sectional Study of Caesarean Section Near-Miss Morbidity." *BMC Pregnancy & Childbirth* 17: 15.
- MoH (Ministry of Health). 2015. *The Health Sector Development Plan 2015/16–2019/20*. Kampala: MoH.
- MoH (Ministry of Health). 2016a. *Reproductive, Maternal, Newborn, Child and Adolescent Health Sharpened Plan for Uganda 2016/17–2019/20*. Kampala: MoH.
- MoH (Ministry of Health). 2016b. *Service Standards and Service Delivery Standards for the Health Sector in Uganda*. Kampala: MoH.
- MoH (Ministry of Health). 2020a. *Annual Health Sector Performance Report for 2019/20*. Kampala.
- MoH (Ministry of Health). 2020b. *Health Sector Ministerial Policy Statement for FY 2020/21*. <http://library.health.go.ug/sites/default/files/resources/Ministerial%20Policy%20statement%20FY%202020-21.pdf>.
- Munabi-Babigumira, S., et al. 2019. "Implementing the Skilled Birth Attendance Strategy in Uganda: A Policy Analysis." *BMC Health Services Research* 19 (1): 655.
- Noubiap, J. J., et al. 2019. "The Burden of Hypertensive Disorders of Pregnancy in Africa: A Systematic Review and Meta-Analysis." *Journal of Clinical Hypertension* 21 (4): 479–88. doi:10.1111/jch.13514.
- Sedgh, G., et al. 2016. "Abortion Incidence between 1990 and 2014: Global, Regional, and Subregional Levels and Trends." *Lancet* 388 (10041): 258–67.
- UBOS (Uganda Bureau of Statistics). 2016. *Uganda Demographic and Health Survey*. Kampala: UBOS.
- UBOS (Uganda Bureau of Statistics) and ICF. 2018. *Uganda Demographic and Health Survey 2016*. Kampala: MoH; and Rockville, MD: ICF.
- UNICEF. 2018. *UNICEF Data: Monitoring the Situation of Children and Women*. <https://doi.org/10.18356/27884201>.
- WHO (World Health Organization). 2010. *Monitoring the Building Blocks of Health Systems: A Handbook of Indicators and their Measurement Strategies*. Geneva: WHO.

- WHO (World Health Organization). 2019. *Maternal Mortality: Key Facts*. <https://rb.gy/yklysb>.
- WHO, UNFPA, UNICEF, and AMDD (World Health Organization, United Nations Population Fund, United Nations Children's Fund, and Averting Maternal Death and Disability). 2009. *Monitoring Emergency Obstetric Care: A Handbook*. Geneva: WHO. <https://apps.who.int/iris/handle/10665/44121>.
- Zikusooka, C. M., R. L. Kyomuhang, J. N. Orem, and M. Tumwine. 2009a. "Is Health Care Financing in Uganda Equitable?" *African Health Science* 9 (S2): S52–58.
- Zikusooka, C. M., R. L. Kyomuhang, J. N. Orem, and M. Tumwine. 2009b. "Will Private Health Insurance Schemes Subscriptions Continue After the Introduction of National Health Insurance in Uganda?" *African Health Science* 9 (S2): S66–71.

2 Review of the RMNCAH Referral Pathway in Rural and Urban Settings in Uganda

GORRETTE K. NALWADDA

EXECUTIVE SUMMARY

Maternal, newborn, and child health complications are primary causes of death in Uganda. Contributing to these avoidable and premature deaths is the weak referral pathway for reproductive, maternal, newborn, child, and adolescent health (RMNCAH). Limited practical understanding and inconsistent application of the *National Referral Guidelines* (Ministry of Health [MoH] 2020b) harm the effectiveness of the referral system. Further, perennial challenges, such as insufficient funding, poor service delivery, and late presentation of cases at health facilities, undermine the effectiveness of the referral pathway and ultimately worsen RMNCAH outcomes.

Study objectives

The objectives of this study are as follows:

- To examine the RMNCAH referral pathway in Uganda from the community level to the various health system facility levels;
- To identify the enablers of and hindrances to an effective RMNCAH referral pathway; and
- To identify practical ways to improve referral pathways for better RMNCAH service delivery outcomes.

Methodology

This study used a mixture of quantitative and qualitative methods to collect data in four districts—Bushenyi, Gula, Kampala, and Pallisa—from pregnant women, mothers of children younger than age 5, female and male adolescents receiving RMNCAH services, and health workers at RMNCAH care points in 10 rural and urban facilities.

Key findings

Key findings include those for RMNCAH conditions referred and the implementation of the RMNCAH referral pathway.

Rmncah conditions referred

The study found that the most common RMNCAH conditions referred were as follows:

- *Antenatal*—anemia, antepartum hemorrhage, high blood pressure in pregnancy, HIV/AIDS, incomplete abortion, and severe malaria;
- *Maternal*—incomplete abortion, obstructed labor, preeclampsia or eclampsia, postpartum hemorrhage, and puerperal sepsis;
- *Neonatal*—asphyxia, low birth weight requiring continuous skin-to-skin contact, preterm birth, and sepsis;
- *Children’s conditions* (ages 2 months to 5 years)—anemia, diarrhea, malaria, nutrition disorders, pneumonia, and sepsis; and
- *Adolescent conditions and needs*—antenatal care (ANC), family planning services, HIV/AIDS, incomplete abortions, sexual and gender-based violence, and sexually transmitted infections (STIs).

Implementation of the RMNCAH referral pathway

The study’s key findings included those related to the implementation of the RMNCAH referral pathway in policy, referral practice, and enabling factors and hindrances.

Policy context. The study found that several key national policies and guidelines outlined specific elements of the RMNCAH referral pathway. Although adequate policy guidance exists, however, in practice, these guidelines are not consistently followed at the point of care or are not appropriately monitored for compliance. Several factors account for this situation, including weak capacity and limited training on and sensitization to the guidelines.

Referral practice. The Uganda MoH has defined a linear pathway for referring patients that begins at the community level, with Village Health Teams (VHTs), and proceeds sequentially through the levels of care, the highest level being the National Referral Hospital (NRH). This process is necessary to ensure that higher levels of care are not overburdened with cases that could be treated at lower levels. However, several factors—such as access to health facilities, trust in the quality of care delivered, cost of services received, attitudes and competencies of health care providers, and availability of transport (including ambulances)—make it difficult for providers to adhere to this process and for patients to follow through. For this reason, several informal referral pathways also exist in tandem with the formal process, choking both Regional Referral Hospitals (RRHs) and NRHs and delaying care for critically ill mothers, newborns, children, and adolescents.

Enabling factors. The study identified several factors that, when present, would enable effective referral for RMNCAH: appropriate and consistent use of referral tools, notably, the referral notes; patients’ ability to pay for services; availability of results-based financing (RBF) incentives to reward appropriate referrals; strong accountability mechanisms at the facility level; community advocacy through VHTs; and the use of digital platforms to automate or facilitate the transfer of referral notes across referring and receiving facilities.

Hindrances. On the supply side, the study underscores the funding constraints that impact negatively on the hiring and training of health personnel, acquisition and maintenance of equipment, availability of essential drugs and

supplies, and adequate provision of utilities (for example, electricity and water). Other problems include weak coordination among facilities in the referral network, poor technical quality of services delivered, inadequate adolescent-friendly services, and difficulty in mitigating the effects of unsafe or illegal abortions.

Demand-side challenges pertain to the distance to facilities and the cost of services. Other concerns include the *perceived* lack of technical competence and poor quality of care provided by VHT or facility health providers, as well as the stigma surrounding HIV/AIDS and STIs, which also impede patients from accessing care.

Recommendations

The study identified ways the MoH in partnership with the Ministries of Local Government, Works, Transport, Education, and Social Protection can improve and enhance the RMNCAH referral pathway:

- **Finalize policy guidance and implement it with training.** The MoH should finalize any further updates to the *National Referral Guidelines* (last updated in 2020) and supplement it with specific health facility-level standard operating procedures (SOPs). Health facility managers and service providers ought to be trained on the guidelines, assisted in being accountable for developing and validating their SOPs, and, where feasible, rewarded. One optional and low-cost approach for training could be to leverage virtual methods to deliver an online course, including assessments and tests. The course should be designed for all providers in the referral pathway, including health care workers, VHTs, and emergency responders. Furthermore, continuous monitoring of referral patterns across all levels is needed to inform the development of new policies and services and improve decision-making along referral pathways.
- **Increase financing.** Increased financing for the health sector is needed to address the bottlenecks in effectively implementing the referral pathway. Some options to consider for financing RMNCAH referrals include increasing the domestic allocation for health; operationalizing the National Health Financing Strategy (MoH 2016c) (including establishing the National Health Insurance Scheme); creating an enabling environment for private-public partnerships; and scaling up performance-based financing models to maximize efficiency and promote accountability.
- **Acquire and deploy ambulances.** The MoH should acquire and deploy adequate numbers of ambulances, with both basic and advanced medical technologies. This task ought to be coupled with strengthening the capacity of emergency medical services (EMS) and the network of dispatch centers. Also of importance, the MoH should engage in partnerships with companies to provide on-time, cost-efficient, and high-quality vehicle maintenance and in addition mainstream the role of the community in the management of ambulances and strengthen partnerships with the private sector for the management of ambulance dispatch systems.
- **Better coordinate, monitor, and manage the referral system.** The MoH should enforce the use of the referral note, including compliance monitoring. It should require and ensure that facilities have clear (costed and financed) SOPs for managing cases, explore or pilot digital options for preparing and sharing referral notes across facilities, and provide guidance on the designation of staff allowed to sign referral notes.
- **Strengthen the quality of care.** The MoH should intensify its efforts to strengthen the quality of care. Proposed approaches for achieving this are by

enhancing the capacity of lower levels of care (for example, VHTs and Health Center [HC] IVs) and increasing their resources; exploring options to remunerate and reward VHTs for quality service; leveraging the skills of medical students to supplement low-level care as needed and where feasible; and clearly delineating and championing a focused quality-of-care agenda with the implementation of relevant governance and institutional arrangements (such as establishing national quality steering committees and national and subnational health services quality departments, training health managers, supervisors, and health workers on quality improvement, and providing the requisite tools for quality monitoring). Although these efforts are ongoing, there is a need to sharpen the focus and deepen engagement, including increasing resources to support the ambitious agenda.

- **Digitize screening and dispatch.** To help manage referrals in and out of high-burden facilities—such as RRHs and NRHs—the MoH should establish electronic referral-based triage centers, where all referrals are quickly screened and recommended to the next stage along the pathway. This would not only help accelerate the review process, but also provide an electronic platform that facilitates the rapid circulation of data from referring facilities to receiving facilities and allow access to it by providers and emergency respondents along that pathway.
- **Generate greater demand by strengthening community partnerships.** To address the negative attitudes, misinformation, and misunderstandings surrounding referrals for RMNCAH and risk assessment, the MoH should strengthen partnerships with community health organizations to increase and improve the quality of sensitization, mobilization efforts, and consider contracting local transporters to help women to get to the health facilities.
- **Strengthen multisectoral and multistakeholder partnerships.** The MoH, at the central and local levels, should actively promote multisectoral and multistakeholder partnerships, particularly with the Ministries of Works, Transport, Education, and Social Protection as well as with the private sector and civil society, to improve referral policies and programs. Within this context, public, private and civil society actors can jointly formulate and agree on strategies and approaches for enhanced referrals, with each group focusing on areas of greatest interest and competency.

INTRODUCTION

RMNCAH conditions represent a critical public health challenge in Uganda, accounting for more than 60 percent of years of life lost in the country (MoH 2016). RMNCAH care outcomes in Uganda are poor, as illustrated in the *Demographic Health Survey* (UBOS and ICF 2018) reporting a fertility rate of 5.4 children per woman, neonatal mortality rate (NMR) of 29 per 1,000 live births, infant mortality rate (IMR) of 43 per 1,000 live births, and maternal mortality ratio (MMR) of 336 per 100,000 live births. The low achievement on these high indicators has been attributed to poor health care-seeking behavior, lack of access to health services, low quality of care, high cost of services, inadequately remunerated staff, insufficient supplies of drugs and essential equipment, and lack of effective referral services in the country (Namazzi et al. 2015).

Even beyond Uganda, it is often hard to predict pregnancy complications, and many such cases rapidly become life threatening. In developing countries, complications—among them hemorrhage, obstructed labor, ruptured uterus, eclampsia,

unsafe abortion, sepsis, preterm birth, anemia, malaria, and pneumonia—are the main causes of emergency referrals and death, because health systems are often fragmented, with poorly functioning referral systems and pathways (Hussein et al. 2012; World Bank 2007). Women often deliver at home, far from emergency obstetric services, yet maternal and newborn deaths could be prevented if functional referral systems were in place to allow pregnant women to reach appropriate health services when complications occur (WHO 2016).

As noted earlier, Uganda has a high MMR, more than twice the global average of 152 per 100,000 live births cited in the Gates Foundation’s 2021 *Goalkeepers Report* (Bill and Melinda Gates Foundation 2021). Furthermore, its IMR and NMR far surpass the global averages of 11 and 17 per 1,000 live births, respectively (UNICEF 2021). COVID-19 and its impacts have also taken a toll on the health of women, newborns, and infants, as mothers have faced disruptions in prenatal care and delivery.

The government of Uganda (GoU) developed the RMNCAH investment case, also known as the Sharpened Plan, for 2016/17 through 2019/20 (MoH 2016b) to intensify efforts to improve outcomes in critical areas, including that of maternal, newborn, and infant health. The Sharpened Plan aims to help Uganda, in line with the objectives of the National Development Plan (NDP), to progressively reduce maternal, newborn, and infant deaths with the overall objective of meeting the global Sustainable Development Goals. Reaching the ambitious targets in its NDP and contributing toward attaining the global average MMR of 70 per 100,000 live births, as well as achieving an NMR of 12 or fewer deaths per 1,000 live births, will require significant reforms, including, most notably, in the referral pathway, which remains an area where many preventable maternal and newborn deaths occur.

National health system

The provision of health services for Uganda is decentralized, with subnational entities—districts and health subdistricts—playing a key role in the delivery and management of health services. The health services infrastructure consists of NRHs, RRHs, General Hospitals (GHs), HCs (with levels II–IV), and VHTs. A no cost-sharing policy is in place for all public health facilities for curative, preventive, rehabilitative, or promotive health services.

The private sector plays an important role in the delivery of health services in Uganda, covering about 50 percent of the reported output (MoH 2012b). Private health services are sourced from both private not-for-profit (PNFP) and private for-profit (PFP) providers and from traditional and complementary medicine practitioners (TCMPs). The contribution of each subsector to overall health outputs varies widely. The PNFP providers are more structured and prominently present in rural areas, whereas the PFP providers are mostly concentrated in urban areas. TCMPs are found in both rural and urban areas; the services provided are not, however, consistent, varying from traditional practices in rural areas to imported alternative medicines, mostly in urban areas.

Public health service delivery and referral in Uganda are sequenced from the lowest points of service delivery in the communities (the VHTs) to the highest (the NRHs), with the range of health services varying with the level of care. Fully functional referral mechanisms require open lines of communication along referral pathways and efficient procedures with clear and simple linear steps.

Study rationale

The available evidence is lacking on the nature and structure of referral pathways, patterns, pre-referral care, care during referral, and post-referral along the continuum of care at health facility and community levels (Murray and Pearson 2006). Gaps exist in understanding the contents of referral notes, potential delays that follow problematic identification of a health problem, follow through of referrals, appropriateness of pre-referral interventions, and the outcome of referrals that if not addressed may impact patient RMNCAH outcomes (Fronczak et al. 2020). Theoretically, informed collective and structural research is still required on the referral care needs of the poor and marginalized populations and on the pathways and implications of the rural and urban health care referral networks (Murray and Pearson 2006). Given changing patterns in referrals, it is extremely important to explore challenges, opportunities, and lessons learned in regard to resistance to and hesitancy over referrals. No up-to-date and well-organized tools are available to comprehensively measure referral pathways for RMNCAH in line with globally agreed measurement frameworks (WHO 2016).

Objectives of the study

This study set out to do the following:

- To examine Uganda's RMNCAH referral pathway from the community level to the various health system facility levels;
- To identify the enablers of and hindrances to an effective RMNCAH referral pathway; and
- To identify practical ways to improve the referral pathways for better RMNCAH service delivery outcomes in Uganda.

Theoretical model and conceptual framework

This study examined two aspects of the theoretical model and conceptual framework: quality of the maternal and newborn health care model and the systems approach and referral for RMNCAH.

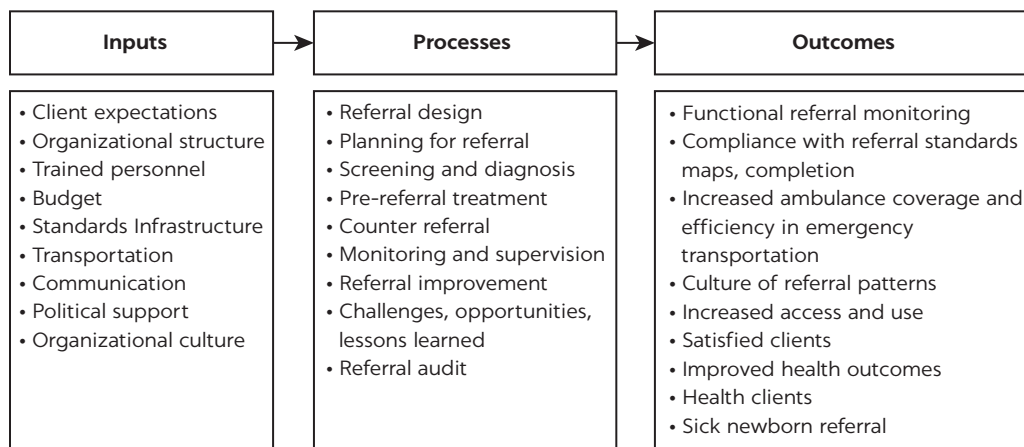
Quality of the maternal and newborn health care model

Quality of care is the extent to which health care services provided to individuals and patient populations improve desired health outcomes (WHO 2016). To achieve a high quality of care, health care, services must be safe, effective, timely, efficient, equitable, and people centered. This study was guided, in part, by the WHO framework for the quality of maternal and newborn health care within Uganda's health system (WHO 2016).

Health systems create the structure that enables access to quality care and allows for the process of care to occur along two important and interlinked dimensions: (a) the provision of care and (b) the experience of care. Based on this framework, quality of care requires competent and motivated human resources and the availability of essential physical resources. Also necessary are evidence-based practices for routine and emergency care, actionable information systems for recordkeeping that enable review, and audit mechanisms and functional referral system levels of care.

Systems approach and referral for RMNCAH

The study applied a systems model to examine the linkages among structural inputs, process, and outcomes for the functional referral systems for RMNCAH.

FIGURE 2.1**Applying the systems approach to referral pathways for RMNCAH**

Source: This figure is original to this publication.

Functional referral pathways for RMNCAH were assessed across family planning services, antenatal services, maternal care during labor and delivery, newborn care shortly after childbirth and the immediate postnatal period, integrated management of neonatal and childhood illness, and adolescent-friendly health services. In each of these six areas, the organization of health service delivery key inputs (that is, referral and information exchange), processes, and outcomes were explored in line with WHO standards, Uganda's national guidelines, and the RMNCAH Sharpened Plan strategic framework (see figure 2.1).

METHODOLOGY

This section discusses the study design, sites, and population; data collection methods, tools, and procedures; data management and analysis; quality control and data triangulation; the multistakeholder validation workshop; ethical considerations and assurance; study limitations and mitigation; and external validity of the study.

Study design

This study used mixed quantitative and qualitative approaches were used to collect data from pregnant women, mothers of children younger than age 5, female and male adolescents attending RMNCAH services, and health workers at RMNCAH care points. The qualitative exploratory design encompassed direct questioning that captured the feelings and opinions of health care providers, managers, and patients. Analysis of their responses revealed the social, cultural, economic, and other contextual factors influencing current referral patterns and behaviors and indicated how these are likely to change in the future.

Study sites

To ensure regional representation, the study was conducted in four districts of Uganda: Bushenyi (Western), Gulu (Northern), Kampala (Central), and Pallisa (Eastern). These locations were selected to represent districts with medium and high RMNCAH burdens, based on maternal and newborn mortality, child

TABLE 2.1 Study site distribution, by facility type

FACILITY TYPE		DISTRICT	URBAN	RURAL	TOTAL
Public facilities	Buteebo HC IV	Pallisa	n.a.	X	1
	Dino HC II	Gulu	n.a.	X	1
	Kabushaho HC III	Bushenyi	n.a.	X	1
	Kyabugimbi HC IV	Bushenyi	n.a.	X	1
	Lalogi HC IV	Gulu	n.a.	X	1
	Naguru RRH	Kampala	X	n.a.	1
	Pallisa DH	Pallisa	X	n.a.	1
Subtotal			2	5	7
PFP and PNFP facilities	Angule HC III	Pallisa	n.a.	X	1
	Bitooma HC III	Bushenyi	n.a.	X	1
	Lacor Private Hospital	Gulu	X	n.a.	1
	Subtotal			1	2
Total facilities			3	7	10

Source: Ministry of Health, Uganda National Health Facility Master List, 2017.

Note: DH = District Hospital; HC = Health Center; n.a. = not applicable; PFP = private-for-profit; PNFP = private-not-for-profit; RRH = Regional Referral Hospital.

mortality, teen pregnancy, and an unmet need for family planning (MoH 2016). Referral patterns were studied at 10 health facilities of different levels and their respective catchment areas (1 RRH, 2 District Hospitals [DHs], 2 HC IVs, 3 HC IIIs, and 1 HC II) across the districts. The sampled sites include government (public) facilities, PNFP facilities, and PFP facilities in both rural areas (seven facilities) and urban areas (three facilities) (table 2.1).

Study population

The study population consisted of the following:

- Patients and clients referred for RMNCAH services;
- VHTs and health facilities through or in which RMNCAH cases are referred;
- Health care providers, including the in-charges and those who handle referred cases at facilities;
- Health system support personnel, including information and human resources officers;
- Health care managers at the facility, health subdistrict, and district levels; and
- Key stakeholders, including members or staff of local councils, nongovernmental organizations and community-based organizations, health programs, and development partners.

Data collection methods, tools, and procedures

Data collection methods, tools, and procedures included literature and medical records review and qualitative data tools and informants.

Literature review

A wide range of literature was examined to determine existing policies, guidelines, and reported issues related to Uganda's current RMNCAH

referral system. MoH policies and guidelines were reviewed as either electronic or print documents. Those from internet searches were obtained using the keywords and phrases “Uganda,” “national policy,” “referral pathways,” and “reproductive, maternal, neonatal, child, adolescent health.” The documents selected for review must have been from the past 10 years, relevant to referral for RMNCAH services in Uganda, and involve pertinent policies and guidelines, protocols, NDPs, or referral guidelines and protocols (for example, the MoH Health Management Information System [HMIS] manuals). The documents covered referral-related thematic areas—inputs (for example, policies, guidelines, standards, and organization structure for referral), process (for example, referral design, forms, and referral planning), and outputs.

Review of medical records

Trained data collectors at all sampled facilities reviewed the medical records of expectant mothers, women attending postnatal visits, newborns, children younger than age 5, and adolescents ages 10–19 who received primary health care (PHC) services (such as maternal, newborn, and child health [MNCH] care, HIV/AIDS care, family planning, cancer screening, ANC, intranatal care, postnatal care [PNC], or postabortion care). Data were extracted from the records using a review guide. The last 15 records of the categories of patients and clients of interest in the most recent and available registers were extracted from the Antenatal Register, Integrated Maternity Register, and Outpatient Department Register and were reviewed; additional maternal and child health (MCH) and family planning records were reviewed to reach the target number of 15 adolescent patients.

The records were reviewed to ensure that they met the following conditions:

- *ANC*: referrals for blood pressure >140/90, HIV-positive status, or anemia;
- *Integrated maternity services*: referrals for preeclampsia or eclampsia, postpartum hemorrhage (PPH), obstructed labor, postabortion care, or sepsis;
- *Newborn care*: referrals for preterm, low birth weight, asphyxia, or newborns requiring kangaroo mother care (KMC);
- *Outpatient department for children ages 2 months to 5 years*: referrals for diarrhea, pneumonia, or nutrition disorders;
- *Sick infants up to age 2 months*: referrals for documented signs of serious infection and relevant diagnosis (such as sepsis, severe pneumonia, malaria, or meningitis) referred to higher-level facilities or treated at receiving facility or referrals for pneumonia or fast breathing (respiratory rate >60 per minute); and
- *Adolescents*: referrals for STIs, HIV/AIDS, family planning, gender-based violence or sexual violence, postabortion care, or ANC.

In reviewing the medical records, the goal was to understand the organization and structure of the referral process; identify the different stakeholders involved in the referral process; determine what referral data are collected, how they are collected, and how they are used; and identify other referral and counter-referral practices across health facilities. The records review also aimed to identify the key bottlenecks in the referral system, such as providers who do not refer patients, underused services, or insufficiently established linkages between services.

Qualitative data tools and informants

Guides for key informant interviews (KIIs) and focus group discussions (FGDs) for health care providers, facility in-charges, and VHTs were informed by the WHO *Standards for Improving Quality of Maternal and Newborn Care in Health Facilities*, Uganda's Demographic and Health Surveys, Uganda's Maternal and Child Health Integrated Program, Uganda's HMIS data, and other instruments. A separate in-depth interview (IDI) guide was developed and used to facilitate each patient interview. Key informants in study districts and catchment areas of selected health facilities were purposively selected for inclusion in the study. They consisted of health managers (for example, district health officers, subcountry chiefs, senior assistant secretaries, and health subdistrict in-charges), local council members, representatives of civil society organizations, program managers, planning managers, health system support personnel (for example, information officers, human resources officers), other actors (such as development partners and VHT members), and clients receiving RMNCAH and HIV/AIDS services.

General FGDs. FGD participants were purposely selected, with each group comprising 6–12 participants and the discussion lasting about 1 hour. The discussions were scheduled and conducted at nonpeak hours or after outpatient department hours to avoid disruption of services. Audio-recorded data were transcribed directly into English. The aim was to determine (a) challenges and opportunities for and lessons learned from referrals for RMNCAH services; (b) client-to-health provider or client-to-community health worker interactions before and during referrals; (c) structural or systemic readiness to provide quality MNCH services; (d) type of information provided to patients or clients; and (e) technical and nontechnical aspects of RMNCAH care, including referral linkages.

Health care provider FGDs. Purposive and snowball sampling were used to select health care providers and health facility directors, who were interviewed remotely (for example, by telephone, Skype, or Zoom) for health facility inputs. Ten facility directors were interviewed to gather specific information about RMNCAH referrals at specific points of care (for example, ANC, labor and delivery, newborn care, outpatient care for children, family planning, and adolescent health). A total of 100 health workers providing RMNCAH services participated in 10 remotely facilitated FGDs.

The aim was to gather information on three key inputs for RMNCAH referral before, during, and after arrival at the referral site: (a) the use of up-to-date, written clinical protocols and guidelines for the identification, management, and referral of women with complications related to pregnancy and childbirth and of newborns; (b) the availability and use of appropriate medicines and medical supplies for the stabilization and pre-referral treatment of referred women and newborns; and (c) the triage system at admission and the mechanism on the wards to assess, identify, and respond to emergencies immediately.

Patient IDIs. The snowballing technique and purposive sampling were used to identify patients and clients who had been referred in emergency and nonemergency situations from the community and TCMPs or from one facility to another for MNCH services. These included mothers of children younger than age 5, pregnant women, early postpartum women, and female and male adolescents. A total of 30 IDIs were conducted remotely by telephone, Skype,

or Zoom. The following categories of patients and clients were interviewed:

- Patients or clients referred for any of the categories (that is, emergency conditions for ANC, maternity, or women with sick infants or children under age five) before discharge from the facility;
- Women, including adolescents, in the catchment areas of the selected facilities who were pregnant, who had given birth within the previous three months and were attending PNC or MCH clinics, or who were identified by community health workers; and
- Adolescents who were not pregnant and those with no history of previous deliveries but who were attending MCH or child clinics.

The selected patients were asked about their decision-making processes for seeking RMNCAH services; experiences with, perceptions of, and attitudes toward referral; their views on transport options, communication processes, and associated costs; the challenges and opportunities of the referral process; and their perception of the quality of RMNCAH services provided. The exact number of patient interviewees was determined on a site-by-site basis to ensure adequate representation of the different study populations. The principle of saturation was applied in the qualitative data collection.

Data management and analysis

Both quantitative and qualitative data were managed and analyzed.

Quantitative data

Data from the review of medical records were coded to generate quantifiable responses before being entered into a database by trained clerks using EpiData version 3.1 software. Data entry screens were developed with appropriate skip patterns and validation rules to ensure accuracy. After entry, data were cleaned and analyzed. The clean dataset was exported to STATA software for descriptive and analytical statistics, which were then summarized and displayed using proportions, pie charts, and graphs.

Qualitative data

All qualitative data from IDIs, KIIs, and FGDs were collected in local languages, transcribed, and translated into English by the interviewers. The interviewers consisted of medical and social scientists who ensured that the thoughts and expressions of the respondents were captured. The trained interviewers made written notes in addition to the audio recordings. As the research team reviewed the recordings and notes from the interviews, codes were created and used as tools to interpret the text, and categories and subcategories of common ideas were constructed from the groups of codes to determine themes for reporting. Relevant quotations were extracted from primary data and presented verbatim.

Quality control and data triangulation

The study instruments were designed to generate information specific to each study objective to avoid a mix up of data and ensure flow and consistency during data collection. Research assistants received intensive orientation on data collection methodologies, and the study instruments were pretested at an HC IV in the Kayunga District before actual data collection. The use of research officers

based in each district limited language barriers and ensured the quality of the data collected. The officers supported participant selection, recruitment, interviewing, and transcription. Quality assurance measures also included debriefing the research team daily through Zoom, Skype, and teleconferencing.

During data collection, the principal investigator and other supervisors were assigned to oversee data collectors and review field notes. Supervision entailed checking for completeness, accuracy, and consistency during data entry to ensure real-time data quality checks and corrections. All digital data were edited, stored, and managed according to best practices for visual data using current technologies.

To ensure that the data were reliable and valid, the research team triangulated the data sources and researchers and used multiple qualitative methods (IDIs, FGDs, and KIIs) and quantitative methods.

Multistakeholder validation workshop

Under the auspices of the MoH, the World Bank Group in partnership with the Makerere University School of Public Health organized a stakeholder validation workshop to share the preliminary findings from the field and solicit comments and views from stakeholders. The workshop helped with the interpretation of findings from the research, reflection on plausible implementation strategies, and discussion of the interconnectedness of findings at the macro-, meso-, and micro-levels, all of which helped to inform the design and development of innovative approaches to create (or satisfy) demand for referral services. Feedback on the findings greatly improved the draft report.

Ethical considerations and assurance

Informed consent was obtained from all participants prior to their engagement. Each participant was apprised of the risks and benefits associated with the study, and confidentiality was maintained for all interviews and FGDs. In the case of underage patients and clients, parental consent was obtained.

Ethical clearance was given by the National HIV/AIDS Research Council's Institutional Review Board and the Uganda National Council for Science and Technology, and the MoH and the respective local governments involved in the study provided administrative clearance. All individuals involved in the research signed a nondisclosure agreement.

Study limitations and mitigation

The study design was based on the use of robust methods for mixed-methods research. However, certain factors, described in this section, influenced the research design and had implications for the study results.

COVID-19 transmission

To minimize the risk of COVID-19 transmission during the data collection process, remote methods, specifically telephone, Zoom, and Skype, were used for interviews and FGDs. The use of remote methods may have limited the ability to develop rapport, to better understand the context and status of the interviewees, and to interpret nonverbal cues. Researchers addressed this constraint by using trained interviewers and facilitators and requested clarifications when responses

were unclear. Furthermore, to the extent feasible, the virtual interviews were carried out in quiet, secure venues to maintain participant privacy and confidentiality.

Accuracy of data

The use of virtual interviews and discussions and review of medical records may have resulted in incomplete or inaccurate data. Researchers addressed this potential limitation by triangulating data.

Disparities in participant selection during data collection were mitigated by training research assistants and pretesting the tools ultimately used.

External validity of the study

Although the results may be limited to the participants' geographic region, they may be generalizable to low-income countries and, to some extent, wherever the referral pathways and quality gaps involving RMNCAH referrals are likely to be similar.

FINDINGS

The key findings of the study are presented in four parts: (a) RMNCAH conditions referred, (b) the RMNCAH referral pathway, (c) enablers of the pathway, and (d) challenges or hindrances to the pathway.

Key RMNCAH conditions referred

Overall, most cases were referred at an extremely critical state, thus resulting in poor outcomes. At the GH level, a shortage of critical supplies (especially a lack of blood products and operating theater supplies) led to referrals to RRHs or NRHs, although the complications noted can and should be managed at the GH level. A review of medical documentation, including maternal registers, revealed the following conditions as the most commonly referred.

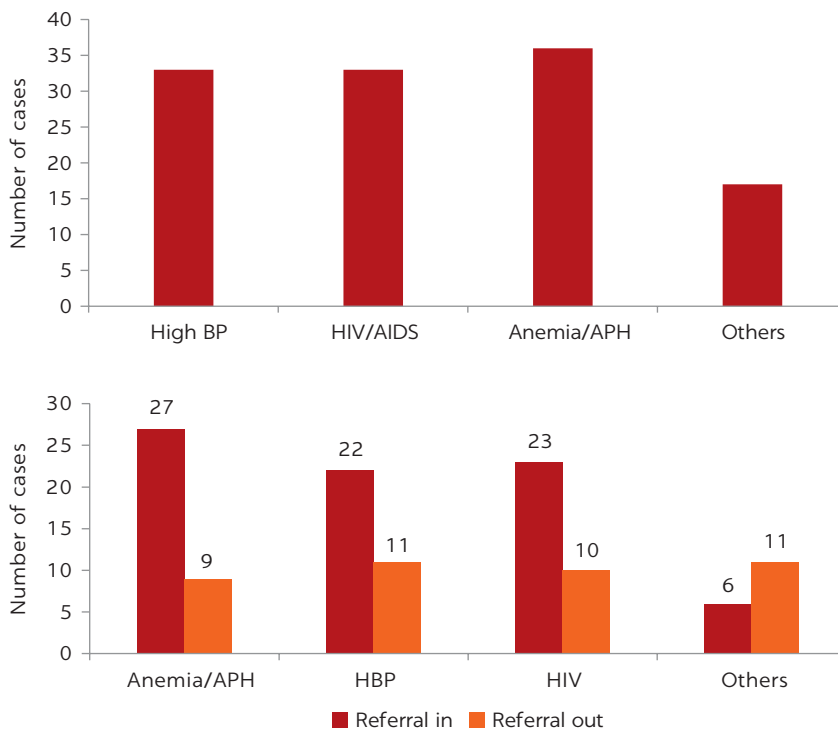
Antenatal conditions

Antenatal conditions included anemia and antepartum hemorrhage, high blood pressure, HIV/AIDS, incomplete abortion, and malaria. The review identified two pregnant women who had died before or during transfer to higher-level facilities for childbirth or for further management during the data collection period, during January and February 2020. Most referrals were to higher-level facilities, for example, to DHs and HC IVs. Figure 2.2 provides details on the referred conditions and levels of care referred to or from.

Maternal complications

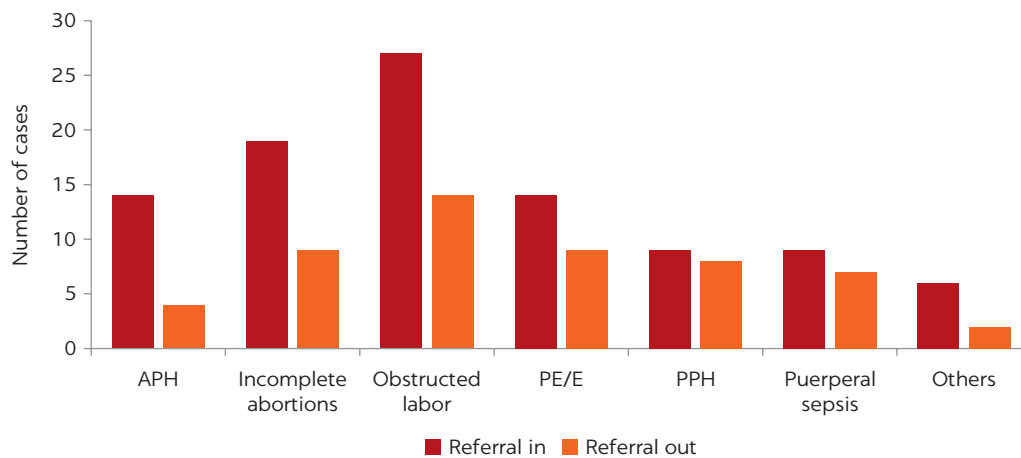
Maternal complications included obstructed labor, incomplete abortion, preeclampsia or eclampsia, PPH, and puerperal sepsis. Most of the obstructed labor-related referrals were from lower-level facilities (HC IIIs and HC IIs). It was rare to find cases of women who had been referred in which the information on the outcomes was later fed back to the referring facility (see figure 2.3).

FIGURE 2.2
Most common ANC conditions referred



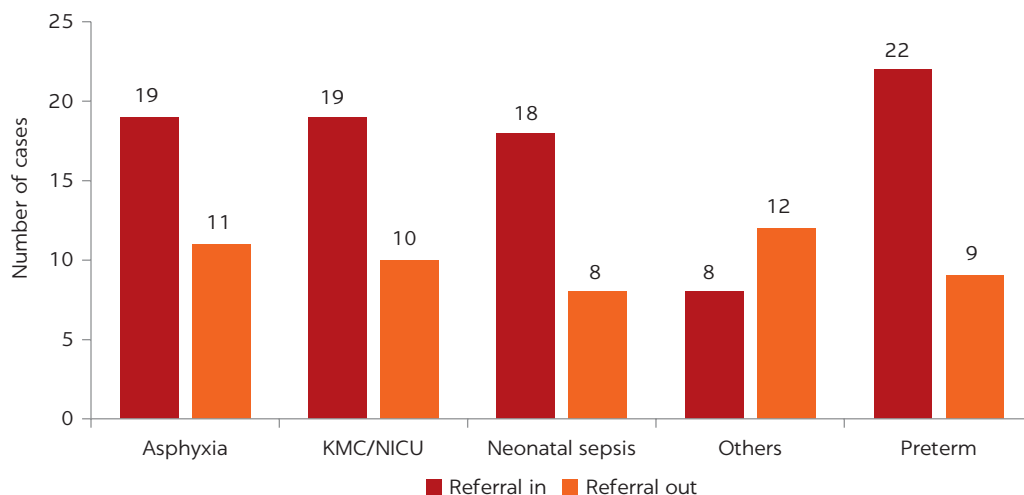
Source: Uganda Ministry of Health service records and registers.
 Note: APH = antepartum hemorrhage; BP = blood pressure; HIV/AIDS = human immunodeficiency virus / acquired immunodeficiency syndrome.

FIGURE 2.3
Referrals, in and out, for maternal complications



Source: Uganda Ministry of Health maternal service records and registers.
 Note: APH = antepartum hemorrhage; PE/E = preeclampsia/eclampsia; PPH = postpartum hemorrhage.

FIGURE 2.4
Referrals, in and out, for newborn complications



Source: Uganda Ministry of Health integrated maternity register.
 Note: KMC = kangaroo maternal care; NICU = neonatal intensive care unit.

Newborn complications

Newborn complications include asphyxia, low birth weight requiring KMC, preterm birth, and sepsis. Most pregnant and early-postpartum women and newborns were referred without emergency transport. A review of the Integrated Maternity Register further revealed two newborn deaths before or during transfer (figure 2.4).

Complications in children (age 2 months–5 years)

Children’s complications included anemia, diarrhea, malaria, nutrition disorders, pneumonia, and sepsis. A review of medical documentation identified one child who died during transfer to a higher-level facility.

Complications in adolescents

Adolescent complications included ANC, gender-based or sexual violence, HIV/AIDS, incomplete abortions, and STIs. Evidence of structures for family planning and adolescent-friendly health services was minimal.

The RMNCAH referral pathway from community level to health system facility levels

In terms of the referral pathway, specific elements have been defined in national policy documents and other guidelines. This policy guidance does not, however, always get translated into action according to recommended practice. This section explains the policy landscape for the RMNCAH referral pathway and discusses what occurs in practice.

Policy context

The GoU has articulated aspects of the patient referral system through a combination of published national policies, strategies, and guidelines. These include,

most notably, the *Third National Development Plan (NDP III) 2020/21–2024/25* (MoH 2020); *Second National Health Policy* (MoH 2010); *Health Sector Development Plan 2015/16–2019/20* (MoH 2015); *National Policy Guidelines for Sexual and Reproductive Health Services* (MoH 2012b); *Investment Case for Reproductive, Maternal, Newborn, Child, and Adolescent Health Sharpened Plan for Uganda 2016/17–2019/20* (2016b); *Uganda Clinical Guidelines 2016* (MoH 2016); and *National Referral Guidelines* (MoH 2020). These documents describe the patient referral system from the community level (VHTs) through the highest level (NRHs).

The *National Referral Guidelines* and *Uganda Clinical Guidelines* provide details on processes for identification, management, and the referral of women with complications related to pregnancy and childbirth and of newborns, children, and adolescents. The documents present important policy and strategic guidance, but they have critical cross-cutting gaps that impede effective operationalization. Notable challenges are as follows:

- Whereas the available documents provide clarity on such areas as the roles and responsibilities of different stakeholders, a disconnect remains between having developed the guidelines and application on the front lines. Some health care providers appeared to lack an understanding of each actor's roles and responsibilities as well as a clear understanding of the *National Referral Guidelines* in particular; some did not even know that the guidelines existed.
- None of the documents presents options for or alternatives to referring or managing patients who cannot afford services at higher levels of care.
- While most of the plans in the documents reviewed are costed, financing sources are not explained or delineated, which makes it difficult to implement proposed actions. As a result, the *Health Sector Development Plan* notes that a financing gap of 54 percent remains in the implementation of key actions integral to strengthening the referral pathway.
- The existing documents also do not provide adequate guidance on community-based interventions within the referral pathway or clearly defined roles for VHTs, traditional birth attendants, traditional healers, and other community stakeholders.

Table 2.2 provides a summary of the key policy and strategic documents and their respective coverage or gaps of referral pathway actions relevant to RMNCAH.

Implementation of the referral pathway

The referral system is a formalized process that requires a patient from a lower-level facility to obtain a referral note from the health workers in that facility to visit the appropriate higher-level facility. The referral note serves as the primary reference for tracking a patient through the levels of care until treatment is obtained, follow-up is completed with the referring physician, and the patient is re-referred to the point where referral began.

As set out by the policy and strategic documents, the referral pathway begins at the community level and, ideally, should follow a linear path through the various levels of care: VHT; HC II, HC III, or HC IV; DH or GH; RRH; and, finally, NRH. In practice, other kinds of ad hoc referral pathways exist that although not codified remain prevalent. The first type, which can be described as an *informal, horizontal* referral pathway, is found primarily at the community level and among community health workers, traditional birth attendants, and community organizations. Within this informal network in rural communities, providers

TABLE 2.2 Review of selected RMNCAH-related policies

POLICY	ASPECTS RELATED TO RMNCAH AND ITS REFERRALS	COMMENTS
Adolescent Health Policy Guidelines and Service Standards (2012)	Intended to operationalize the National Adolescent Health Policy and guide stakeholders, program officers, and service providers on criteria to set up or scale up adolescent-friendly services.	Offers limited guidance on referrals for adolescents, on referrals between schools and health facilities, and referrals for adolescents in school (ages 6–19). Consistent with other RMNCAH policies, with a detailed monitoring and evaluation framework.
Health Facility Quality of Care Assessment Program (2020)	Details the expected standards of care, including when health workers should refer patients for specific RMNCAH conditions. Also details the tools expected at each level of service delivery to facilitate referrals.	Should be reviewed for alignment with the <i>Uganda Clinical Guidelines</i> .
Health Sector Development Plan (2015/16–2019/20)	Underscores the need to establish a referral system. Under service delivery systems, emphasizes delivering the essential health services package, referral system and ambulance service, community health services, and supervision and quality of care. The document's review of the plan for RMNCAH referral focuses on improvement of women's and children's health outcomes. Describes the referral actions for basic emergency obstetric and newborn care and for comprehensive emergency obstetric and newborn care but not for postnatal care.	Limited clarity on how to implement the costed plan for referrals at all levels of care.
National Policy Guidelines for Sexual and Reproductive Health Services (MoH 2012)	Provides an overview of the process of referral and counter-referral for RMNCAH services. Details the care services expected at each health facility level up to HC IV.	Does not provide specific guidance on which conditions need to be referred and how. "Referral" is stated broadly as a necessary action when a facility cannot offer or provide services. Because these are guidelines or service standards, the document should, but does not, have dedicated sections for different RMNCAH conditions detailing when health workers should refer a patient.
National Referral Guidelines (2020)	Outline the principles, structure, and practicalities of referring patients within Uganda's health system (public and private) and outside the country. Also detail the roles and responsibilities of the different stakeholders and facility levels, types of referrals, tools for referral, and the monitoring and evaluation system for the referral process.	As of writing, the updated guidelines had not been disseminated.
Second National Health Policy (2010)	Highlights the need to strengthen a national referral system for primary, secondary, and tertiary care, and, specifically for lower-level facilities, to enable the referral system to function. The Maternal Newborn and Child Health cluster, included under the Uganda Minimum Health Care Package, identifies the priority health care interventions and services the government will focus on to address the high disease burden in the country. Prioritizes high-quality facility services and functional integration within the public and private sectors and addresses human resources constraints.	Well-stated policy and strategy statements. Mentioning RMNCAH as a focus area is sufficient for a policy document.

Source: This table is original to this publication, based on analysis of MoH 2010, 2012a, 2012b, 2015, 2020a, and 2020b.

Note: HC = Health Center; RMNCAH = reproductive, maternal, newborn, child, and adolescent health.

refer patients for different types of support and, in some cases, they deter patients from using services at higher levels of care. Some reasons include affordability and accessibility as well as traditional notions of appropriate care for expectant mothers, newborns, and children.

The second referral pathway, an *inter- or intrafacility referral*, is for critical cases for specialized and other integrated services within the same facility or

within the same level of care. A third pathway is the *downward referral* to community-based organizations or shelters and applies especially to conditions requiring social and psychological support. Fourth is the *nonhealth or clinical referral* to the police or other duty bearers, such as the Family Protection Unit for legal affairs, for issues concerning children, adolescents, and gender-based violence.

This study focused on the patient's journey through the *formal, vertical referral* pathway. The decision to seek care at HCs or hospitals is made either by the patient or their family or by a provider, and the majority of referrals to an HC are from VHTs. In general, the decision to seek health care at HCs or hospitals was reported to be made if the patient did not recover from initial remedies or treatments and needed to access laboratory services and trained health care providers in a public, PNFP, or PFP facility. Patients seemed to prefer PNFP facilities the most, due to their perceived balance of quality of care, quality of service delivery, and affordability.

Once patients arrive at the point of care, they should be made to follow several steps articulated in the guidelines. These steps involve arrival; screening; patient consultation and checkup; patient education; rapid diagnostic tests, if available; contact tracing; prescription of medicine; back referral; and management of comorbidities. If further referred and the patient follows through to the hospital for specialized diagnosis and treatment, care at this level involves consultation, diagnostics, treatment, back referral or follow-up, and contact tracing.

The study also found that, in terms of the responsibilities of different actors at the community and health care settings, little clarity existed regarding roles, so different stakeholders performed referral functions in an ad hoc manner.

Enablers of an effective referral pathway

The study identified the following enabling factors for the RMNCAH referral pathway:

- *Use of referral notes* was helpful in tracking patients through the referral pathway. Also, the availability of health care provider escorts for referrals was linked to positive outcomes for patients.
- *Patients' ability to pay* for services provided greater flexibility in accessing care across the different levels.
- *Use of incentives* from the RBF program, funded under the Uganda Reproductive Maternal and Child Health Services Improvement Project (URMCHIP) or the Uganda Reproductive Health Voucher Project, played an important role in enhancing referrals. For example, the turnaround time for laboratory results was reduced because patients referred to the laboratories from MCH service points were given priority. The RBF funds were reported to complement PHC funds to meet adolescent health needs, procure referral-related supplies, secure vouchers for patients, use incentives for VHTs, and support community dialogue activities.
- *Strengthened accountability*, especially in the case of donor-financed programs, helped ensure enhanced vigilance about monitoring and evaluation and better RMNCAH outcomes. In this regard, the availability of robust results frameworks, along with adequate data collection and analysis platforms linked to the HMIS, was important.

- *VHTs have an important role to play in demand generation.* The clinical knowledge of VHTs is limited, and therefore their legitimacy is sometimes questioned by patients and health care providers alike, but in some cases VHTs were good at sensitizing communities and patients. Some patients interviewed had been referred by VHTs and were pleased to have been informed about the facility services available to address their conditions.
- *Virtual communication* exchange between HCs and hospitals, using an internet-based tracking referral system piloted in the Kampala Capital City Authority, was observed to be an essential innovation.
- *When the service was within a reasonable distance of the patient's residence,* and the perceived benefits of the referral service outweighed the cost, participants reported that socioeconomic factors ceased to be a barrier.

Challenges of and hindrances to an effective referral pathway

The barriers to an effective RMNCAH referral pathway in Uganda are extensive and are summarized in table 2.3. The challenges and hindrances are categorized as supply- and demand-side drivers.

RECOMMENDATIONS

The following study recommendations are primarily geared toward the MoH in partnership with the Ministries of Local Government, Works, Transport, Education, and Social Protection.

Finalize policy and operating guidelines

The MoH must finalize updates to the *National Referral Guidelines* and supplement it with specific facility-level SOP templates. Health facility managers and service providers should be trained and held accountable for developing and validating their SOPs. Furthermore, the MoH should develop a curriculum, aligned with the guidelines, to train health care providers as well as VHTs. Where practical, the MoH may consider simulation exercises that test the resilience of the system in managing referrals along the continuum of care.

In addition, the MoH, working with facilities and patients, must develop or update standard referral notes and registers based on current trends and the needs of health care workers at all health units. This would improve communication and feedback mechanisms between referring and receiving facilities and consistently draw on referral data collection, analysis, and interpretation and on referral system information for decision-making. Continuous monitoring of referral patterns is needed to inform development of new policies and services and accompanied by appropriate communication strategies to ensure that implementers understand any updates to the policy framework.

Pursue long-term health financing, including universal health coverage

A fundamental challenge constraining effective implementation of the RMNCAH referral pathway is financing. A long-term health financing approach is needed

TABLE 2.3 General referral pathway challenges

REFERRAL CHALLENGES	DESCRIPTION
SUPPLY SIDE	
Financing	Health care providers across all levels of care (HCs and hospitals—public, private, PFP, and PNFP) emphasized the lack of funds as a fundamental constraint on managing patients through the referral pathway.
Limited health system inputs	<p>Linked to financing are the limited quantities and low quality of health system inputs to ensure service delivery and the appropriate provision of care to patients along the referral pathway.</p> <ul style="list-style-type: none"> • Inconsistent application of guidelines. Facility directors reported that the use of up-to-date, written clinical protocols and guidelines for the identification of patients, pre-referral, and referral care management was inconsistent or not enforced. As a result, providers' approaches to managing patients were largely ad hoc and not always compliant with the <i>National Referral Guidelines</i>. • Inadequate human resources. The dearth of critical health personnel in Uganda (such as physicians, anesthesiologists, midwives, and intensive-care nurses) remains a challenge, compounded by limited training opportunities, weak support and supervision, frequent provider absenteeism, and poor leadership by the health facility administration. • Unreliable utilities. The lack of a reliable potable water supply, frequent power outages and few stand-by generators, and poor sanitation measures inhibit the proper functioning of HCs and hospitals, impacting the quality of care. In addition, limited internet connectivity is a barrier to the rapid recording and sharing of information across the different levels of care to facilitate swift management of referred patients. • Medicine and supplies. Frequent stock-outs of essential drugs, particularly lifesaving MNCH medications—such as magnesium sulfate, oxytocin, hydralazine, and blood products for transfusions—create a barrier to treating referred patients and sometimes lead to asking patients to pay for services, medicine, and supplies that should ideally be paid for by the government. • Equipment. The failure of equipment to function, due to wear and tear or to an unreliable power supply, combined with the unavailability of technical staff to run diagnostic equipment (for example, X-ray machines), poses challenges for screening, diagnosing, and treating patients. • Transport and ambulances. Ambulances are inequitably distributed, wrongly deployed, nonfunctional (including lacking fuel), or nonexistent. Ambulances and other vehicles for emergency transport were limited to hospitals and HC IVs and reported to take longer than the recommended 30-minute response time. Other forms of transport for referred patients included motorcycles and bicycles, both of which, while less expensive, present risks or are unsuitable for severely ill patients. Furthermore, medicines and supplies, including oxygen for stabilization and pre-referral treatment, varied across rural and urban areas and higher- and lower-level facilities. The triage system to respond to emergencies was limited to hospitals.
Weak coordination of referrals within and across levels of care	While the <i>National Referral Guidelines</i> stipulate the need for the different levels of care to work in unison and in tandem, no central coordinating entity exists to streamline the functioning of this network of providers. Formal processes for coordinating referrals in and out, inter-referrals, and transfers across and within facilities were reported to be poor and ineffective. Consequently, communication across referring and receiving facilities is mostly informal, hindering the readiness of receiving facilities to manage referred patients. Health care providers also reported the absence of updated lists of facilities to enhance interfacility coordination within a network or geographic area and the lack of formal agreements, communication arrangements, SOPs, and a feedback system to support interfacility partnership.
Inconsistent or limited use of referral notes	Referral notes are not consistently or appropriately filled in and, in some instances, are not signed because of a lack of clarity about the authorized signatory. The poorly enforced use of referral notes inhibits the ability to track patients along the referral pathway and ensure that they receive appropriate care. Also, health care providers are unable to track when patients were referred and received, where there were delays, and the referral outcomes, which further constrains the ability of the MoH and facilities to correct a treatment course.
Quality of services delivered	Across levels of care, the low quality of care received creates a hindrance to effective referrals, which can impact clients' future health care-seeking decisions. Long delays at both referring and receiving centers was a common theme across study sites, with health care providers underscoring the impact that high patient volumes combined with limited resources have on rapid triaging, treatment, and referral of patients. In many instances, the large workload requires prioritizing cases. Emphasis is given to severely ill patients or, although unlawful, to those able to pay for preferential treatment. Referrals from VHTs to NRHs tended to be deprioritized because of the perceived or real waste of time of highly technically trained health workers in cases that could be managed at lower-level facilities. The quality of referral services varied, with the quality of care in private facilities perceived to be slightly better than in public ones, where the quality of care provided at the lower-level facilities (HC IIs–HC IVs) followed more informal processes and was indeed worse.

continued

TABLE 2.3, continued

REFERRAL CHALLENGES	DESCRIPTION
SUPPLY SIDE	
Adolescent-friendly services	Health care providers at public facilities are reluctant to discuss safe abortion due to abortion's illegality. ^a Instead, they refer patients to private facilities willing to offer “undercover” safe abortion services. Informants expressed uneasiness and discomfort about the lack of clarity on the most appropriate and ethical channels for supporting clients interested in illegal abortions while also supporting such patients to mitigate the risk of unsafe abortions.
DEMAND SIDE	
Access to care	Access to health facilities is a barrier for patients to obtain care. For example, patients interviewed mentioned that referrals to distant health facilities (DHs, RRHs, and NRHs) posed challenges because of the financial implications for arranging transport and other supports to travel to the receiving facility and because of the return trip to the primary physician or referring facilities for feedback and follow-up care. In some cases, severely ill patients prefer to be referred back to lower-level facilities (or to return home) to receive supportive treatment rather than be admitted to costly higher-level facilities.
Costs of receiving care	Poverty affects referral patterns and health care-seeking behavior. Financial constraints were a primary hindrance to patients following through on referrals, especially referrals to hospitals and private facilities perceived to be costly. Patients reported illegal requests from health care providers for undercover payments, which many patients could not afford, and they perceived their inability to pay as ultimately impacting their ability to receive care. An alternative for some patients to accessing care in the formal health establishment was to resort to religious institutions, herbalists, or traditional healers. Patients with no financial barriers had more freedom to access care at receiving facilities, but they also tended to prefer facilities that had a good reputation or better suited their specific needs.
Perceived knowledge and competence of health care providers	While VHTs are closer to communities and can leverage informal networks to refer patients to HCs, in some cases, their referrals were contested by patients or by some health care providers. This issue was attributed to the perceived lack of technical competence and credibility of VHTs. Furthermore, at the facility level, some patients reported a lack of religious, cultural, or gender sensitivity by health care providers that made them less likely to follow through on recommended referrals.
Quality of care received	Inadequate service delivery—including long waiting times, poor customer service, unavailability of key health personnel, and stock-outs of needed drugs and supplies—all affected patients' willingness and ability to follow through on referrals and receive needed care. These factors not only impacted current behaviors but also had lasting effects by discouraging patients from following through on future referrals as well.
Stigma	The stigma associated with HIV/AIDS and other diseases influences patients' likelihood of seeking or following through on referrals. This issue was also witnessed in adolescent-friendly health services, where patients expressed reluctance to receive referrals for conditions such as STIs and concerns about health care providers invading their privacy (for example, by asking that partners or parents accompany the patients). Adolescents were also reluctant to access outpatient services and walk-in clinics due to the stigma associated with STIs in their age group.
COVID-19's impact on referrals	The COVID-19 pandemic disrupted referral pathways, with patients expressing concern about accessing services in health facilities for fear of infection. In addition, curfews and lockdown measures imposed by the government to contain the outbreak further constrained access to health care shutting down public transportation and other means of reaching points of care. Severely ill patients and patients in emergency situations were unable to access ambulances or emergency care during the lockdown, either aggravating their conditions or leading to death.

Source: This table is original to this publication.

Note: DHs = District Hospitals; HCs = Health Centers; HIV/AIDS = human immunodeficiency virus / acquired immunodeficiency syndrome; MNCH = maternal, newborn, and child health; MoH = Ministry of Health; NRHs = National Referral Hospitals; PFP = private for-profit; PNFP = private not-for-profit; RRHs = Regional Referral Hospitals; SOPs = standard operating procedures; STIs = sexually transmitted infections; VHTs = Village Health Teams.

a. Abortion in Uganda is illegal unless performed by a licensed medical doctor in a situation in which the woman's life is deemed to be at risk.

to anchor investments in RMNCAH and universal health coverage more broadly. Linked to the National Health Financing Strategy (MoH 2016c) is the need to explore the introduction of national health insurance plans that protect the poor. These issues are currently under discussion at the policy level and, if implemented, could provide greater financial protection for patients and encourage the use of services. Furthermore, evidence from RBF and voucher programs

shows that both can be useful avenues for improving the quality of service delivery and service use. Some options to consider for financing RMNCAH referrals include increasing the domestic allocation for health, establishing an enabling environment for private-public partnerships, and scaling up RBF models to maximize efficiency and promote accountability. For this reason, the GoU is advised to review the lessons learned from the use of RBF models in RMNCAH service delivery and to begin to implement selected high-impact interventions that would help accelerate improvements in health care while also bridging financing gaps on both the supply and demand sides.

Strengthen quality of care at the lower levels

Related to service point financing and health coverage, the MoH should implement specific provisions to increase budgetary allocations for lower-level health facilities up to HC IVs and for community health workers. Such investment is especially important to improve the delivery of services at these levels of care and to minimize the burden on higher-level facilities. In addition to increased financing at these levels, emphasis should be given to performance on different indices of quality of care, including timely follow-up, supervision, availability of essential medicine and supplies, improvements in clinical outcomes for RMCNAH conditions, and adequate training of staff.

At the community level, in line with evidence from the literature (for example, Roy et al. 2016), VHTs should (a) be offered compensation to encourage strong performance and accountability; (b) be given clearly defined and practical responsibilities that are not too wide ranging; (c) receive training, continuing education, and ongoing supervision; (d) be integrated into PHC teams; and (e) be part of data feedback loops (Bateganya et al. 2015). Recruiting, training, and employing students in underserved areas of the country could contribute effectively to improving PHC outcomes and so could having a focused quality-of-care agenda with relevant governance and institutional arrangements as reported by other studies (WHO, OECD, and World Bank 2018). The MoH should reinforce the National Quality Steering Committees and the national and subnational Health Services Quality Departments; train health managers, supervisors, and health workers on quality improvement; and provide the requisite tools for quality monitoring.

Finance and improve ambulances and related services

There are insufficient ambulances to support effective EMS, including referrals. It is recommended that the MoH allocate additional resources toward procuring ambulances for HCs—ensuring adequate resources for maintenance and fuel, enforcing strict guidelines on the use of ambulances, and imposing penalties for violations—and ensure that appropriate EMS personnel are available to escort patients to the different levels of care. The MoH is advised to mainstream the role of the community in the management of ambulances and strengthen partnerships with the private sector for the management of ambulance dispatch systems. Furthermore, the MoH may consider supplementing ambulances with motor tricycles, which are more agile and sturdier for navigating the poor roads. These could be used for facilities in close proximity and for non-emergency cases. Finally, in view of Uganda's poor road network, facility-level guidelines must provide clearer and realistic guidance on lead time for

transferring passengers to facilities. Lead times should be monitored and incentivized if possible.

Address staffing gaps and strengthen training

The GoU has the perennial challenge of there being extremely limited health personnel across various cadres. This is an especially acute problem in regard to specialized positions, such as physicians, nurses, and anesthetists. Several efforts are under way to expand the health workforce, including through the URMCHIP, the Uganda Intergovernmental Fiscal Transfers Program, and other government-led initiatives. Addressing the staffing gaps is integral to eliminating the bottlenecks in the RMNCAH pathway. Furthermore, in addition to hiring more personnel, there is a need to apprise staff of the *National Referral Guidelines* as well as the facility-level standards for implementing the referral pathway. Such training should be complemented with occasional drills that help update staff knowledge and enhance their competencies. As part of the training and at the facility level, those in charge should also build the capacity of different departments, helping strengthen linkages and referrals within the units (for example, by referring clients from ANC for laboratory services).

In addition, it is recommended that the MoH develop and roll out a program for sensitizing VHTs, along with other community stakeholders (including traditional birth attendants and healers), to the referral pathway. This program would help address issues of misinformation that deter the use of facilities and could also help promote the use of community stakeholders as effective advocates for service utilization. The MoH may consider innovative and cost-effective ways for remunerating VHTs, including free access to health services, in-kind yearly donations, and limited allowances for transportation, mobilization, and sensitization.

Improve coordination of referrals across levels of care

Six recommendations are urged to improve coordination across the levels of care:

- **Enforce the use of referral notes.** The MoH can achieve this by (a) requesting that all patients at receiving health facilities have a referral note, without which they cannot receive care, and (b) requiring that facilities perform monthly or quarterly audits, during which they determine whether the facilities have provided referral notes for all patients and impose penalties for any violations.
- **Establish a clear and costed roadmap for each facility that guides the allocation of resources to improve referrals.** This roadmap should be part of facility-level SOPs. The plan should be costed to include the health care workforce, supervisors, monitoring and auditing, internal and external evaluation, and appropriate tools. Furthermore, facilities should be requested to develop and publicly display the referral network linked to their facility. This way, it is clear to all providers what the referral chain is, which facilities are in the chain, who the contact persons are, and the average times for reaching each of the facilities in the network.
- **Authorize alternative personnel at the facility level to sign referral notes in the absence of the in-charge or designated official.** Also provide guidance on options for health care providers if the signatory is absent.

- **Establish a virtual screening and dispatch referrals system.** To help manage referrals in and out of high-burden facilities—such as RRHs and NRHs—the MoH should establish electronic referral-based triage centers where all referrals in and out are quickly screened and recommended to the next stage for advancement along the pathway. An effective way to do this could be using a form of telemedicine in which patients can be screened quickly online by answering a set of questions and providing information on the initiating facility. In the case of referrals out, physicians or ambulance escorts could provide this information. The telemedicine platform would then make a recommendation based on the information provided and send the personal details on to the receiving facility or back to the initiating facility. Such a model could be part of a broader e-health effort that aims to accelerate decision-making and data processing.
- **Work more closely with community health organizations to generate demand and community empowerment.** To address negative attitudes, misinformation, and misunderstandings surrounding referrals for RMNCAH and risk assessment, the MoH should explore working in closer partnership with community health organizations to increase and improve the quality of sensitization, to increase social mobilization efforts, and to consider contracting local transporters to help women access the health facilities. Sensitization on the referral pathway can be incorporated into broader community health organization programming and workshops on RMNCAH to illustrate how patients are referred across the levels of care, the importance of referring to the right level of care, and the resources available to patients to facilitate their access to care. The workshops should also address knowledge gaps on the referral process, counter-referral, follow-up, and proper use of referral notes as well as the roles of different stakeholders, including VHTs and traditional birth attendants and healers to better define how they all fit together to create an enabling environment for enhanced RMNCAH outcomes.
- **Strengthen multisectoral and multistakeholder partnerships.** The MoH, at the central and local levels, should actively promote multisectoral and multistakeholder partnerships, particularly with the Ministries of Works, Transport, Education, and Social Protection as well as with the private sector and civil society, to improve referral policies and programs. The private sector can play an active role in such areas as EMS, including private-public arrangements, that aim to enhance the provision of ambulance services across facilities. Furthermore, civil society organizations and community-based organizations can all be leveraged to enhance accountability in service delivery as well as help strengthen citizen knowledge of and confidence in the referral pathway. Private organizations and civil society organizations can also be leveraged to raise funds and other resources to support community-based investments that will improve delivery of services, including charitable efforts around the provision of amenities, utilities, or infrastructure.

REFERENCES

- Bateganya, M. H., U. Amanyiwe, U. Roxo, and M. Dong. 2015. “Impact of Support Groups for People Living with HIV on Clinical Outcomes: A Systematic Review of the Literature.” *Journal of Acquired Immune Deficiency Syndromes* 68 (S3): S368–74.
- Bill and Melinda Gates Foundation. 2021. “Innovation and Equity.” *Goalkeepers Report*. <https://www.gatesfoundation.org/goalkeepers/report/2021-report/>.

- Fronczak, N., T. Chitashvili, E. Cherkezishvili, P. Mutanda, G. Nalwadda, and S. Kauder. 2020. *Assessment of Quality of Reproductive, Maternal, Newborn, Child and Adolescent Care in Uganda and Kenya*. Technical Report. USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project. Chevy Chase, MD: University Research Co. https://pdf.usaid.gov/pdf_docs/PA00WKCF.pdf.
- Hussein, J., I. Kanguru, M. Astin, and S. Munjanja. 2012. "The Effectiveness of Emergency Obstetric Referral Interventions in Developing Country Settings: A Systematic Review." *PLOS Medicine* 9 (7): e1001264. doi:10.1371/journal.pmed.1001264.
- MoH (Ministry of Health). 2010. *The Second National Health Policy: Promoting People's Health to Enhance Socio-economic Development*. Kampala: MoH.
- MoH (Ministry of Health). 2012a. *Adolescent Health Policy Guidelines and Service Standards*. 3rd ed. Kampala: MoH.
- MoH (Ministry of Health). 2012b. *National Policy Guidelines for Sexual and Reproductive Health Services*. Kampala: MoH.
- MoH (Ministry of Health). 2015. *Health Sector Development Plan 2015/16–2019/20*. Kampala: MoH.
- MoH (Ministry of Health). 2016a. *Uganda Clinical Guidelines 2016*. Kampala: MoH.
- MoH (Ministry of Health). 2016b. *Investment Case for Reproductive, Maternal, Neonatal, Child and Adolescent Health in Uganda, 2016/1–2019/20*. Kampala: MoH.
- MoH (Ministry of Health). 2016c. *National Health Financing Strategy 2015/16–2024/25*. Kampala: MoH.
- MoH (Ministry of Health). 2020a. *Health Facility Quality of Care Assessment Program*. Kampala: MoH.
- MoH (Ministry of Health). 2020b. *National Referral Guidelines*. Kampala: MoH.
- Murray, S. F., and S. C. Pearson. 2006. "Maternity Referral Systems in Developing Countries: Current Knowledge and Future Research Needs." *Social Sciences & Medicine* 62: 2205–15.
- Namazzi, G., P. Waiswa, M. Nakakeeto, V. K. Nakibuuka, S. Namutamba, M. Najjemba, R. Namusaabi, A. Tagoola, G. Nakate, J. Ajeani, S. Peterson, R. N. Byaruhanga. 2015. "Strengthening Health Facilities for Maternal and Newborn Care: Experiences from Rural Eastern Uganda." *Global Health Action* 8: 24271.
- Roy, M., et al. 2016. "Understanding Sustained Retention in HIV/AIDS Care and Treatment: A Synthetic Review." *Current HIV/AIDS Reports* 13 (3): 177–85.
- UBOS (Uganda Bureau of Statistics) and ICF. 2018. *Uganda Demographic and Health Survey 2016*. Kampala: UBOS; Rockville, MD: ICF.
- UNICEF. 2021. Data: Monitoring the Situation of Children and Women. <https://data.unicef.org/resources/resource-type/datasets/>.
- World Bank. 2007. *World Development Report: Development and the Next Generation*. Washington, DC: World Bank.
- WHO (World Health Organization). 2016. *Standards for Improving Quality of Maternal and Newborn Care in Health Facilities*. Geneva: WHO. <https://www.who.int/publications/i/item/9789241511216>.
- WHO (World Health Organization), OECD (Organisation for Economic Co-operation and Development), and the World Bank. 2018. *Delivering Quality Health Services: A Global Imperative for Universal Health Coverage*. Geneva: WHO, OECD, and World Bank. <https://www.who.int/publications/i/item/9789241513906>.

3 Assessment of the Implementation of Maternal and Perinatal Death Surveillance and Response in Uganda

SYMON PETER WANDIEMBE AND PAUL MUBIRI

EXECUTIVE SUMMARY

In 2017, Uganda adopted the World Health Organization (WHO) maternal and perinatal death surveillance and response (MPDSR) guidelines and disseminated them to districts and health facilities (Ministry of Health [MoH] 2017). However, implementation of the guidelines in the country has been irregular, with some health facilities performing well but others performing poorly on both review and implementation of response actions. Similarly, the benefits achieved from the MPDSR process have been suboptimal. Whereas barriers to MPDSR implementation are known, there are limited data on the extent of institutionalization and fidelity of implementation at the health facility level, best practices, and successful strategies. This study aimed to identify the MPDSR's institutionalization status, associated challenges, lessons learned, and best practices, as well as to assess what degree of influence the quality-of-care reviews had at the health facility level.

Study objectives

The study objectives were as follows:

- Assess progress on the implementation of MPDSR at different levels of health care delivery.
- Identify factors that have affected the uptake and sustainability of the MPDSR system at the health facility level.
- Assess the perceptions of health workers regarding the contribution of MPDSR to improving the quality of maternal and perinatal care and outcomes at the health facility and district levels.
- Describe best practices that facilitate the implementation of the recommendations and response subcomponents of the MPDSR system at the health facility level.
- Propose strategies for improving and sustaining MPDSR in Uganda.

Methodology

The study was mainly qualitative and gathered data through document reviews and telephone interviews with two MPDSR officers in the MoH and 56 health workers from 17 health facilities in 13 districts. Data collection took place in December 2020. The 17 facilities involved in the study were purposively selected from 175 health facilities that reported at least one maternal death in 2018–19 and 2019–20 and were implementing or had ever implemented a formal MPDSR process. These facilities included 3 Regional Referral Hospitals (RRHs), 11 General Hospitals (GHs), and 3 Health Center IVs (HC IVs). The study also conducted semi-structured interviews with health facility in-charges using a standardized tool with 24 progress markers defining six stages of institutionalization. Axial coding of qualitative data was aligned with a Consolidated Framework for Implementation Research (CFIR).

Key findings

Key findings for this study included those for progress in facility-level MPDSR integration, the sustainability of response actions, and the perceived effect and influence of the MPDSR system.

Progress in MPDSR integration at the health facility level

Overall, the progress toward the institutionalization of MPDSR at the health facility level is well above average, with a mean integration score of 18.5 (of 12.2–24.0) for the 17 facilities. However, compliance with national guidelines and the quality of the review process (for example, the quality of review meetings, data synthesis, recommendation crafting, and action plans) are weak. Current MPDSR practice is characterized by low adherence to schedules for death notification and reviews; punitive actions of staff, which are common yet contradictory to MPDSR’s “no blame, no shame” principle; incomplete patient forms and documentation; and the lack of a systematic mechanism to monitor the implementation of response actions. Notwithstanding these challenges, the sampled facilities had an average of 66 percent and 14 percent of their reported maternal and perinatal deaths reviewed, respectively. These findings are comparable to the corresponding national figures of 66 percent and 10 percent, respectively, for fiscal year (FY) 2019/20.

Sustainability of response actions

Results indicate that implementation and sustainability of response actions are suboptimal. Respondents estimated that more than 85 percent of the MPDSR recommendations under the control of health facility staff were implemented, while about 60 percent of changes under the control of health facility management were acted on. Most of the recommendations that require external support at the community, lower health facility, and district levels were largely unimplemented. Other factors affecting sustainability are staff shortages, skill gaps, and poor attitudes, as well as a lack of mechanisms to monitor the quality of implementation and link MPDSR response actions to general continuous quality improvement activities at the health facility level; these can lead to low sustainability of new improvements in clinical practices. There are also large gaps in analyzing data and crafting recommendations.

Perceived effect and influence of the MPDSR system

Sixty percent of health workers thought MPDSR had led to improvements in maternal care, while 35 percent thought it had led to improvements in neonatal

care. The MPDSR process was also reported to have helped health workers in capacity and skills building. More than 40 percent of the health workers cited at least one change in practice or avoidable factor at their facility resulting from the MPDSR approach.

Enablers of MPDSR institutionalization. Based on the CFIR, the enablers of implementation and institutionalization of the MPDSR process included ease of adaptability of the process, good leadership and teamwork at the health facility level, individual health workers' self-motivation and positive attitudes, political and other high-level leadership support, and guidance and support from health partners.

Barriers to MPDSR institutionalization. Based on the CFIR, several interconnected barriers exist: inadequate funding; staff complacency with low levels of integration, demotivation, and attitudes toward and perceptions of the MPDSR process; weak health facility leadership and lack of accountability; lack of health worker training in the process; staff transfers and turnover; poor data quality; and political sensitivities that have led to a punitive culture.

Recommendations

To address these findings, action is required at the health facility and district levels. To initiate these actions, the MoH should implement the following:

- In collaboration with the District Health Management Teams (DHMTs), institute and facilitate a feedback process for both capacity building and quality improvement to link the referral facilities to lower-level facilities, where deaths and near-death events were initially managed.
- With the DHMTs and RRHs, institute a technical capacity-building structure for health workers at HC IIIs, especially for data capture and synthesis, tracking, and reflecting on responses.
- With health partners, mobilize resources to increase budgets for MPDSR implementation at the facility and district levels and, in particular, earmark financial support for perinatal death reviews.
- With the DHMTs, support facilities to establish formal (auditable) and systematic procedures for following up on recommendations and coordinating responses, evaluating, and reflecting on changes resulting from MPDSR reviews.
- With the DHMTs, RRHs, and health partners, establish a capacity-building strategy for MPDSR that will ensure all members of the MPDSR committee are trained before they embark on their roles and will also ensure continuous health worker skills building through training, mentorship, and supportive supervision.
- With the RRHs, institute a mechanism to monitor the prevalence of punitive actions against staff and provide support to reduce those actions through attitudinal trainings and the development and use of a code of conduct at the facility level.
- Establish and promote regional-level communities of practice (COPs) for MPDSR champions at the health facility and district levels. These COPs will also provide technical assistance to referring lower-level health facilities.
- With health partners, strengthen the organizational and operational capacity of the facility-level MPDSR committees through support supervisions and mentorship, ensuring health managers' active involvement, and track the functionality of the committees as a key annually reported indicator.

- Ensure that the MPDSR committee at the GH and HC IV levels strengthens community linkages by holding regular meetings with community leaders and community health workers to share the findings of the MPDSR reviews, receive feedback on these, and jointly develop local solutions to modifiable factors relating to the first delay to seeking care. Additionally, health facility and community leaders should identify local champions as part of strengthening community linkages and improving the quality of sensitization and mobilization efforts.
- Link the MPDSR reviews with the ongoing performance-based financing schemes so that those who use them to advance service delivery outcomes are tracked and rewarded. This process would encourage health facility managers and service providers to periodically discuss and sustainably respond to emerging maternal and perinatal death determinants in the health facilities and their catchment areas.

INTRODUCTION

Uganda has made some progress toward reducing the maternal mortality ratio (MMR), which decreased from 438 per 100,000 live births in 2011 to 336 per 100,000 live births in 2016 (UBOS and ICF 2018); however, over the same period, the neonatal mortality rate (NMR) stagnated at 27 deaths per 1,000 live births. Both the MMR and NMR in 2016 were higher than the targets set in the *Health Sector Development Plan 2015/16–2019/20* of 320 deaths per 100,000 live births and 16 deaths per 1,000 live births, respectively (MoH 2015). In 2017, the MoH adopted the WHO MPDSR guidelines as a means of identifying and addressing avoidable causes of maternal and perinatal deaths.

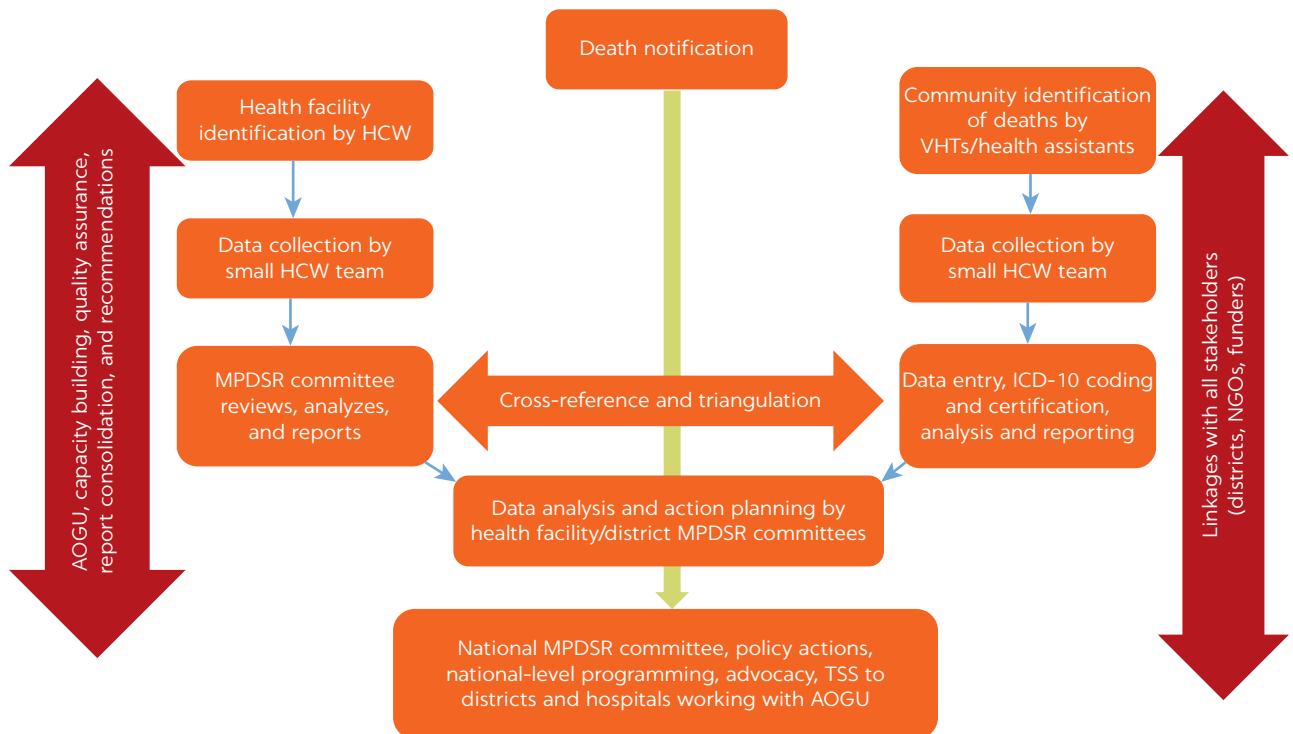
MPDSR focuses explicitly on (a) the notification and review of maternal and perinatal deaths, (b) actions taken based on review findings, and (c) accountability for those responses to the findings (Hounton et al. 2013). MPDSR also helps ensure that learning from maternal deaths elicits more systemic responses for quality-of-care improvements from the local to the national level (WHO 2016). Figure 3.1 shows the adapted Uganda MPDSR implementation framework.

Study rationale

To date, results from MPDSR implementation in Uganda are suboptimal, and only a few of the targets set by the MoH were achieved in 2019–20. Less than 60 percent of the districts had functional MPDSR committees, less than 80 percent of the perinatal and maternal deaths were notified within 24 hours, and less than 50 percent of the perinatal and maternal deaths were reviewed (MoH 2020). Similarly, the reduction in institutional mortality ratios has been slight (MoH 2020), reflecting deficient benefits from the MPDSR process. Some studies in Uganda have documented barriers to implementation, citing factors such as financing, leadership, staff capacity, workload, self-motivation, and attitude, as well as limited linkages with the communities (Agaro et al. 2016).

Documenting both lessons and best practices from health facilities that are implementing MPDSR successfully would illustrate how to support poorly performing health facilities. Further, there has been limited evidence on the

FIGURE 3.1
Uganda MPDSR implementation framework



Source: MoH 2017.

Note: AOGU = Association of Obstetricians and Gynecologists of Uganda; HCW = health care workers; ICD-10 = *International Classification of Diseases*, 10th ed.; MPDSR = maternal and perinatal death surveillance and response; TSS = technical support services; VHTs = Village Health Teams.

extent of institutionalization and fidelity of MPDSR implementation at this level. Little is known about health workers' perceptions of MPDSR and how this influences attitudes, or about the influence of community-level factors on the integration of the MPDSR process with other services at the health facility level.

Objectives of the study

The main objective of the study was to conduct an in-depth assessment of MPDSR, focusing on implementation challenges, lessons learned and best practices, and the influence of the reviews on quality of care and health outcomes at the health facility and district levels in Uganda. The specific objectives were to

- Assess progress on the implementation of MPDSR at various levels of health care delivery;
- Identify factors that have affected the uptake and sustainability of the MPDSR system at the health facility level;
- Assess the perceptions of health workers regarding the contribution of MPDSR to improving the quality of maternal and perinatal care and outcomes at the health facility and district levels;
- Describe best practices that facilitate the implementation of the recommendations and response subcomponents of the MPDSR system at the health facility level; and
- Propose strategies for improving and sustaining MPDSR in Uganda.

Conceptual framework

This study was designed to capture the factors relating to institutionalization and to quantify the extent of this institutionalization. The assessment of factors was based on a CFIR (Damschroder et al. 2009). The CFIR provides an overarching typology to promote the development of an implementation theory and verification of what works, plus where and why, across multiple contexts. Quantification was based on a conceptual model for monitoring progress developed by the South African Medical Research Council's (SAMRC) Maternal and Infant Health Care Strategies Unit (Bergh et al. 2014).

Consolidated Framework for Implementation Research

The CFIR consists of five major domains, each with different subconstructs (figure 3.2): (a) intervention, (b) outer setting, (c) inner setting, (d) individual health worker, and (e) process of implementation. The intervention is related to the characteristics of MPDSR, including the adaptability of its multifaceted components and steps of the audit cycle, cost and required funding for the process, and perceived value of the process at the health facility level. The outer setting factors, which influence implementation of MPDSR, include policy and planning, pressures to implement, support supervision, legal framework, and community links, while inner setting factors include readiness to implement, the facility's organizational culture, quality of communication and relationships, engagement of champions of change and facility leadership, available resources, and staff workload.

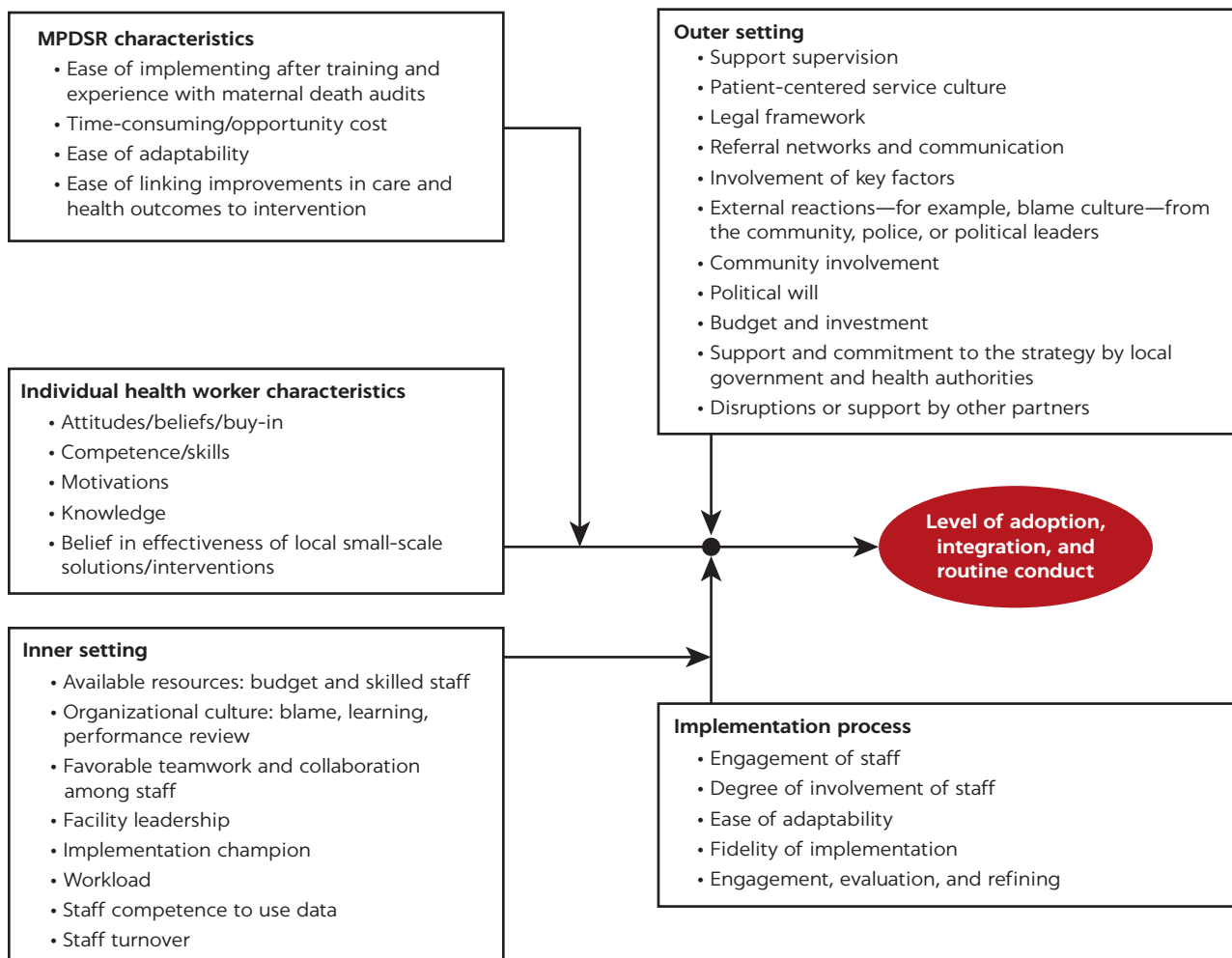
The individual health worker domain considers characteristics such as capacity and knowledge, motivations, and commitment to implement MPDSR, as well as commitment to adopt MPDSR in routine practice. The process of implementation includes how MPDSR was introduced at the health facility; implementation fidelity; change dynamics; and monitoring, reflecting, and evaluating the MPDSR process. The CFIR argues that most interventions cannot be implemented without adaptations to these settings.

Institutionalization progress-monitoring conceptual model

In this model, the institutionalization process of an intervention is divided into three phases: (a) pre-implementation, (b) implementation, and (c) institutionalization. For MPDSR, the model quantifies the progress based on several markers defining six evidential stages of institutionalization within the phases: (a) evidence of creating awareness at the health facility, (b) adoption and formation of an MPDSR committee, (c) the health facility taking ownership, (d) evidence of MPDSR practice and a functional MPDSR committee, (e) evidence of integration of MPDSR into routine practice; and (f) development of a sustainability plan (table 3.1; table 3A.1 in annex 3A). The model was developed and validated by the SAMRC's Maternal and Infant Health Care Strategies Unit and has been used for MPDSR assessments in Ghana, Nigeria, Rwanda, and Zimbabwe (Kinney et al. 2019; Lazzarini et al. 2018; Tayebwa et al. 2020).

In the model, each health facility receives a score from 0 to 30. A score of up to 10 points indicates a pre-implementation phase; a score between 11 and 17 indicates evidence of MPDSR practice; a score between 18 and 24 demonstrates institutionalization of MPDSR through evidence of routine practice

FIGURE 3.2
Conceptual and analytical framework for study



Source: Based on Damschroder et al. 2009.
 Note: MPDSR = maternal and perinatal death surveillance and response.

and integration; and a score of more than 24 shows sustainable MPDSR practice. This scoring validly quantifies cumulative implementation progress for a health facility (Bergh et al. 2014). The model recognizes that progress is not merely linear but has iterative forward and backward steps. Scoring does not assess the quality of MPDSR but rather is a tool to complement the qualitative assessment analysis in relation to the stage of implementation progress and practice.

METHODOLOGY

This section discusses the study objectives, design, sites, and population; data collection tools, procedures, and analysis; ethical considerations and assurance; and study limitations.

Objectives of the study

This study aimed to answer the following questions:

- What is the implementation status of the MPDSR system at the health facility and district levels in Uganda?
- What are the enabling or hindering factors for the institutionalization of MPDSR at the facility level?
- What are the key barriers to the implementation of recommendations from the reviews (local solutions)? How can the effects of these barriers be reduced?
- What are the perceptions of the health workers and health managers of the contribution of MPDSR to quality of care and health outcomes? What are some unintended outcomes?

Study design

This study was an in-depth assessment of MPDSR implementation that used mixed methods involving quantitative and qualitative data collection but with the main focus on qualitative data. To address the first research question, data were collected using a semi-structured questionnaire and the MPDSR Scorecard on institutionalization status, and secondary data and information were reviewed. The other research questions were addressed by collecting primary qualitative data through in-depth interviews (IDIs) with various stakeholders and through desk reviews.

Study sites

The sampling frame consisted of 175 health facilities (that is, HC IVs, GHs, and RRHs) that reported to the internet-based District Health Information Software version 2.1 (DHIS2) at least one maternal death between July 2018 and June 2020 and that are implementing or have ever implemented a formal MPDSR process. Because the study was mainly qualitative, a purposive sample of 17 facilities was chosen based on facility ownership, performance on maternal death reviews, rural-urban location, and volume of maternal deliveries (with less than 2,000 and with greater than 2,000).

The 17 health facilities were from 13 districts: Bukwo, Iganga, Kamuli, Mbale, and Soroti districts, in the Eastern region; Bunyangabo, Ibanda, Kabarole, Rukungiri, and Sheema, in the Western region; Arua, in the Northern region; and Kalungu and Masaka, in the Central region. The facilities included 3 RRHs, 11 GHs, and 3 HC IVs.

Study population

At each sampled facility, the facility in-charge, the MPDSR focal person, and at least one health worker supporting MPDSR actions were asked to participate in an IDI. Interviews were also held with members of the district MPDSR Committee or the assistant district health officer in 10 of the 13 districts and at the national level. A total of 58 respondents were interviewed: 17 were MPDSR focal persons or delegates; 16 were health facility in-charges or delegates; 7 were other MPDSR committee members at the facility level; 16 were at the district level, including members of the DHMT; and 2 were at the national level.

The research population included the health facility in-charges and MPDSR focal persons, health facility and district MPDSR committee members, and other health workers and managers supporting MPDSR at the health facility, district, and national levels.

Data collection tools, procedures, and analysis

Using IDI guides based on the CFIR framework, qualitative data were collected through telephone calls with potential participants. The interviews included questions on the perceptions of the health workers and health managers on the contribution of MPDSR to the quality of care and health outcomes. A semi-structured questionnaire and scorecard were administered to health facility in-charges or their delegates to capture progress markers in the institutionalization progress-monitoring conceptual model (see table 3.1) and the MPDSR Scorecard. In each facility, the focal person or designee was asked to retrieve the minutes of the latest review meeting and completed Health Management

TABLE 3.1 Progress markers for the institutionalization conceptual model of MPDSR at the facility level

PHASE	STAGE	PROGRESS MARKERS
Pre-implementation	Creating awareness (2 points)	<ol style="list-style-type: none"> 1. Awareness by management 2. Committed leader
	Adopting the concept (2 points)	<ol style="list-style-type: none"> 1. Conscious decision to implement 2. Committee formed
Implementation	Taking ownership (7 points)	<ol style="list-style-type: none"> 1. Tools are available 2. Tools include cause of death 3. Tools include modifiable factors 4. Tools include place to follow up on actions taken 5. Understanding of process for conducting meetings (confidentiality and “no blame, no shame” principle) 6. Staff meeting conduct agreement is available 7. Budget or support allocation to conduct death reviews
	Evidence of practice (6 points)	<ol style="list-style-type: none"> 1. Meeting minutes are available 2. Meeting minutes include action items 3. Minutes include follow-up from previous meetings 4. Meeting notes respect confidentiality of staff and patients 5. Program/plan supports regular orientation of staff (including new staff) on MPDSR 6. Data trends displayed or shared and used
Institutionalization	Evidence of routine integration (7 points)	<ol style="list-style-type: none"> 1. Evidence of change based on recommendation 2. Death review meetings are held at stated intervals 3. Multidisciplinary team engagement 4. Evidence of reporting findings or progress to community
	Evidence of sustainable practice (6 points)	<ol style="list-style-type: none"> 1. Over 1–2 years of ongoing practice 2. Plan in place to ensure all staff receive MPDSR training 3. Evidence that staff have received MPDSR training/reorientation in the past year, 2019

Source: This table is original to this publication.

Note: MPDSR = maternal and perinatal death surveillance and response.

Information System (HMIS) review forms for 5–10 maternal deaths that occurred within the past 24 months. Discussions were held about the documented details, the recommendations on 2–3 HMIS maternal death review forms were counted, and the number implemented also was noted. Data on reported maternal and perinatal deaths were extracted from DHIS2. Two trained research assistants supported the data collection process.

Qualitative data were analyzed using open and axial coding techniques, with emerging themes mapped onto the CFIR. Quantitative data were analyzed using frequencies and percentages. Scoring institutionalization was based on the guidelines of the SAMRC Maternal and Infant Health Care Strategies Unit (Bergh et al. 2014).

Ethical considerations and assurance

Ethical approval for the study was obtained from Uganda’s National HIV/AIDS Research Committee (NARC) (Protocol Reference ARC 217, October 26, 2020), and national clearance was obtained from the Uganda National Council for Science and Technology (Registration no. HS599ES). In addition, authorizations were issued by the MoH and the directors of RRHs and hospital officers at the district level. Only participants who provided informed consent were interviewed. The COVID-19 risk management plan for the study was developed and approved by NARC before the data collection process was initiated.

Study limitations

Observation of evidence of changes based on MPDSR at the facilities was not possible due to travel restrictions related to COVID-19. Similarly, completed HMIS review forms were retrieved from the health facilities by the MPDSR focal person or designee, limiting the number of forms retrieved.

FINDINGS

This study’s findings included those for the implementation process of MPDSR, factors affecting the uptake and sustainability of MPDSR, health worker perceptions about MPDSR, and best practices in MPDSR implementation.

Implementation progress of MPDSR at different levels of health care delivery

Findings related to MPDSR implementation progress were related to national-level structures and response, district-level implementation status and perceptions, and health-facility-level implementation status.

MPDSR structures and response at the national level

The implementation of MPDSR in Uganda is largely donor supported. Progress has been facilitated by the committed leadership of the government through the MoH. Implementation is supported by the national MPDSR committee, and several health partners and professional bodies are coordinated through a technical working group. The process is facilitated by detailed HMIS death notifications and review forms and the national MPDSR guidelines. The information on HMIS forms is entered into DHIS2 and is used in generating the MPDSR annual report.

The notifications and reviews of maternal deaths at the national level have improved since the rollout of the national guidelines in FY 2017/18. In FY 2019/20, maternal death notifications within 24 hours and their review were 79 percent and 66 percent, respectively, increasing from 59 percent and 51 percent, respectively, in FY 2018/19. The notifications and reviews of perinatal deaths, however, remain low, at 38 percent and 10 percent, respectively. The community component of the MPDSR system as defined in the national guidelines is yet to be implemented.

Implementation status and perceptions of MPDSR at the district level

Based on data from the DHIS2 for FY 2019/20, the sampled districts had an average of 66 percent and 14 percent of their notified maternal and perinatal deaths reviewed, respectively. These figures were similar to the corresponding national averages of 66 percent and 10 percent, respectively, as reported in the national MPDSR report for FY 2019/20. Although the notifications of all deaths at the assessed facilities were completed, not all death reviews were entered into the DHIS2.

Findings showed that the MPDSR system was weakly integrated at the district level. Whereas there was a focal person in each of the 13 districts surveyed, the full MPDSR committees were rarely functional. Moreover, even among the few active committee members, some had not been trained in MPDSR. The deficient integration of MPDSR at the district level was also reflected in the insufficient support supervision, mentorship, and performance reviews for the MPDSR process at the health facility level. Generally, there were weak linkages between the health facility and district MPDSR committees. The health facility performance reviews, which are often held by DHMTs, were reported to allocate limited or no time slots to reflect on the MPDSR performance. In the four districts surveyed, the turnover of trained and experienced staff at the district level who used to champion MPDSR was also reported to have impaired the integration process.

Nonetheless, in some districts, there were champions who actively supported health facilities in implementing the MPDSR process. In three districts, the MPDSR focal persons were reported to frequently attend MPDSR meetings at health facilities, and in another district, the focal person reported participating in the data collation for reviews. The focal persons reported resource constraints and competing time demands as barriers to their effective support to the health facilities. The competing time demands also explain why some health facilities were supported within the same district and others were not. Similarly, the implementation of recommendations that require district-level action was affected by these constraints and time demands. Poor attitudes among DHMT members regarding inadequately facilitated support supervision visits were also reported as common.

The other aspects of MPDSR implementation that were observed included the “no blame, no shame” principle, which few agreed with. Some focal persons were not comfortable with this principle and argued that to prevent future deaths, some staff should be held accountable. In many districts, the DHMT is involved in administering punitive actions, especially for deaths linked to perceived unprofessional conduct, negligence, or being off the duty station without leave. One MPDSR district focal person noted,

Of course, we have to take action if the health worker has caused that death or if the health worker is the cause of that problem. The procedures are there for punishing such a person. If it was negligence, he/she has to face the disciplinary committee.

The members of DHMTs perceived the MPDSR process as valuable and useful in reducing maternal and perinatal deaths within the district. MPDSR was noted to have led to improved knowledge and behavior among health workers at the health facilities and to have highlighted gaps in infrastructure, staffing, and staff competencies. The MPDSR focal persons reported some changes instituted by the districts to support MPDSR's implementation or its recommendations. Some of these included DHMT members (a) supporting radio talk shows (mentioned in two districts), (b) working with health facility MPDSR committee members to visit and provide mentorship to HC III staff (cited in two districts), (c) participating in or supporting continuing medical education (CME) at the health facility level (cited in one district), and (d) briefing and empowering Village Health Teams (VHTs) to reach out to the communities (reported in one district). However, it was also noted that the consistent and effective follow-up on these actions has been challenged by a lack of resources and competing time demands.

Implementation status of MPDSR at the health facility level

Overall, the 17 health facilities assessed scored an average of 18.0 (ranging from 12.2 to 24.0 of a possible 30) on progress status, with 6 facilities at the “evidence of practice” stage and 11 facilities at the “evidence of routine integration” stage. These progress scores are mainly driven by the maternal death surveillance and response (MDSR) subcomponent, not the perinatal death surveillance and response (PDSR) subcomponent, which is lagging. Overall, RRHs had better scores (mean score of 23), followed by the GHs (mean score of 18.4). All three HC IVs had only attained the “evidence of practice” stage (mean score of 14.3).

Some health facilities had progressed on the institutionalization pathway, and others had regressed. Findings from key informant interviews show that among the 17 facilities surveyed, two had regressed from the “routine integration” stage to the “practice” stage over the past year. This movement was attributed to the turnover of trained staff and reduced motivation among some staff partly because health facility administrators or health managers (for example, DHMT, MoH) failed to support implementation or give feedback on some of the key review recommendations.

The overall progress toward institutionalization was above average, but adherence to the national guidelines, procedures for reviews, and quality of the process (that is, quality of meetings, data synthesis, recommendations, and action plans for the recommendations) are moderate. Death notification and review forms are rarely completed on time, and some of the most recent completed review forms for maternal deaths were incomplete. Most MPDSR committee meetings were poorly attended, and action plans for the most recent recommendations were incomplete in 11 health facilities. Further, disciplinary actions against staff following the MPDSR meetings in the past 12 months were noted in 6 health facilities.

The implementation of the response actions remains the weakest subcomponent of the MPDSR process, and failure to sustain the new changes based on the MPDSR reviews was commonly reported. Similar to MPDSR implementation at the district level, implementation at the health facility level is largely donor supported.

The results in this section are presented according to the three adoption phases of MPDSR (pre-implementation, implementation, and institutionalization), as shown in table 3.2, mainly focusing on MDSR but with occasional reference to PDSR.

TABLE 3.2 Facilities that achieved progress markers for each stage of MPDSR institutionalization (N = 17)

PHASE	STAGE	PROGRESS MARKER	NO. OF FACILITIES WITH MARKER FOR MDSR (%)	NO. OF FACILITIES WITH MARKER FOR PDSR ^a (%)	
Pre-implementation	Creating awareness	1. Awareness by management	17 (100)	14 (82)	
		2. Committed leader	17 (100)	17 (100)	
	Adopting the concept	1. Conscious decision to implement	17 (100)	14 (82)	
		2. Committee formed	17 (100)	17 (100)	
Implementation	Taking ownership	1. Tools available	17 (100)	14 (82)	
		2. Tools include cause of death	17 (100)	17 (100)	
		3. Tools include modifiable factors	17 (100)	17 (100)	
		4. Tools include place to follow up on actions taken	17 (100)	17 (100)	
		5. Understanding of process for conducting meetings (confidentiality and “no blame, no shame” principle)	17 (100)	17 (100)	
		6. Staff meeting conduct agreement/code available	3 (18)	3 (18)	
		7. Budget or support allocation to conduct death reviews	4 (24)	4 (24)	
	Evidence of practice	1. Meeting minutes available	17 (100)	14 (82)	
		2. Meeting minutes include action items	11 (65)	11 (65)	
		3. Meeting minutes include follow up from previous meetings	11 (65)	11 (65)	
		4. Meeting notes respect confidentiality of staff and patients	17 (100)	14 (82)	
		5. A program/plan supports regular orientation of staff (including new staff) on MPDSR	7 (41)	7 (41)	
	Institutionalization	Evidence of routine integration	1. Evidence of change based on recommendation	14 (82)	10 (59)
			2. Death review meetings are held at stated intervals	15 (88)	10 (59)
			3. Multidisciplinary team engagement	17 (100)	14 (82)
			4. Evidence of reporting findings or progress to community	3 (18)	3 (18)
Evidence of sustainable practice		1. Over 1–2 years of ongoing practice	17 (100)	14 (82)	
		2. Plan in place to ensure all staff receive MPDSR training	8 (47)	5 (29)	
		3. Evidence that staff have received MPDSR training/reorientation in the past year, 2019	10 (59)	7 (41)	

Source: This table is original to this publication.

Note: MDSR = maternal death surveillance and response; MPDSR = maternal and perinatal death surveillance and response; PDSR = perinatal death surveillance and response.

a. Only 10 focal persons provided complete information/data on PDSR, thus some imputations were made about the quality of the minutes and meetings.

Pre-implementation phase. All 17 health facilities assessed had the MDSR markers for this stage, while 14 (82 percent) had markers for PDSR; they reported creating awareness of the MPDSR system among staff and had committed MPDSR focal persons. However, the awareness information was mostly cascaded to senior staff and staff in maternity and neonatal wards. Many health workers perceived MPDSR to be a standard quality-improvement tool. Some noted that it follows the 2008 presidential directive on notification and auditing of maternal and perinatal deaths.

All the focal persons reported the existence of MPDSR committees at their facilities that held a formal meeting to adopt MPDSR. The meetings were chaired by health facility in-charges and supported by the DHMT or health partners.

While all facilities had MPDSR committees of 6–10 staff in place, most were not formed according to the national guidelines; in particular, they were missing community linkage persons.

Implementation phase. All the facilities reported the use of the standard HMIS MDSR review forms. However, stock-outs of the review forms at the health facility level were reportedly common, with a stock-out of the PDSR review form and use of old death audit forms at the time of the study in three (18 percent) health facilities, while the use of photocopies in the past 12 months was reported in two (12 percent) facilities. All MPDSR focal persons were able to outline the correct process for holding MPDSR meetings, including the need to create a safe and blame-free environment. Although most MPDSR committees—14 (82 percent)—did not have a written code of conduct for the meetings, they reported that their members signed confidentiality forms to adhere to the “no blame, no shame” principle.

The study revealed that initially, MPDSR was regarded as an extra-clinical practice and additional work that required more time, resources, and incentives. Further, due to the pervasiveness of the “blame culture” at the time of introducing MPDSR, the focal persons reported that the fear of MPDSR as a fault-finding system slowed down its uptake. As one health facility MPDSR committee member stated,

Many people thought they would be blamed for reviewing and frankly mentioning what went wrong. It is like blaming your colleague. It was confusing. No one was sure of what would happen.

Over time, staff attitudes shifted from apprehension to positivity toward using death reviews to learn, share experiences, and take action to improve quality of care. MPDSR committee members valued and expressed dedication to the MPDSR process.

Four health facilities reported allocations from the facility budget or health partners to establish or implement MPDSR activities. Some facilities employed part of the primary health care grant and others used results-based financing (RBF) program funds, while still others integrated MPDSR meetings with quarterly performance review meetings. Overall, RRHs performed better on the markers of “taking ownership” of the MPDSR approach than did other facilities.

Evidence of practice. Current MPDSR practice is characterized by several anomalies; what was reported in the institutionalization steps is not necessarily what was found in the minutes of the most recent committee meeting. When the meeting minutes from the sampled health facilities were reviewed, only nine (53 percent) facilities did not mention the names of staff or patients, signifying some cases where confidentiality of staff or patient is not fully respected. Minutes from a few facilities (35 percent) included action items, and four (24 percent) facilities included follow-up on actions from previous meetings. Further, 73 percent of the latest MDSR meetings and 60 percent of the PDSR meetings had at least half of the core committee members and health facility in-charges participating in the session. Additionally, most attendees did not arrive on time to the meetings. Further, MPDSR focal persons reported that, on average, about 30 percent of maternal deaths and more than 50 percent of perinatal deaths were not notified within 24 hours. Of note, four (24 percent) of the MPDSR focal persons reported instances of the allocated meeting time being hurried.

Poorly attended meetings partly explain the inadequately completed maternal death review forms, which had incomplete information and inconsistencies when identifying modifiable factors contributing to the deaths. Insufficient data capture by health workers is another reason; in more than 50 percent of the health facilities, many patients' charts and records were left incomplete by health workers, especially in referred cases from lower-level health facilities. Incomplete data were attributed to staff's poor attitudes and low motivation, deficient understanding of the tools, and a lack of information from reluctant and or grief-stricken relatives about a mother after a death. Fear of blame, of disciplinary action, or of the consequences of criticizing a senior staff member were noted as other possible reasons for poor-quality and, in some cases, falsified data. The quotes that follow exemplify these reasons:

The nurses and midwives seem to generally have a poor culture of documenting. They focus on clinical practice instead. This makes it difficult to get complete data to fill in HMIS forms and assess for avoidable factors. —National-level (MoH) stakeholder

One challenge to getting correct data is the attitude of staff at the referring health facilities. They think you want to blame them. Sometimes they are not forthcoming. —MPDSR committee member

The display of mortality data trends at the health facility level was reported in eight facilities, and focal persons reported initiating efforts to share death review findings and recommendations with other staff at maternity or neonatal wards and with the senior staff in other departments or units.

Overall, the study revealed that none of the MPDSR committees consistently followed the national guidelines. Instead, they reorganized the flow of the processes to cope with competing time demands, low staffing levels, and limited staff capacities, among other health system challenges. Further, despite the guidelines' stipulating a nonpunitive approach to the reviews, in seven (41 percent) of the surveyed health facilities, disciplinary action was taken against a staff member involved in handling a case in the previous 24 months. In three districts, the team reported sanctions for cases of negligence, violation of ethics, or repeat offenses.

Institutionalization phase. There is evidence of routine integration. Fourteen (82 percent) of the surveyed health facilities achieved at least two progress markers in this stage, namely evidence of changes based on recommendations, death review meetings held at stated regular intervals, or multidisciplinary team engagement. The MPDSR focal persons reported weekly to quarterly meeting interactions. Some ad hoc meetings were also held when a maternal death occurred.

Committee members in 14 health facilities readily identified changes based on MPDSR reviews. Common examples included improved clinical practices, strengthened referral system (including timely referrals, better follow-up, and improved documentation), and better response of facility management to equipment and supply needs. Stressful changes—the punitive actions against staff—were also reported.

The composition of the review committees was reported as multidisciplinary in all the health facilities for MDSR and in 14 (82 percent) facilities for PDSR. However, the levels of engagement in the review process varied widely. Discussions with MPDSR committee members suggested instances in which

few members were forced to conduct reviews to meet the seven-day deadline due to competing time demands, poor motivation, and staff attitudes.

About one-quarter (24 percent) of the health facilities reported sharing recommendations with the communities through VHTs and radio talk shows, as exemplified by the statement of one MPDSR focal person:

Reviews showed that the use of herbs was common and linked to some of the deaths. We, therefore, introduced radio talk shows to sensitize the community.

Study findings revealed that the health facilities lacked systematic change management processes and did not have mechanisms for monitoring the implementation of the MPDSR committee recommendations. At four health facilities, hospital in-charges actively assigned recommendations to members of the MPDSR committee for follow-up until implementation. These facilities reported more accounts of positive changes ensuing from the MPDSR process, as observed by one MPDSR focal person:

The boss [medical superintendent] follows up to confirm that you have done your part of the assigned actions . . . He sometimes gives support to facilitate implementation.

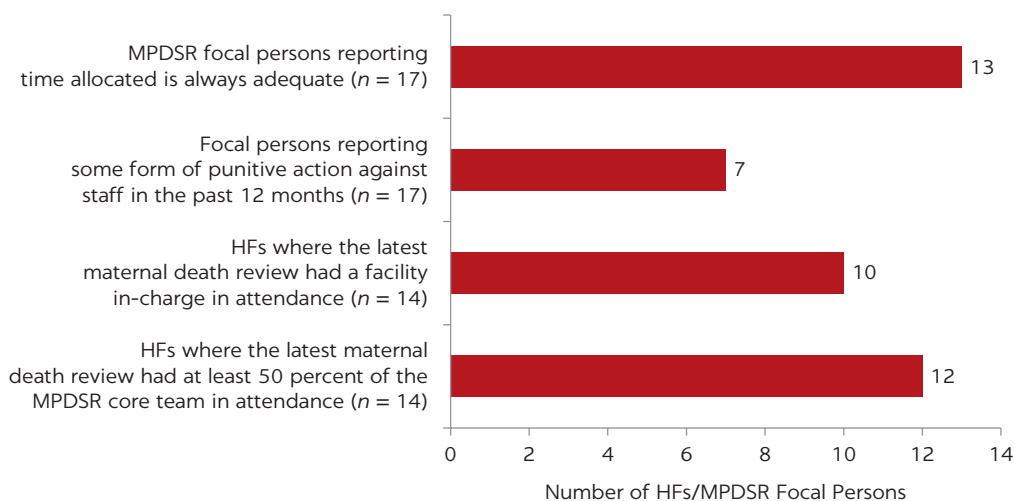
Overall, six facilities (35 percent)—all three HC IVs and three GHs—have not reached this stage of routine and integrated practice.

Evidence of sustainable practice. Only 8 (47 percent) of the 17 health facilities had documented plans in place for all staff to receive MPDSR training. However, most of these plans had yet to be implemented, as only one facility had operationalized its training plan. Many of the MPDSR committee members (over 40 percent), including some focal persons, have had no formal training or reorientation in the MPDSR approach in more than 1.5 years since their initial training. Of the 17 health facility MPDSR committees, only three (in GHs) had fully trained members, and regular orientation of staff on MPDSR was reported in only seven facilities. The in-charges attributed this issue to a lack of financial and material resources. All focal persons also reported limited support supervision from the districts and MoH over the previous 24 months.

Overall, the current practice is working better for maternal deaths than it is for perinatal deaths. The high volume of perinatal deaths is overwhelming to overworked health workers. Among the perinatal deaths in the assessed facilities in the past 24 months preceding the current study, only 16 percent, as compared with 67 percent, of maternal deaths were reviewed. In addition to the workload, poor staff attitudes toward the reviews of perinatal deaths were reported by some MPDSR committee members. Often the perceived value of reviewing a perinatal death is low, and there was no evidence of regular perinatal death review meetings in almost all the facilities assessed.

Overall, the current implementation of MPDSR at the health facility levels is characterized by poor adherence to national guidelines as well as by poor staff attendance of the review meetings, inadequate allocation of time dedicated to reviews, gaps in data generated and analyzed due to defensive behavior and punitive actions, and inadequate engagement of facility leaderships and senior staff in the review processes. The study found that of the latest review meetings implemented in the 17 selected health facilities, only 10 were attended by health facility in-charges, and only 13 of the meetings lasted for a sufficient duration (figure 3.3).

Poor adherence to the guidelines could be viewed as a local adaptation of the MPDSR process at the health facility level due to financial constraints, limited

FIGURE 3.3**Health facilities and MPDSR meeting attributes**

Source: This figure is original to this publication.

Note: HF = health facility; MPDSR = maternal and perinatal death surveillance and response.

infrastructure, and inadequate human resources. Many MPDSR committee members seemed indifferent to the punitive actions against staff, and several committee members missed meetings, and yet they considered their facilities to have institutionalized the MPDSR process. Other factors commonly cited to explain poor adherence to guidelines were competing time demands, staff attitudes, stock-outs of HMIS forms, lack of a formal mechanism for tracking adherence to the guidelines, and lack of holding facility in-charges accountable for the quality of reviews.

Summary. The study revealed that health facilities have made good progress toward institutionalization of the MPDSR process, with many facilities in the “evidence of routine integration” stage. However, the quality of the current practice of MPDSR needs improvement, specifically adherence to the national guidelines and the process of the reviews, including crafting of recommendations, documentation of action plans, and follow-up. The study findings also suggest that MPDSR has led to improvements in both the capacity and skills of health workers and the quality of care at the health facility level. This result corroborates previous reports that participation in MPDSR enhances analytical skills, peer learning, and capacity building (Hofman and Mohammed 2014; Kerber et al. 2015; Lewis 2008; WHO 2016).

The study further revealed the enablers and barriers in institutionalizing MPDSR, as observed in previous studies in Uganda (Agaro et al. 2016) and in other low-income countries in Africa (Kinney et al. 2019; Lazzarini et al. 2018; Tayebwa et al. 2020). Findings show insufficient technical, human, and financial resources to fully institutionalize MPDSR. This result was also noted in Tanzania (Mutabazi and Leshabari 2020). These areas need to be addressed to further enhance the gains made in MPDSR.

Factors affecting uptake and sustainability of MPDSR

The health facilities with high scores of institutionalization progress indicated that the enablers were active leadership engagement, staff receiving supportive

supervision from the DHMT, access to some form of finances (for example, RBF), and strong, multidisciplinary teamwork. The facilities also tailored their CME to issues identified in the MPDSR meetings. Effective teamwork required good communication and networking at the facility level and with several staff trained in MPDSR. Facilities with the lowest scores had limited involvement of health administrators and managers at the facility and district levels and poor accountability for the follow-up actions identified during the review process.

Table 3.3 details the perceived enablers of and barriers to the implementation and institutionalization of the MPDSR process based on the CFIR.

Health worker perceptions about MPDSR

A total of 42 health workers supporting MPDSR implementation at the health facility or district level were interviewed to ascertain their perception of MPDSR at the facility level. Overall, health workers perceive the MPDSR system at the facility level as an invaluable strategy for reducing maternal and perinatal deaths and achieving set maternal and child health targets. Over 50 percent of these workers agreed that the implementation of recommendations based on MPDSR led to improvements in maternal care; only 21 percent were not sure (figure 3.4), mainly because they had not done any assessment on the contributions of MPDSR. About 65 percent of the respondents stated that the MPDSR process contributed little to improving neonatal care at health facilities.

Over 40 percent of the health workers reported at least one change or avoidable factor at their facility whose identification would not have been possible without the MPDSR approach. Examples include staff deployment restructuring, regular CME offerings, equipment and supplies' purchases, improvement in clinical practices and staff attitudes, health education and engagement of communities through radio talk shows and VHTs, and improvement in referrals.

TABLE 3.3 Enablers of and barriers to MPDSR implementation

THEMATIC AREA	ENABLERS	BARRIERS
MPDSR characteristics	<ul style="list-style-type: none"> Favorable perceptions of MPDSR's potential to reduce maternal and perinatal death Ease of adaptability of MPDSR into clinical practice Positive changes following MPDSR that motivate staff to invest time and energy into institutionalizing the MPDSR process 	<ul style="list-style-type: none"> Health workers' varied understanding of institutionalization of MPDSR and complacency in ensuring the MPDSR implementation process is of high quality as defined in the national guidelines High workload and staffing levels that limit the momentum for institutionalization of quality MPDSR Limited resources to implement all the MPDSR activities Lack of convergent views on the implementation of the "no blame, no shame" principle across the health facilities
Individual (health worker) characteristics	<ul style="list-style-type: none"> Self-motivation and positive attitudes toward implementation of the MPDSR process, because it is viewed as relevant to changing the quality of care and reducing mortalities at the health facility level 	<ul style="list-style-type: none"> Staff demotivation due to heavy workloads, lack of incentives, and failure to implement recommended actions (all facilities reporting staff inadequacies) Staff confidence in implementing changes that would improve maternal and perinatal health negatively affected by inadequate knowledge and skills in maternal and perinatal health care and MPDSR due to inadequate training, mentorship, and support supervision Staff perceptions of MPDSR as extra work negatively affecting commitment to the process, data capture, and overall quality of the activities Gaps in data analysis and crafting of recommendations attributable to inadequate skills and time

continued

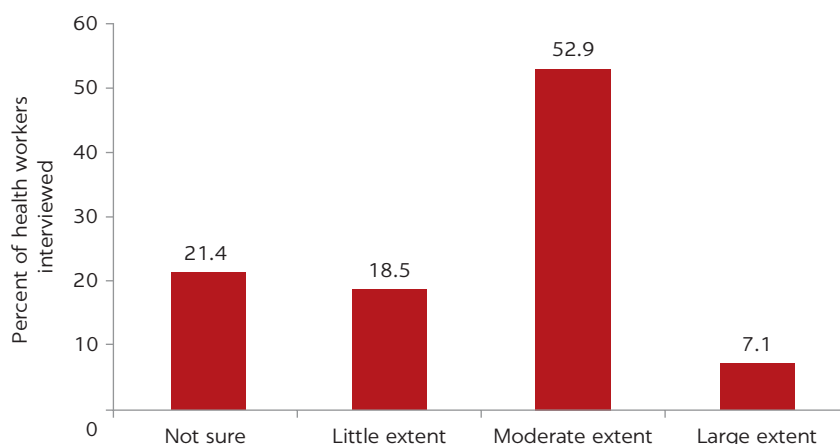
TABLE 3.3, continued

THEMATIC AREA	ENABLERS	BARRIERS
Inner setting	<ul style="list-style-type: none"> Active engagement of health facility leadership at the start of MPDSR implementation Involvement of management in meetings, identified as a motivating factor that improves coherence among senior staff, as well as analysis of data to highlight gaps Good teamwork and shared responsibility for quality of care and a culture of supporting one another instead of taking punitive actions for errors, which were reported to have accelerated implementation status in some health facilities Availability of the HMIS notification review forms to facilitate routine and timely reviews Identification of champions at MPDSR introduction 	<ul style="list-style-type: none"> Weak health facility leadership and engagement (such as leaders being less involved, not holding health workers accountable to effecting change but instead being keen to institute punitive actions) Staff attrition due to transfers and other reasons Political sensitivities about maternal deaths and hence fear among health workers that the MPDSR process is about finding fault Inadequate capacity building through training and supportive supervision (only three facilities reporting attendance of DHMT at their last meeting) Limited financial resources to effect changes, for example, purchase of requisite health commodities Poor organizational culture quick to apportion blame for errors leading to deaths, and thus staff perceptions of MPDSR as a fault-finding system, which slows its adoption and integration at the health facility level Limited awareness and integration of staff across the different points of care in some facilities Inadequate monitoring, reflection, and evaluation of the MPDSR process Gaps in analyzing data and documenting action plans on recommendations from reviews
Outer setting	<ul style="list-style-type: none"> Availability of guidelines and well-structured HMIS review forms Political and high-level leadership support and guidance at the MoH that pushed health facilities to adopt and implement MPDSR Involvement of the DHMT at the introduction of the MPDSR process, which all MPDSR focal persons reported helped with initial launch 	<ul style="list-style-type: none"> Inadequate support supervision and feedback from the DHMT and MoH Slow implementation of recommendations (such as improving blood availability) that should be implemented by district managers, which demotivates facility staff Low investment in building staff confidence in the execution of MPDSR at initiation Promotion of MPDSR as an extra-clinical practice within the quality improvement framework Limited engagement with the community, where several factors affect maternal and perinatal outcomes (for example, delays in health seeking, lack of transport, or costs associated with health care)

Source: This table is original to this publication.

Note: DHMT = District Health Management Team; HMIS = Health Management Information System; MPDSR = maternal and perinatal death surveillance and response; MoH = Ministry of Health.

FIGURE 3.4
Perceived extent to which MPDSR has improved the quality of maternal services at the facility level



Source: This figure is original to this publication.

These changes have led to noticeable reductions in maternal deaths at the facilities, as noted:

Not only have we seen improvement in the quality of maternal care services, but also, the number of maternal deaths at the health facility level has greatly reduced. —MPDSR committee member

We used to lose mothers to [postpartum hemorrhage] due to the limited monitoring we used to do. We were understaffed to do close monitoring of mothers after delivery. After MPDSR recommendations, management transferred a colleague from another unit to join us. There is now close monitoring, and we have almost eliminated deaths due to PPH. —MPDSR focal person

Best practices in the implementation of MPDSR

According to the respondents, over 85 percent of the actionable recommendations from MPDSR that are in the control of health facility staff and about 60 percent of recommended changes that are in the control of district health management were acted on. Despite gaps, several good practices were observed, as shown in box 3.1.

Lessons learned in MPDSR implementation

The key lessons learned from interactions with the different implementers of MPDSR in this study are as follows:

- Maternal and perinatal death reviews are by their very nature stressful and emotional events and evoke guilt and fear of retribution in health workers. Facilitators of the review sessions, therefore, need both technical and counseling skills to manage the sessions for better outcomes.
- Staff insufficiencies and workloads at both the facility and DHMT levels are hindering the quality of maternal and perinatal death reviews, which require staff time and commitment.

Box 3.1

Best practices in MPDSR

- Actively involve the health facility management in meetings, and follow up with staff to ensure skills development, capacity building, and accountability for agreed-on actions.
- Conduct joint death reviews with health workers from referring facilities.
- Provide written feedback to referring facilities to improve health care practices.
- Involve local leaders in community sensitization, and share information from reviews.
- Involve Village Health Teams and communities in discussing avoidable factors leading to deaths and in escorting pregnant mothers to health facilities.
- Hold continuing medical education sessions on maternal and perinatal death surveillance and response.
- Hold staff accountable for collation of complete data, and follow up on recommendations.
- Schedule review meetings in consultation with the District Health Management Team members to ensure their attendance.

- Several changes resulting from MPDSR recommendations require staff's extra time and improved skills to execute and sustain, especially at facilities receiving referred patients. Facilities are failing to maintain adequate practice of the new changes due to a shortage of staff and gaps in their skills.
- To reduce maternal and perinatal mortality, recommended changes from the death reviews should be implemented at both the facility and community levels.
- Facility managers are the most constrained by time during the MPDSR process. Managers are required to participate on the MPDSR committees and yet have many competing demands. This issue affects the time managers allocate to reviews and, consequently, the quality of the reviews and recommendations generated.
- Health workers and managers have adapted the MPDSR guidelines to suit their own context, with both positive and negative outcomes. Negative outcomes include poor adherence to the guidelines and complacency in the implementation of MPDSR activities.
- Sharing success stories and feedback motivates staff to implement the MPDSR process and recommendations.
- Despite the guidelines explicitly stating a “no blame, no shame” policy in MPDSR, staff's fear of punitive measures in the event of a maternal death remains, and disclosure of accurate information is not fully practiced.
- Support supervision from the district, conducted by health managers trained in the MPDSR process, improves the capacity and confidence of staff to craft recommendations and makes facility in-charges more responsive to the implementation of recommendations.
- Facilitated and motivated champions of the MPDSR process effectively reach out to lower health facilities to provide necessary technical support.

RECOMMENDATIONS

The final objective of the study was to extrapolate from the findings proposals for improving and sustaining MPDSR at the health facility and district levels. The most important proposals are as follows:

- **Institute and facilitate feedback.** The MoH, in collaboration with DHMTs and RRHs, should institute and facilitate a feedback process to link the referral facilities to lower facilities where deaths and near-death events were initially managed to improve the quality of care at facilities.
- **Mobilize resources.** The MoH and health partners should mobilize resources to increase budgets for MPDSR implementation at the facility and district levels and, in particular, earmark financial support for perinatal death reviews.
- **Strengthen community linkages.** Health facility MPDSR committees at the GH and HC IV levels should strengthen community linkages by holding regular meetings with community leaders and health workers to share review findings of maternal and perinatal surveillance, to receive feedback, and to jointly develop local solutions to modifiable factors related to health care-seeking delays. Additionally, health facility and community leaders should identify local champions as part of strengthening community linkages.
- **Establish formal and systematic procedures.** Facilities and districts should establish formal and systematic procedures for following up on

recommendations and coordinating responses. Suggested mechanisms include the following:

- a. DHMTs should integrate and allocate sufficient time during quarterly supervisory visits or performance reviews to the monitoring of MPDSR recommendations at GHs and HC IVs.
 - b. DHMTs should maintain a master checklist to record on a quarterly basis the status of MPDSR recommendations and responses in each facility.
 - c. Health facility MPDSR committees should track and periodically evaluate the quality of the implementation of new clinical practices as well as the recommendations from MPDSR reviews.
 - d. Districts should track the functionality of the committees (once formed) as a key annually reported indicator.
- **Improve monitoring.** The MoH, in collaboration with RRHs, should institute a formal mechanism to monitor the prevalence of punitive actions against staff at the health facility and district levels and provide support to reduce these actions. This work can be done as follows:
 - a. Providing attitudinal training of health facility managers and DHMT members;
 - b. Adding more guidance on punitive actions into the national MPDSR guidelines; and
 - c. Ensuring that health facilities have developed a MPDSR participant code of conduct to ensure the “no blame, no shame” principle is followed and no punitive actions are taken.
 - **Strengthen district-level committees.** DHMTs should strengthen district MPDSR committees, ensuring they are visible as advocates and supporters of best practices for maternal and newborn care. Key aspects include the following:
 - a. Mentoring members of the MPDSR committees to ensure a no-blame approach to death review and supporting MPDSR champions who commit to this approach;
 - b. Allocating financial resources to facilitate the functions of the committee; and
 - c. Developing and implementing guidelines for tracking response actions at the health facility level.
 - **Deploy a capacity-building strategy.** The MoH, in collaboration with DHMTs, RRHs, and health partners, should develop and implement a capacity-building strategy to ensure that all members of health facility MPDSR committees are trained before they enter their roles and to ensure ongoing (at least once a year) skills building of committee members and other staff through reorientation and support supervisions. Some key elements of the MPDSR process to be emphasized in the capacity-building efforts include the following:
 - a. Attitudinal training, which helps minimize the risks of defensive behavior among staff;
 - b. Competencies in data capture, analysis, and synthesis; recommendation crafting; action plan development; tracking and reflecting on response actions; and effective management of continuous quality improvement processes;
 - c. Innovative and cost-effective training strategies that facilitate wide dissemination of and easy access to guidelines and training materials (for example, developing audio- or video records of MPDSR training sessions

and enabling their wide dissemination through electronic media), and the introduction of MPDSR training in training institutions; and

d. Establishment of communities of practice at different levels to promote learning and peer support.

- **Improve review structure for processing deaths.** Health facilities should ensure that the reviews of deaths are conducted by a multidisciplinary team that includes at least 50 percent of the committee members to the extent possible. Facility leadership and committees should ensure data completeness before conducting a review and that national guidelines are followed.
- **Link MPDSR with RBF schemes for sustained actions.** The MoH should link the MPDSR with the ongoing performance-based financing schemes so that those who use them to advance service delivery outcomes are tracked and rewarded. This process would encourage health facility managers and service providers to periodically discuss and sustainably address emerging maternal and perinatal death determinants in the health facilities and their catchment areas.

ANNEX 3A MATERNAL AND PERINATAL DEATH SURVEILLANCE AND RESPONSE MODEL

TABLE 3A.1 Detailed MPDSR institutionalization conceptual model

PHASE	STAGE	PROGRESS MARKERS AND INSTRUMENT ITEMS	RATIONALE FOR INSTRUMENT ITEMS BASED ON THE LITERATURE AND GLOBAL GUIDELINES
Pre-implementation	Creating awareness (2 points)	Number and type of (senior) managers involved in implementation process	Successful implementation of MPDSR requires leaders to champion the process and access change agents at other levels to address larger, systemic concerns identified through MPDSR (Abebe et al. 2017; Belizán et al. 2011; Kerber et al. 2015).
	Adopting the concept (2 points)	Decision to implement MPDSR Steering committee	A formal decision is needed by facility leadership to support implementation (Kerber et al. 2015; Lewis et al. 2014). A steering committee is needed for operationalizing the MPDSR guidelines. Supervision and teamwork within a supportive environment are essential components to establish the foundation for a functioning MPDSR process (Belizán et al. 2011; Kerber et al. 2015).
Implementation	Taking ownership (7 points)	Data collection tools: <ul style="list-style-type: none"> • Are always available • Include cause of death • Include modifiable factors • Include a place to follow up on actions taken 	National guidelines with clearly defined roles and responsibilities, necessary tools, and familiarity and confidence in the reporting process enable implementation (Kerber et al. 2015; Smith et al. 2017).
		Meeting process established: <ul style="list-style-type: none"> • Informants able to describe meeting process • Staff meeting conduct agreement available 	Part of taking ownership involves team members being engaged in the process. Specific actions need to be taken to create “no-blame, no-shame” environment, such as having a code of conduct members agree to adhere to during a review (WHO 2016).
		Resources allocated: <ul style="list-style-type: none"> • Acquired through facility budget or support from other partners to establish death reviews 	Reliance on external funds or the goodwill of professional organizations to support the process can be an inhibitor of implementation (Smith et al. 2017).

continued

TABLE 3A.1, *continued*

PHASE	STAGE	PROGRESS MARKERS AND INSTRUMENT ITEMS	RATIONALE FOR INSTRUMENT ITEMS BASED ON THE LITERATURE AND GLOBAL GUIDELINES
	Evidence of practice (6 points)	Evidence of MPDSR meetings: <ul style="list-style-type: none"> • Minutes available • Minutes include action items • Minutes include follow up from previous meetings • Meeting notes respect confidentiality of staff 	Documentation of meetings provides evidence that regular meetings take place and enables reflection on the quality of the meetings (Kerber et al. 2015).
		Orientation of new staff	Orientation of old and new staff about the death review process supports implementation efforts, because everyone is on-boarded to the process (Kerber et al. 2015).
		MPDSR data use: <ul style="list-style-type: none"> • Data trends displayed or shared 	Looking at data trends over time, such as number of admissions, births, and deaths, as well as trends in causes of death and types of modifiable factors are important components of MPDSR tracking (Abebe 2017; Kerber et al. 2015; Smith et al. 2017).
Institutionalization	Evidence of routine integration (7 points)	Further evidence of practice: <ul style="list-style-type: none"> • Evidence of change based on recommendations 	Implementation is encouraged by evidence of the MPDSR process leading to improved health services (de Kok 2017; Martin et al. 2016; Smith et al. 2017).
		<ul style="list-style-type: none"> • Evidence of routine MPDSR practice 	Holding regular meetings is important (Belizán et al. 2011; Kerber et al. 2015).
		<ul style="list-style-type: none"> • Multidisciplinary meetings 	Participation of all health worker cadres involved in the process of caring for women and newborns enhances the analysis of death information and the identification of modifiable factors (Belizán et al. 2011; WHO 2016).
		<ul style="list-style-type: none"> • Community linkages (evidence) 	Institutionalizing MPDSR supported by communities strengthens collective ownership, responsibility, and quality of care (Martin et al. 2016).
	Evidence of sustainable practice (6 points)	Documented results: Facility records show ongoing death review meetings for at least 1 year	Regular audit meetings practiced over a long time reflect sustained practice; staff have an expectation that meetings will occur (Belizán et al. 2011; Kerber et al. 2015).
		Evidence of staff development: <ul style="list-style-type: none"> • There is a plan in place to ensure all staff receive MPDSR training • There is evidence that staff have received MPDSR training in the past year 	Depending on the role and level of implementation of the audit system, district health staff, administrative staff, health workers, and other relevant stakeholders require initial and regular training specific to their role in the audit process (Kerber et al. 2015; Smith et al. 2017; WHO 2016).
		Combined score for the other five stages (divided by 12)	Sustainable practice is influenced by the level of implementation of elements of the other five stages.

Source: This table is original to this publication.

Note: MPDSR = maternal and perinatal death surveillance and response.

REFERENCES

- Abebe, B., et al. 2017. “We Identify, Discuss, Act and Promise to Prevent Similar Deaths’: A Qualitative Study of Ethiopia’s Maternal Death Surveillance and Response System.” *BMJ Global Health* 2: e000199. doi:10.1136/bmjgh-2016-000199.
- Agaro, C., J. Beyeza-Kashesya, P. Waiswa, J. N. Sekandi, S. Tusiime, R. Anguzu, and E. Ekirapa-Kiracho. 2016. “The Conduct of Maternal and Perinatal Death Reviews in Oyam District, Uganda: A Descriptive Cross-Sectional Study.” *BMC Womens Health* 16 (38). doi:10.1186/S12905-016-0315-5.
- Belizán, M., A. M. Bergh, C. Cilliers, R. C. Pattinson, A. Voce, and Synergy Group. 2011. “Stages of Change: A Qualitative Study on the Implementation of a Perinatal Audit Programme in South Africa.” *BMC Health Services Research* 11: 243.
- Bergh, A. -M., et al. 2014. “Implementing Facility-Based Kangaroo Mother Care Services: Lessons from a Multi-Country Study in Africa.” *BMC Health Services Research* 14 (1): 293. doi:10.1186/1472-6963-14-293.
- Damschroder, L. J., D. C. Aron, R. E. Keith, S. R. Kirsh, J. A. Alexander, and J. C. Lowery. 2009. “Fostering Implementation of Health Services Research Findings into Practice: A Consolidated Framework for Advancing Implementation Science.” *Implementation Science* 4 (50). doi:10.1186/1748-5908-4-50.
- de Kok, B., M. Imamura, L. Kanguru, O. Owolabi, F. Okonofua, and J. Hussein. 2017. “Achieving Accountability through Maternal Death Reviews in Nigeria: A Process Analysis.” *Health Policy and Planning* 32: 1083–91.
- Hofman, J. J., and H. Mohammed. 2014. “Experiences with Facility-Based Maternal Death Reviews in Northern Nigeria.” *International Journal of Gynecology and Obstetrics* 126 (2): 111–14. doi: 10.1016/j.ijgo.2014.02.014.
- Hounton, S., et al. 2013. “Towards Elimination of Maternal Deaths: Maternal Deaths Surveillance and Response.” *Reproductive Health* 10 (1). doi: 10.1186/1742-4755-10-1.
- Kerber, K. J., et al. 2015. “Counting Every Stillbirth and Neonatal Death through Mortality Audit to Improve Quality of Care for Every Pregnant Woman and Her Baby.” *BMC Pregnancy and Childbirth* 15 (S2): S9. doi: 10.1186/1471-2393-15-S2-S9.
- Kinney, M. V., et al. 2020. “It Might Be a Statistic to Me, but Every Death Matters: An Assessment of Facility-Level Maternal and Perinatal Death Surveillance and Response Systems in Four Sub-Saharan African Countries.” *PLOS One* 15 (12): e0243722. doi:10.1371/journal.pone.0243722.
- Kinney, M. V., et al. 2019. “Implementation of Maternal and Perinatal Death Reviews: A Scoping Review Protocol.” *BMJ Open* 9 (11): e031328. doi:10.1136/bmjopen-2019-031328.
- Lazzerini, M., S. Richardson, V. Ciardelli, and A. Erenbourg. 2018. “Effectiveness of the Facility-Based Maternal Near-Miss Case Reviews in Improving Maternal and Newborn Quality of Care in Low-Income and Middle-Income Countries: A Systematic Review.” *BMJ Open* 8 (4): e019787. doi:10.1136/bmjopen-2017-019787.
- Lewis, G. 2008. “Reviewing Maternal Deaths to Make Pregnancy Safer.” *Best Practice & Research: Clinical Obstetrics & Gynecology* 22 (3): 447–63. doi:10.1016/j.bpobgyn.2007.10.007.
- Lewis, G. 2014. “The Cultural Environment behind Successful Maternal Death and Morbidity Reviews.” *BJOG* 121 (Suppl 4): 24–31.
- Martin, H., et al. 2016. “Strengthening Accountability for Improved Maternal and Newborn Health: A Mapping of Studies in Sub-Saharan Africa.” *International Journal of Gynaecology & Obstetrics* 135: 345–57.
- MoH (Uganda Ministry of Health). 2015. *Health Sector Development Plan 2015/16–2019/20*. Kampala: MoH.
- MoH (Uganda Ministry of Health). 2017. *The National Maternal and Perinatal Death Surveillance and Response Guidelines 2017*. Kampala: MoH.
- MoH (Uganda Ministry of Health). 2020. *The National Annual Maternal and Perinatal Death Surveillance and Response (MPDSR) Report FY 2019/2020*. Kampala: MoH.

- Mutabazi, M., and S. Leshabari. 2020. "Maternal Death Surveillance and Response: Factors Affecting Its Implementation in Mtwara Region, Tanzania." *Journal of Gynecology and Women's Health* 19 (2): 556007.
- Smith, H., et al. 2017. "Implementing Maternal Death Surveillance and Response: A Review of Lessons from Country Case Studies." *BMC Pregnancy Childbirth* 17: 233.
- Tayebwa, E., et al. 2020. "Assessing Implementation of Maternal and Perinatal Death Surveillance and Response in Rwanda." *International Journal of Environmental Research and Public Health* 17: 4376. doi:10.3390/ijerph17124376.
- UBOS (Uganda Bureau of Statistics) and ICF. 2018. *Uganda Demographic and Health Survey 2016: Key Indicators*. Kampala: UBOS; and Rockville, MD: ICF.
- WHO (World Health Organization). 2016. *Time to Respond: A Report on the Global Implementation of Maternal Death Surveillance and Response (MDSR)*. Geneva: WHO. <http://apps.who.int/iris/bitstream/10665/249524/1/9789241511230-eng.pdf?ua=1>.

4 Coverage, Delivery Approaches, and Utilization of Adolescent-friendly Health Services Related to Sexual and Reproductive Health in Uganda and Factors Influencing Their Expansion

NICOLETTE NABUKEERA-BARUNGI AND PETER ELYANU

EXECUTIVE SUMMARY

Improving adolescent health is central to achieving the goals of reproductive, maternal, newborn, child, and adolescent health (RMNCAH) in Uganda. In the past two decades, Uganda has made progress toward improving outcomes in RMNCAH. However, while maternal and under-five mortality have seen dramatic improvements over this period, for adolescents (ages 10–19), health outcomes have stalled. In fact, the teenage pregnancy rate has hovered at 24–25 percent over the past decade, and almost one-third of all maternal deaths in Uganda are of young mothers (15–24 years), including adolescents. Despite overall improvements in HIV/AIDS incidence and prevalence, 3.3 percent of adolescents still live with the disease (MoH 2016), and 60 percent have an unmet need for modern contraception. Early sexual debut, coupled with the low rates of contraception use among adolescents, contributes to Uganda’s high rates of unplanned teenage pregnancies, higher risk of unsafe abortions, and an overall high fertility rate. Furthermore, adolescents remain particularly underserved by health and social programs, even though interventions that cater to their unique needs have the potential to generate long-term benefits through adulthood.

To drive sectoral reform and mobilize resources for adolescent health, the Ministry of Health (MoH) has developed and published several policies and guidelines, including the *National Adolescent Health-Strategy 2011–2015* (MoH 2011), the *Adolescent Health Policy Guidelines and Service Standards* (MoH 2012), and the *Investment Case for Reproductive, Maternal, Newborn, Child, and Adolescent Health Sharpened Plan for Uganda* (the Sharpened Plan; MoH 2016). Additionally, the *Health Sector Strategic and Investment Plan 2010/11–2014/15* (MoH 2010) and the *Health Sector Development Plan 2015/16–2019/20* (MoH 2015) both set targets for improving the delivery of

adolescent-friendly health services (AFHS). These services are designed to cater to the specific needs of adolescents and aim to create a “safe space” where this population can access sexual and reproductive health (SRH) services (see table 4A.1 in annex 4A).

Although a policy framework for delivering AFHS has been created, many challenges remain that have impeded transformative changes in adolescent health outcomes. Importantly, there is a lack of clarity on the exact coverage of AFHS and the extent to which both supply- and demand-side factors facilitate or hinder service delivery. Therefore, this study sought to better understand these issues.

Study objectives

The specific objectives of the study were as follows:

- Describe the coverage, delivery approaches, and utilization of AFHS, and
- Explore factors that enable or hinder the delivery and expansion of such services from the perspective of RMNCAH in Uganda.

Methodology

The study adopted a cross-sectional, mixed-methods approach and collected data using (a) a review of relevant literature; (b) a review of 132 health facility records in the District Health Information Software version 2 (DHIS2); (c) 50 key informant interviews (KIIs) with various policy makers, managers, health workers, members of Village Health Teams (VHTs), teachers, and religious and civic leaders; (d) 20 in-depth interviews (IDIs) with adolescents from communities adjacent to health facilities providing adolescent sexual and reproductive health services (ASRH); and (e) 29 focus group discussions (FGDs) with groups of adolescents and their caregivers (parents and guardians). Data were collected from five districts: Gulu (Northern region), Kampala Capital City Authority (Central region), Luwero (Central region), Mayuge (Eastern region), and Mbarara (Western region); Kampala was included because it is the location for the headquarters of the MoH and other national agencies that support or implement RMNCAH programs.

Key findings

Key findings are related to AFHS coverage, delivery approaches, and utilization, as well as to enablers and hindrances to service delivery.

Coverage, delivery approaches, and utilization of AFHS

Several issues affected AFHS coverage, delivery approaches, and utilization.

Coverage. The study found a paucity of information on which to definitively estimate the coverage of AFHS in Uganda. This issue stems from a lack of operational tools to uniformly measure adolescent friendliness and to assess adolescent health services offered at the range of providers—from public health facilities to independently run organizations. Within public health facilities, coverage was estimated based on the presence of youth-friendly corners in the health facilities, which are spaces providing SRH services to youths in a non-judgmental way. However, as noted in existing literature and from the interviews conducted throughout this study, these centers often were not functional or did

not provide the full set of minimum AFHS as defined in the *Adolescent Health Policy Guidelines and Service Standards*. Given the absence of a standard framework for measuring the delivery of AFHS, the study estimated that coverage ranges from 17 percent to 71 percent. This estimation was derived from existing literature that assessed coverage. The wide variation in coverage range is to be expected, given the differences in tools used, the study objectives, the sampling frame, the role of development agencies in funding the interventions assessed, and the focus population—for example, adolescents receiving HIV care.

Delivery approaches. AFHS are delivered through a variety of delivery models. The *Adolescent Health Policy Guidelines and Service Standards* identifies three main models or approaches: (a) in out-of-school locations and outposts for hard-to-reach youth, (b) through targeted nonclinical service provision through a youth desk located in schools, and (c) in an integrated clinical and nonclinical service provision approach through youth-friendly corners in public and private health facilities at all health service delivery levels.

This study further broke down the delivery approaches, based on what was identified during data collection:

- *Youth-friendly corners*, typically at public health facilities and dedicated to providing services, mostly ASRH;
- *Standalone clinics*, providing some AFHS either in health facility settings or as independent structures;
- *Adolescent-responsive model*, which focuses on ensuring that the delivery of all health services is integrated into facility services rather than having dedicated centers within the facility to provide AFHS specifically;
- *Outreach or outpost services*, which bring AFHS closer to the targeted populations through awareness campaigns, mobile clinics, and so on;
- *Youth SRH desks and counseling services* in schools to provide on-demand support to adolescents;
- *HIV/AIDS services* for adolescents, which by virtue of their focus on SRH are able to also target adolescents and also have adapted the Young Adolescent Program Support (YAPS) model; and
- *Combined approaches*, which allow a mix of modalities—for example, a youth-friendly corner that also has an active HIV/AIDS control program and uses outreach campaigns to raise awareness and generate demand.

Utilization. The study found that utilization of AFHS depends on several factors, including confidentiality or privacy offered by service providers, attitudes of the providers toward adolescents, quality of the services provided, accessibility (in costs and logistics), and perceived benefits. A key issue affecting AFHS utilization is concern about societal judgment or frowning on adolescents who use services such as youth-friendly corners, which some perceive as an avenue for promoting sexual activity or promiscuity. The study also found that, in general, male adolescents were more likely to use dedicated centers for AFHS, especially those that provided edutainment and other AFHS; centers tended to have fewer engaging options for young girls. Further analysis of DHIS2 data related to adolescents' utilization of SRH services in 132 health facilities, with and without youth-friendly corners, showed that adolescents in facilities with youth-friendly corners were significantly more likely to be first-time users of condoms, intrauterine devices (IUDs), and Microgynon contraceptives, as compared with those in health facilities without youth-friendly corners (at a 0.05 level of significance).

Enablers of and hindrances to delivery of AFHS

Table 4.1 summarizes the enablers and hindrances to delivery of AFHS as identified through this study.

Recommendations

To address the findings of the study, the MoH, the Ministry of Local Government (MoLG), the Ministry of Education and Sports (MoES), and the Ministry of Gender, Labour and Social Development (MoGLSD), in collaboration with other stakeholders, should undertake the following:

- Review and harmonize existing legislation, policies, and guidelines for AFHS and disseminate them widely among the managers and implementers of AFHS, notably health workers, teachers, parents, religious and cultural leaders, and community-based resource persons, including VHTs, to guide the planning and implementation of services.
- Discuss and build consensus on the appropriate definitions, minimum package, and standards for AFHS in different settings, particularly health facilities, schools, and community. The Pathfinder tool for assessing AFHS can be adapted for this purpose (see table 4B.1 in annex 4B).

TABLE 4.1 Summary of findings on enablers and hindrances to AFHS

ENABLERS	HINDRANCES
Existence of policies, guidelines, and standards that allow the establishment, implementation, and expansion of AFHS at various levels	Gaps and contradictions in legal and policy frameworks that hinder the smooth implementation of AFHS
Availability of financing partnerships for AFHS between MoH and various health development and implementing partners	Inadequate funding to enable provision and scaling up of AFHS
Provision of social and economic activities alongside ASRH services to generate alternate or additional income for providers	Inadequate collaboration among stakeholders in various sectors in the delivery of AFHS
Accessibility, affordability, and confidentiality of available services to adolescents	Remote locality of the health facility and community
Utilization of a combination of delivery approaches to target and reach adolescents	Frequent stock-outs of essential medicine and commodities for adolescent health
Training school staff in the delivery of SRH information and counseling for adolescents	Poor customer service and quality of care, including poor state of amenities in public facilities
Availability of HIV services in a health facility	Negative attitude toward the provision of SRH information to young people among some stakeholders
Socioeconomic well-being and strong social ties and networks	Having a disability, being a sexual minority, or having a low socioeconomic background
Peer-to-peer information sharing	Inadequate number of health workers and community resource persons who are trained in the provision of AFHS
Collaboration with parents and community leaders in the provision of AFHS	Misinformation on the objectives and benefits of AFHS
Access to and use of social media	Limited knowledge about available AFHS among adolescents and community members
Enhanced community awareness on available AFHS	Personal and community stigma about teenage pregnancy, which inhibits the use of AFHS

Source: This table is original to this publication.

Note: AFHS = adolescent-friendly health services; ASRH = adolescent sexual and reproductive health; MoH = Ministry of Health; SRH = sexual and reproductive health.

- Increase funding for and scale up proven, cost-effective AFHS delivery and utilization approaches in health facility, school, and community settings. In particular, focus on making all health facilities adolescent responsive, on training service providers in health facilities in the delivery of AFHS, on teacher and peer-driven SRH education and counseling in schools, on health facility-driven community outreach, and on community-led sensitizations about SRH services for adolescents.
- Develop an AFHS system by training health workers in health facilities, mentoring members of VHT, and furnishing members with simplified guidelines or handbooks on the delivery of AFHS to guide their work.
- Establish multisectoral mechanisms to coordinate planning, financing, implementing, and scaling up of AFHS at the national and decentralized levels.
- Establish interministerial collaboration to oversee the development of appropriate information and educational materials as well as the implementation of the nonclinical AFHS in schools and the community.
- Strengthen collaboration and coordination among AIDS control, adolescent health, and school health programs to leverage the available funding to broaden (a) the number of service providers trained and mentored in the delivery of AFHS and (b) the coverage of facility services.
- Develop a comprehensive, multisectoral operational plan and budget for scaling up AFHS interventions, incorporating them into the second RMNCAH Sharpened Plan, and mobilizing the resources necessary for their implementation.
- Incorporate AFHS indicators into the Health Management Information System (HMIS), data collection and reporting forms, and quality and performance assessment tools to enable periodic assessment of the coverage, quality, and impacts of this intervention on a continual basis in Uganda.
- Raise awareness among adolescents at service delivery points, including health facilities, schools, and communities, by putting up sign posts and conducting outreach to the communities where they live.
- Encourage implementing partners to support efforts that engage peers and community models, including schools and young VHTs as peers, to assuage adolescents' fear of seeking AFHS services, the greatest barrier they reported.
- Carry out further research to establish a baseline for the actual coverage and utilization of clinical and nonclinical AFHS based on an agreed-upon definition, minimum package, and criteria for various settings, especially health facilities, schools, and the community. The baseline will be important for further research on the effectiveness of AFHS in the country.

INTRODUCTION

In the past two decades, Uganda has made progress toward improving outcomes in RMNCAH. As a result of these efforts, the maternal mortality ratio declined by 20 percent from 418 per 100,000 live births in 2006 to 336 in 2016, and the under-five child mortality rate declined from 128 to 64 deaths per 1,000 live births over the same 10-year period (UBOS 2017).

In contrast, improvements in adolescents' (defined as people ages 10–19) health outcomes have stalled. The teenage pregnancy rate has hovered at

24–25 percent over the past decade, and almost one-third of all maternal deaths in Uganda are of young mothers ages 15–24, including adolescents. Furthermore, despite overall improvements in HIV/AIDS incidence and prevalence, 3.3 percent of adolescents still live with the disease (MoH 2016). A recent study among 648,000 sexually active adolescents ages 15–19 in Uganda found that more than 60 percent had an unmet need for modern contraception, and 3 percent of young women and 1.7 percent of young men had used a form of modern contraception (Guttmacher Institute 2019). Early sexual debut, coupled with the low rates of contraception use among adolescents, contributes to the high rates of (unplanned) teenage pregnancies, higher risks of unsafe abortions, and Uganda’s overall high fertility rates. Furthermore, adolescents remain particularly underserved by health and social programs, even though interventions that cater to their unique needs have the potential to generate long-term benefits through adulthood.

Early studies in Uganda have shown that the provision of health services that are better tailored to adolescents can help improve their health outcomes. A critical aspect of tailoring services for adolescents is to ensure that services are “friendly.” According to the World Health Organization (WHO), AFHS

refers to the availability of suitable policies and standard operating procedures, health workers, specific service areas, and acceptable and affordable services for adolescents in a health facility, as well as the involvement of the community in service delivery and attending to adolescent clients in a sensitive, confidential, and timely manner. (WHO 2017)

Therefore, effective AFHS attracts adolescents by eliminating barriers to care, creating a safe space for consultation and counseling, and educating and empowering users. Unfriendly services include those that are expensive, lack confidentiality or privacy, are difficult to physically access, or provide poor customer service (Atuyambe et al. 2005; Mbonye 2003; WHO 2003, 2017).

National policy and operational response to adolescent health

The Ministry of Health (MoH) has developed and published guiding documents for the implementation of AFHS, notably the *National Adolescent Health Strategy* and the *Adolescent Health Policy Guidelines and Service Standards*. Further, the *Health Sector Development Plan 2015/16–2019/20* set a target to make all public health facilities adolescent friendly, and adolescent health was incorporated into the *Investment Case for Reproductive, Maternal, Newborn, Child and Adolescent Health. Sharpened Plan for Uganda 2016/17–2019/20* (the Sharpened Plan). The Sharpened Plan emphasizes the need for expansion of both the coverage and quality of AFHS and provides a platform for mobilizing domestic and external financing to support the strengthening of services for adolescents, particularly in SRH and rights. The prioritization of AFHS in the Sharpened Plan has helped galvanize development partners’ support for investments in adolescent health, notably through the Uganda Reproductive Maternal and Child Health Services Improvement Project, jointly financed by the World Bank, the Global Financing Facility, and Sweden. The MoES and the MoGLSD have also established policies to address adolescent health.

Study rationale

In spite of the GoU's efforts to provide AFHS, the delivery of these services remains poorly coordinated, inadequate, under-resourced and, therefore, in many cases, ineffective. A study by the MoH found that only 29 percent of 127 health facilities, in 44 randomly selected districts, had ASRH services (MoH 2015). The MoH also found in later studies that only 59 percent of a representative sample of the 134 health facilities accredited to provide antiretroviral therapy (ART) had youth-friendly corners for HIV/AIDS care (MoH 2018). The weak progress in adolescent health is of particular concern, given that (a) adolescents constitute a large and growing proportion—estimated at 25.7 percent—of Uganda's population (UBOS 2021), and (b) lifestyle choices, often initiated during adolescence, have long-term health impacts, including high risks of noncommunicable diseases (NCDs), which remain an area of increasing prevalence in Uganda and an important driver of premature mortality.

Objectives of the study

The broad objective of this study was to assess the delivery of AFHS in Uganda. Drawing from an extensive body of knowledge on the subject, the study examined estimations of the current coverage of AFHS, as well as the enablers for and impediments to scaling up AFHS in Uganda. The specific objectives are as follows:

- Describe the coverage, delivery approaches, and utilization of AFHS from the perspective of RMNCAH in Uganda, and
- Explore the factors that enable or hinder delivery and expansion of AFHS in Uganda.

Working definitions

To facilitate understanding of the terminology used in this study, table 4.2 provides a list of common terms used and their definitions per the WHO.

Conceptual framework

This study was guided by the conceptual framework for identifying factors that affect the availability, utilization, and expansion of AFHS, based on the socioecological and behavioral model for assessing factors that influence access to and

TABLE 4.2 Definition of terms used in the study

TERM	DEFINITION
Adolescents	Persons ages 10–19
Young adolescents	Persons ages 10–14; “older adolescents,” ages 15–19
Child	Persons younger than age 18
Young people	Persons ages 15–24
Out-of-school adolescents	Persons ages 10–19 who do not attend school
Adolescent-friendly health services	The availability of suitable policies and standard operating procedures, health workers, specific service areas, and acceptable and affordable services for adolescents in a health facility, as well as the involvement of the community in service delivery and attending to adolescents in a sensitive, confidential, and timely manner

Source: WHO 2003, 2012, and 2017; WHO and UNAIDS 2015.

use of health services by young people living in rural KwaZulu-Natal in South Africa (Ngwenya et al. 2020). This framework posits that individual, interpersonal, health facility, and community-, district-, and national-level factors interact to influence RMNCAH service use and outcomes.

- *National-level* factors include the availability of suitable policies, guidelines, funding, levels, and training of health workers for expansion and use of AFHS.
- *District-level* factors include the availability of direct funding for adolescent service delivery, various implementing partners, supportive district leadership, and adolescent focal persons of AFHS.
- *Community-level* factors include religious and cultural beliefs.
- *Individual and interpersonal* factors include age, sex, education, marital status, income, locality of residence, knowledge of and attitudes toward the services, and other attributes, such as the distance to the service delivery place and availability of means of transportation.
- *Health facility* factors include health workers' training and attitudes related to AFHS delivery and the availability of information and various SRH services desirable and suitable for adolescents.

METHODOLOGY

This section discusses the study design, sites, sampling strategy, and population; data collection methods, tools, and procedures; data management and analysis; quality control and data triangulation; ethical considerations and assurance; and study limitations and mitigations.

Study design

This cross-sectional, mixed-methods study used a review of relevant literature, key informant interviews (KIIs), in-depth interviews (IDIs) and focus group discussions (FGDs) to collect data related to AFHS from policy makers, managers, health workers, members of Village Health Teams (VHTs), teachers, religious and other civic leaders, and adolescents and their caregivers in selected districts and health facilities of Uganda. The study also reviewed data from the District Health Information Software, version 2 (DHIS2) to determine the effect of AFHS on SRH service utilization indicators.

Study sites and sampling strategy

The study was conducted in the districts of Gulu (Northern region), Kampala Capital City Authority (Central region), Luwero (Central region), Mayuge (Eastern region), and Mbarara (Western region); Kampala was included because it hosts the headquarters of the MoH as well as those of development agencies that support or implement RMNCAH programs. A purposive sampling strategy was used to select the study districts and health facility sites as well as participants.

Study population

For the selection of research participants, a list of stakeholders was provided by the ASRH program managers in the MoH and the respective research districts

and health facilities. Participants were chosen at the national, district, and health facility levels based on their involvement in or knowledge of ASRH or HIV policy development, programming, funding, implementation and management, or delivery, or on their use of ASRH or HIV services. At the community level, caregivers and adolescents were chosen from the catchment areas of the selected health facilities based on past or current experience of a specific SRH condition, such as pregnancy; use of existing SRH/HIV services, such as contraceptives and testing and care for sexually transmitted infections (STIs) or HIV; and residence in the area for at least 3 months. The types and number of research participants chosen from each of these levels are indicated in table 4.3.

Research participants were (a) national-level ASRH managers in key development or donor agencies, government ministries (MoH, MoES, and MoGLSD), and civil society organizations (CSOs); (b) district-level technical officers, political and religious and youth leaders, and managers of ASRH implementing

TABLE 4.3 Sample sizes of research participants, by research method

RESEARCH METHODS AND PARTICIPANTS	SAMPLE SIZE
KIIs	50
ASRH program managers in the MoH, MoES, and MoGLSD	5
ASRH managers in UN and donor agencies	4
ASRH managers in CSOs	4
District health officers	4
District technical officers	5
District political leaders	3
Religious leaders	3
Managers of civil society agencies implementing ASRH	4
Health facility clinical care workers	9
School teachers	4
Community resource persons, including members of VHTs	5
IDIs	20
Pregnant adolescents	4
Youth peer leaders	4
Adolescents receiving contraceptives	4
Adolescents receiving STI/HIV testing or treatment from a health facility	4
Adolescents with other lived SRH experiences, such as multiple pregnancies	4
FGDs	208
Caregivers of adolescents	30
Young adolescent girls ages 10–14 in school	34
Young adolescent boys ages 10–14 in school	27
Older adolescent girls ages 15–19 in school	29
Older adolescent boys ages 15–19 in school	26
Adolescent girls ages 10–19 out of school	32
Adolescent boys ages 10–19 out of school	30

Source: This table is original to this publication.

Note: ASRH = adolescent sexual and reproductive health; CSOs = civil society organizations; FGDs = focus group discussions; HIV = human immunodeficiency virus; IDIs = in-depth interviews; KIIs = key informant interviews; MoES = Ministry of Education and Sports; MoGLSD = Ministry of Gender, Labour and Social Development; MoH = Ministry of Health; STI = sexually transmitted infection; UN = United Nations; VHTs = Village Health Teams.

agencies; (c) health facility-level clinical care health workers; (d) teachers, community-based resource persons, and members of VHTs; and (e) adolescents and their caregivers.

Apart from the Kampala district, which was selected for the study because it is the site of the headquarters for the key government, CSOs, and development agencies supporting ASRH in Uganda, the other four districts were chosen based on their being located in different regions. Health facilities were selected based on the overall number of health facilities that offer AFHS in Uganda (MoH and UNFPA 2017). In each district, health facilities were selected according to their level, ownership, rural or urban setting, and reported level of AFHS coverage.

Data collection methods, tools, and procedures

Data for this study were collected through a review of relevant literature and retrospective data from the DHIS2, KIIs, IDIs, and FGDs.

Review of relevant literature

Scholarly and gray literature related to AFHS published online on organizational websites was downloaded and reviewed. The key search terms for scholarly online literature included “adolescent-friendly health services” and “sexual and reproductive health,” and the search was restricted to articles published in English. Downloaded gray literature was restricted to websites of key government ministries, local and international nongovernmental organizations, and multilateral and bilateral agencies involved in the implementation of SRH and AFHS in Uganda and elsewhere in the world. The scoping search yielded 426 journal articles and program documents. These items were further reviewed for studies that (a) addressed coverage of AFHS and use of SRH services by adolescents or youths; (b) addressed strengths, weaknesses, barriers, and facilitators of delivery or expansion of AFHS; (c) were conducted in Uganda; and (d) had quantitative or qualitative data. This review yielded 32 studies.

Review of retrospective data in DHIS2 and AFHS documents

Due to the lack of data on the level of “adolescent friendliness” of health services, the study used SRH data for a representative sample of 132 health facilities offering ART that had previously been studied for the presence of youth-friendly services, as evidenced by the availability of a youth-friendly corner. The data were transferred from the DHIS2 into an Excel spreadsheet and examined for the proportions of adolescent and adult women seeking the following: first and fourth antenatal care coverage, prevention of mother-to-child transmission cascade, family planning access, and postnatal care. The adolescents in health facilities with or without youth-friendly corners were compared to determine the association between the presence of a youth-friendly corner and adolescents’ use of the selected services.

KIIs

KII guides were used to conduct interviews with diverse stakeholders in ASRH and adolescent rights at the national, district, facility, and community levels. The interviews covered their perspectives on planning, financing, existence, provision, access, use, challenges, and suggestions concerning AFHS. The study’s key informants included (a) program managers of ASRH in the MoH, MoES, and MoGLSD; (b) CSOs and international development support agencies;

(c) district-level chief administrative officers, health officers, the secretary for youth, religious leaders, and managers of CSOs implementing ASRH activities; and (d) health facility-level clinical workers, school teachers, and community-based resource persons or members of VHTs.

IDs

IDI guides were used to interview adolescent boys and girls across the four research districts to obtain specific information on their experiences, challenges, and views concerning access, delivery, and use of SRH services. Adolescents interviewed in each district included a youth peer leader; a pregnant girl; a girl receiving or using contraceptives; a girl or boy receiving STI/HIV testing or treatment at a health facility; and a girl or boy with such SRH or rights experience as multiple adolescent pregnancies or gender-based violence.

FGDs

Averaging six to nine participants each, FGDs were held with groups of caregivers and adolescents to obtain more information on adolescents' experiences; enabling and hindering factors; and suggestions concerning access, delivery, and use of SRH services. Participants included parents or other caregivers of adolescents, school-going adolescent girls ages 10–14, school-going adolescent boys ages 10–14, school-going adolescent girls ages 15–19, school-going adolescent boys ages 15–19, out-of-school adolescent girls ages 10–19, and out-of-school adolescent boys ages 10–19. Each FGD included two research assistants conversant in the local language: One served as the session moderator and the other as the notetaker.

Data management and analysis

The following steps were used for data analysis.

Literature review

Data were summarized in a matrix according to coverage, delivery approaches, and use of AFHS. In addition, the data were also reviewed for information on strengths and weaknesses and on enablers and barriers to AFHS and were further assessed for insights on lessons learned and innovative practices to guide the formulation of study recommendations.

Quantitative data

Service records for the 132 health facilities in the DHIS2 that participated in the study by the MoH and the AIDS Control Program (ACP) on the availability of ASRH- and HIV-responsive services (MoH 2018) were extracted and categorized into health facilities with and without youth-friendly corners. The proportions of adolescents using different SRH services in each group were computed using Microsoft Excel. Afterward, these data were exported to STATA version 14 and further analyzed using bivariate logistic regression to determine the association between the presence of a youth-friendly corner and use of the selected services (at a 0.05 level of significance).

Interviews and focus groups

All IDs, KIIs, and FGDs were transcribed verbatim by hand from local languages into English, typed, and coded manually to generate the initial list

of codes. The typed transcripts were then exported into Atlas-ti 7.0.83 and further coded and analyzed according to predetermined and emerging themes and subthemes: coverage, delivery approaches, use and expansion, enabling and hindering factors, and suggestions for improvement. Quotes representing typical views expressed by the participants were extracted from the transcripts verbatim and used to substantiate findings in this report.

Quality control and data triangulation

All research instruments were translated into local languages. Research assistants were trained on data collection processes, including the use of remote or virtual methods, and daily meetings were held with them to discuss and guide the data collection process. Interviews with participants who consented were audio-recorded, and data entry for transcribed information was done twice to ensure thoroughness, including verifying incomplete notes with interviewers and participants.

Quality assurance of the studies was provided through a team of technical experts comprising members of the Advisory Committee for the Reproductive, Maternal, Newborn, Child, and Adolescent Health Operational Research Program, who provided strategic and technical guidance on design and implementation. Other experts were drawn from the MoH, the World Bank, and the Makerere University School of Public Health. Validation meetings, held in May and June 2021, as well as the research results dissemination meeting held November 23–24, 2022, also provided an opportunity for stakeholders, including local government representatives, to offer comments on the study findings.

Ethical considerations and assurance

Ethical and quality aspects of this study were ensured prior to and during data collection. Research instruments were approved by the National HIV/AIDS Research Committee and Uganda National Council for Science and Technology. Verbal informed consent was obtained from prospective research participants. Interviews were conducted from a private location to ensure confidentiality, and titles and sites were substituted for names in the interviews. Participants in the FGDs were assigned code numbers, and the research team erased individual names or reference clues from all data transcriptions and results presented in this report. Researchers and interviewers stored audio recordings and transcribed data in a password-protected computer.

Study limitations and mitigation

Collection of data for this study was conducted during closures and restrictions on travel and gatherings imposed by the government of Uganda (GoU) to prevent the spread of COVID-19. As such, data collection relied heavily on relevant literature published online on organizational websites, and engagement with research participants consisted of virtual meetings by telephone or computer. Therefore, it was impossible to access some documents not published online or to reach some eligible adolescents and caregivers who did not have a telephone or a computer. Thus, the findings of this study might have missed some important information on the extent, use, and underlying factors of AFHS.

Due to the absence of information on specific measures for AFHS in the DHIS2 database, the presence of a youth-friendly corner in a health facility was used as a proxy to determine whether a facility was adolescent friendly. However, the presence of a youth-friendly corner alone does not imply that the health facility is actually adolescent friendly, because some facilities may not have other components of basic AFHS services. There is a need for further research to build on this study's findings to better substantiate the extent to which existing youth-friendly corners deliver AFHS.

FINDINGS

The study findings are categorized under thematic areas aligned with the research objectives.

1. Coverage, delivery approaches, and utilization of AFHS

Several findings were discovered for AFHS coverage, delivery approaches, and utilization.

Coverage of AFHS

Data on *service coverage*, which is defined as the proportion of health services that are adolescent friendly in a district, region, or country, were derived from published and gray literature on AFHS. To assess the level of coverage, the study sought first to define what constitutes AFHS in Uganda. The *Adolescent Health Policy Guidelines and Service Standards* (MoH 2012, 12) describes the components of AFHS as

- Clinical care for sexual and gender-based violence;
- Prenatal and maternity care for pregnant adolescents;
- HPV immunization;
- HIV counseling and testing;
- Breast examination and information on cervical cancer;
- Information and counseling on health, especially growth and development;
- Information on adolescents' rights and responsibilities; and
- Referral and follow-up.

While the policy and service standards elaborate a broad array of AFHS, they are not accompanied by operational tools or standard operating procedures (SOPs) that would allow implementers and evaluators to uniformly assess the level of AFHS delivered at health facilities. The lack of such tools creates a challenge in the standard assessment of AFHS because, in the absence of SOPs, facilities and implementers have tended to use their own definitions of what constitutes AFHS.

The *Health Sector Strategic and Investment Plan 2010/11–2014/15* (MoH 2010) and the *Health Sector Development Plan 2015/16–2019/20* have emphasized the need to expand AFHS. Nevertheless, at the point of care in public health facilities, AFHS has become synonymous with “youth corners,” which are designed to provide AFHS but do not typically provide the comprehensive services defined in the national policy. From a program management perspective, however, the presence of youth-friendly corners is easier to measure and track and, as such, this presence is included as indicators for the *Health Sector Strategic*

and Investment Plan and for the Health Sector Development Plan. The target of the former was to increase the proportion of health facilities that are adolescent friendly from 10 percent to 75 percent by 2015, while the target of the latter was to establish or functionalize adolescent-friendly corners at all levels of care.

To meet these targets, public health facilities made efforts to provide youth-friendly corners. While the corners have made AFHS easier to track, they are not the intended goal of the national policy. Indeed, what constitutes AFHS, as extensively described in the *Adolescent Health Policy Guidelines and Service Standards*, is unlikely to be met by many facilities and implementers, given the broad range of requirements amid the limited implementation capacity at the frontlines.

In the absence of a standard framework for assessing AFHS in Uganda, this study drew on existing studies evaluating coverage of AFHS. Each study referenced used different approaches to arrive at an estimation of coverage, and each also considered the different types of providers. The level of AFHS coverage ranged from 17 percent to 71 percent, as noted in table 4.4. Several factors influenced the variation in the coverage estimations, including the design of the tool; the sampling frame; the role of development agencies in funding the interventions (that were assessed); the objective of the studies; and the focus population, for example, adolescents receiving HIV care. The most telling study was the comprehensive provider, facility, and program assessment based on the AFHS program tool developed by Pathfinder. This assessment was designed to align with the *Adolescent Health Policy Guidance and Service Standards* and, thus, examined a more comprehensive list of services, as shown in table 4.4. Given the capacity and funding constraints facing public health facilities, the low coverage is telling.

TABLE 4.4 Estimated AFHS coverage in Uganda, by literature source

REFERENCE	ESTIMATED COVERAGE	CRITERIA FOR AFHS	REGION AND SCOPE	COMMENT
MoH (2018)	59%	Presence of youth-friendly corner	134 facilities in 42 districts	Only ART sites are involved.
MoH and UNFPA (2017)	29%	Presence of youth-friendly corner and trained health worker	127 facilities in 44 districts	Health facilities were randomly selected.
UNFPA 2017 (UNFPA 2017)	80%	Not clear	8 humanitarian districts	UNFPA conducted adolescent training in the districts.
Nalumansi (2016)	71%	Not clear	14 health facilities from 14 districts from 4 regions	Randomly selected districts; 71% reported financial support for the AFHS from their head offices.
SUSTAIN (2017)	6/11 Regional Referral Hospitals	Adolescent clinic days	Nationwide	Program data, not research. Based on HIV services.
MoH (2014)	17%	Comprehensive provider, facility and program assessment based on Pathfinder tool (Senderowitz, Solter, and Hainsworth 2002).	30 health facilities from 10 districts from 10 subregions	A more standardized measure was used to assess AFHS.

Source: This table is original to this publication.

Note: ACP = AIDS Control Program; AFHS = adolescent-friendly health services; ART = antiretroviral therapy; MoH = Ministry of Health; RRHs = Regional Referral Hospitals; UNFPA = United Nations Population Fund.

Based on the previous discussion and literature reviews, it is difficult to ascertain the real level of national AFHS coverage. This perspective was corroborated during the KIIs, as reflected in one national-level key informant interviewee's comments:

If you went to the MoH they will not tell you . . . [the coverage level] may be even 50 percent or—I know it will be much less, less than 50 percent. But they cannot pinpoint a figure and, maybe, say, 40 percent or 30 percent of the health facilities are able to offer adolescent-friendly health services. That's the first point. So the mapping of the availability in terms of extent of the availability is not known.

Although used as a proxy for AFHS, many youth corners are not functional, or key components are found to be lacking, as reported in a previous study (Nalumansi 2016). This issue calls for a national consensus on the criteria for “adolescent friendliness” that should be used to determine the actual coverage of AFHS and to set a baseline for measuring effects of future investments in adolescent health.

Delivery approaches for AFHS

The *Adolescent Health Policy Guidelines and Service Standards* recommends three delivery approaches for AFHS: (a) an approach in out-of-school locations and outposts for hard-to-reach youth, (b) a targeted nonclinical service provision approach through a youth desk located in schools, and (c) integrated clinical and nonclinical service provision approaches through youth-friendly corners in public and private health facilities at all health service delivery levels. The policy guidelines describe the staffing norms and the package of essential services for each facility level. Of these models, the MoH officially adopted youth-friendly corners for facilities, as documented in most national documents (MoGLSD 2016; MoH 2010, 2015).

This study groups the delivery approaches into seven categories, which cut across the three dimensions outlined by the *Adolescent Health Policy Guidelines and Service Standards* as well as the approaches found to be operational in the study districts.

1. Youth-friendly corners. Youth-friendly corners are segregated, facility-based services reserved for the provision of clinical and edutainment services to adolescents. Some corners are furnished with audiovisual equipment, music, and indoor and outdoor games (such as volleyball and football) to draw the attention of adolescents and make it easier for them to readily access health services available on the premises (MoH 2019b). While the intent of youth-friendly corners is to offer a broad range of services, the study found that in practice, these corners, notably in public health facilities, primarily focus on the provision of clinical SRH services, such as STI/HIV testing and treatment and contraceptive use. For convenience, these services were provided within the broad delivery framework available to other (nonadolescent) users. This focus on SRH and contraception also underscores the capacity and resource constraints—for example, staffing and availability of essential SRH supplies—that public health facilities face, which in turn also account for why some youth-friendly corners are not functional.

On the demand side, youth-friendly corners can be expensive for users, with the estimated service cost per clinic visit for a beneficiary ranging from

\$4 to \$200, or UGX14,000 to UGX740,000, respectively (Denno, Hoopes, and Chandra-Mouli 2015). The cost creates a barrier and disincentive to utilization. Furthermore, the study found that the existing youth-friendly corners are accessed mainly by boys because of the edutainment options, which tend to be better suited to a male audience. There is also a misperception among some segments of the population that youth-friendly corners promote risky lifestyles or promiscuity. This finding corroborates earlier studies that pointed out that some services offered in youth-friendly corners, particularly family planning, are shunned by adolescents because they are viewed as contravening religious and sociocultural norms (Nalumansi 2016).

2. **Standalone clinics or centers for youth.** These clinics are independent centers located either within or outside health facilities, mainly in urban settings. These centers, typically managed by CSOs, offer health information and clinical care services to young people, including adolescents (MoH and UNFPA 2017). Specific services include SRH counseling, medical care for basic ailments, HIV testing, toll-free help lines, and outreach. Examples of organizations running standalone clinics or centers include Reproductive Health Uganda (RHU) and the Naguru Teenage Information and Health Centre (NTIHC). In 2020, the NTIHC had one standalone youth-friendly SRH service delivery center, located in Kampala (NTIHC n.d.), while in 2018 RHU had 18 adolescent-friendly health service centers located across all regions in Uganda (RHU 2018). The NTIHC offers services free of charge, while RHU offers them at a nominal fee. The costs of creating and operating standalone clinics or centers is generally higher than are those for youth-friendly corners, but operational and overhead costs are absorbed by the CSOs. Because these youth-friendly corners are part of a health center, some of their costs are shared with or borne primarily by the facility (Senderowitz 1997). Typical funders for standalone clinics or centers are donor and development agencies, such as the United Nations Population Fund (UNFPA).
3. **Integrated care model.** Given the challenges of sustaining independent youth-friendly corners or standalone centers, the WHO (2014) recommends the integrated care model as a more sustainable option. This model seeks to ensure that overall service delivery at health facilities is *adolescent responsive*. This responsiveness is achieved by training all health workers in adolescent friendliness and making sure that service delivery models consider the unique needs of adolescents and—regardless of the provider—are prepared to take care of their users.
4. **Outreach or outpost services.** The *Adolescent Health Policy Guidelines and Service Standards* outline an outreach or outpost delivery approach that requires a mobile team of health workers to provide various services to designated community settings in which adolescents or other special groups convene. This approach is used to deliver integrated services in hard-to-reach areas and to specific populations (MoH 2012), such as students, commercial sex workers, sexual minorities, and substance or drug users (Nalumansi 2016). Some services delivered through this approach include SRH and HIV education, HIV testing, distribution of contraceptives, such as injectables and condoms, and identification and referral of clients with severe conditions (Nalumansi 2016). Like standalone clinics or centers, the costs of operating outreach or outpost services can be high and typically depend on donor funding, which also can make this approach unsustainable. However, the study found that this mode of delivery was not functional in any of the study districts.

5. ASRH desk and counseling in schools and out of school. Although the *Uganda School Health Policy* (MoH 2008) and *Adolescent Health Policy Guidelines and Service Standards* stipulate the creation of ASRH desks in the schools and community where youth can obtain information and social support concerning their SRH and rights, the study found that they are not operational in all study districts due to the lack of specific guidelines and funding for their implementation. In some cases, CSOs, such as RHU, have supported the training of peer educators or counselors who operate in selected schools and communities (Nalumansi 2016). Additionally, the MoES has incorporated topics related to SRH and HIV risk factors, modes of transmission, and prevention in the teaching curriculum for primary and secondary schools. In spite of these efforts, the majority of teachers involved in this study reported inadequate training on SRH and counseling skills as well as discomfort with teaching and counseling adolescents about SRH, given their personal values and fear of criticism from parents, religious leaders, and other stakeholders. Two districts in the study (Mbarara and Luweero) have established partnerships between health facilities and schools whereby health workers provide outreach services to the schools, as stated by one teacher:

The health workers from the nearby hospitals come to educate our students at the school. Yes, they come.

6. HIV/AIDS programs. Adolescents living with HIV have many challenges, including access to health services for testing, linkage to care, retention of care, and adherence to ART, and they have been found to have low levels of viral suppression. A peer-led intervention model was implemented by Link Up, a program for young people living with HIV in the Luweero and Nakasongola districts. The strategy contributed to observed increases in self-efficacy, knowledge of HIV, condom use, HIV disclosure, ART utilization and adherence, CD4 testing, STI testing uptake, and use of modern family planning methods (Vu et al. 2017). At the national level, the MoH set up the YAPS model for differentiated HIV care for adolescents living with HIV (MoH 2019a), which uses adolescent and youth peers to support adherence and retention of care (MoH 2018). In addition, most HIV programs have a separate adolescent clinic day (Asire et al. 2017). The YAPS model was pilot tested in nine districts with very promising results and is now being scaled up to the national level. Although these programs have demonstrated success in improving outcomes for adolescents living with HIV, one weakness is the limited availability of funding to sustain them.

7. Combined approaches to AFHS delivery. A combined approach involves the use of multiple service delivery mechanisms, such as the creation of youth corners in health facilities, the training of health workers in delivery of adolescent-responsive services, community outreach, peer education, and ASRH programs in print and online or electronic media. A combined approach is the most effective for improving the friendliness of adolescent health services, generating demand, and ensuring sustained access of SRH services among adolescents (Denno, Hoopes, and Chandra-Mouli 2015). An example of a combined delivery approach is a facility that has trained staff in adolescent health, offers an onsite youth-friendly corner, and runs a routine outreach program.

Utilization of AFHS

The aim of establishing AFHS is to facilitate access to and utilization of socioculturally sensitive SRH services (WHO 2003, 2015). A review of the literature indicates a paucity of information on the level of utilization of the specific SRH services offered by the various AFHS interventions. In fact, an in-depth review of the DHIS2 data revealed the absence of variables to easily measure adolescents' use of and demand for health services. Therefore, as a proxy, the study used the age-disaggregated data for women utilizing SRH services. Using this proxy, the study found that adolescent girls constituted

- 17 percent of pregnant women who attended the first and fourth antenatal care visits;
- 19 percent of those who delivered in health facilities;
- 18 percent of those who received postnatal care;
- 10 percent of the women who received condoms; and
- 8–26 percent of the women who received various modern family planning methods.

Further analysis of DHIS2 data related to adolescents' utilization of SRH services in 132 health facilities, with and without youth-friendly corners, showed that those in facilities with youth-friendly corners were 2.6 times more likely to be “first-time condom users” (odds ratio [OR] 2.57; 95 percent confidence interval [CI]: 2.168, 3.040) and were 1.5 times more likely to use an IUD (OR 1.445; 95 percent CI: 1.192, 1.751) as compared with those in health facilities without youth-friendly corners (at a 0.05 level of significance).

An MoH assessment on the sources of care among 6,983 adolescents found that 84.7 percent received care from Regional Referral Hospitals and specialized HIV centers and that 50 percent received care from the adolescent-friendly service centers in the Kampala district (ACP/STD, MoH, and USAID/Uganda SUSTAIN 2014). In the qualitative assessment, the study found that when facilities offered adolescent-friendly services, they attracted large numbers of youth, as stated by one VHT member:

In most government health facilities where youths come in large numbers, they are welcomed well. For example, where I am, there is a youth corner, and there is a dedicated health worker. All youth who come to the health center are first sent to the youth corner so that he talks to them. He is so kind to the youth, and youth do not fear expressing themselves to him.

2. Factors that enable delivery and expansion of AFHS in health facilities in Uganda

The study categorized the factors that enable delivery, utilization, and expansion of AFHS in Uganda as structural, service delivery, interpersonal, and individual.

Structural factors

Structural factors are policies, guidelines, and standards that enable the establishment, implementation, and expansion of AFHS at various levels. Uganda has adopted several international, regional, and national guidelines on establishing these services; building their capacity (WHO 2003, 2009, 2012;

WHO and UNAIDS 2015); scaling them up (WHO and Expandnet 2010); ensuring standards for care (WHO and UNAIDS 2015); and facilitating advocacy for their implementation, for access to them, and for their use (UNFPA 2013). Some regional and national policies that facilitate implementation of AFHS are

- Article 16, section C, of the African Youth Charter (African Union 2006);
- The Continental Policy Framework for Sexual and Reproductive Health and Rights;
- The MoH Maputo Plan of Action for 2007–10;
- The *Adolescent Health Policy Guidelines and Service Standards* (MoH 2012);
- The *Multisectoral Framework for Adolescent Girls in Uganda 2017/2018–2021/2022* (Republic of Uganda and United Nations 2018);
- The *Health Sector Development Plan 2015/16–2019/20* (MoH 2010); and
- The *National Youth Policy and Action Plan* (MoGLSD 2016).

The MoH has partnered with various health development and implementing partners to advance AFHS. AFHS delivery remains minimally funded within the RMNCAH continuum. In fact, the recent gains made in advancing AFHS in Uganda are largely due to the HIV program through support from such interventions as the US-sponsored President’s Emergency Plan for AIDS Relief and the national ACP. Other development partners funding AFHS include Baylor Uganda; Danida; the Elizabeth Glaser Pediatric AIDS Foundation; the Global Fund; Mildmay Uganda; Sweden; TASO Uganda; UNFPA; the World Bank. These partners, in collaboration with the MoH, have helped strengthen the delivery of adolescent HIV and SRH care and risk prevention services. In addition to helping bridge a large financing gap in adolescent health, CSOs and development partners have also played an important advocacy role, including calling for the GoU to increase investment in AFHS to reach at least 5 percent of the annual health sector budget to support adolescents’ access to quality SRH services (Sexual Reproductive Health Rights CSOs in Uganda and CEHURD 2016).

Service delivery factors

Service delivery factors included the provision of social and economic activities along with ASRH services; the accessibility, affordability, and confidentiality of services; the utilization of a combination of delivery approaches; training school staff in service delivery and counseling; the availability of HIV services; and community awareness of the services.

Provision of social and economic activities alongside ASRH services. This finding includes provision of other services, such as income-generating services, games, and toll-free telephone services for young people, all to improve access to AFHS (Nalumansi 2016).

Accessibility, affordability, and confidentiality of available services. The physical accessibility, affordability, and confidentiality of the available services not only enable the provision of AFHS but also their uptake. Whereas private health facilities are important providers of contraceptive services to youths (Dennis et al. 2017), the public health facilities, which are supported by donor and implementing partners, were found to be more adolescent friendly. Respondents perceived them to be more easily accessible, more specialized in adolescent health, more likely to provide a safe space that promotes privacy and confidentiality, and more likely to offer services for free. This finding confirmed

earlier studies (Biddlecom et al. 2007), which found that adolescents had a stronger preference for public clinics because they were more accessible, affordable, and respectful of confidentiality standards.

Utilization of a combination of delivery approaches. The study found that health facilities that offer AFHS using a combination of delivery approaches and methods succeeded in attracting and serving a larger number of adolescents. These approaches included active parent engagement; risk communication through radio, television, and social media platforms; sensitization and social mobilization of adolescents; well-equipped youth-friendly corners; effective and consistent outreach services; and continuous training of health care workers and counselors.

Training school staff in the delivery of ASRH information and counseling. The MoES instituted and has trained male and female teachers to guide and counsel students and to disseminate educational materials on SRH. The MoES has also collaborated with CSOs, such as the Straight Talk Foundation, that specialize in adolescent health prevention and promotion. The engagement of the education sector and the training of teachers and counselors help improve the channels through which adolescents receive health education and can also help generate demand for AFHS.

Availability of HIV services in a health facility. Accreditation of health facilities for HIV care and the training of health workers in the delivery of HIV services to adolescents have enabled access to and expansion of AFHS. HIV/AIDS programs have benefited from the availability of external and domestic funding for HIV/AIDS control, the availability and demand for ART, and community awareness of and engagement on HIV/AIDS. By leveraging HIV/AIDS control programs, facilities can provide ASRH services, which are applicable to both adolescents living with HIV and to the general adolescent population.

Community awareness of the available health services. The study found that health facilities with community awareness campaigns about available services attracted more adolescent clients (Denno, Hoopes, and Chandra-Mouli 2015). The study also found that adolescents enrolled in school, especially those in day schools, were more aware of the available AFHS than were those out of school because of the schools' awareness-raising activities, educational materials, and inclusion of sex education in the curriculum.

Individual and interpersonal factors

Individual and interpersonal factors included age, sex, socioeconomic status, and residential setting; peer-to-peer information sharing; collaboration with parents and community leaders; and access to and use of social media.

Age, sex, socioeconomic status, and residential setting. A review of existing studies indicates that the factors enabling adolescent access to services include being of a high socioeconomic status, being in an urban setting, being in school, and being an older male.

Peer-to-peer information sharing. Peer-to-peer sharing, in addition to firsthand experience, plays an important role in enhancing the broader use of AFHS. Adolescents are more likely to listen to or follow through on a peer's recommendation than that of a teacher or "parent figure."

Collaboration with parents and community leaders. The involvement of parents and civic leaders in the delivery of AFHS related to SRH can improve community acceptance and adolescents' utilization of services. This strategy

was adopted by the NTIHC to successfully change the negative attitudes of some parents toward adolescent access to SRH information and services, such as family planning. Earlier studies also have found that involvement of parents, teachers, and opinion leaders in SRH activities reduces opposition to the delivery of AFHS (Salam et al. 2016). A parent of an adolescent in one of the FGDs affirmed this finding:

Sometimes, the service providers in the youth-friendly health service center talk to us about the services that are available for young people and advise us to encourage them [young people] to visit the service center whenever they wish . . . As for me, I am no longer upset when I learn that my child is seeking information and/or using family planning methods from the youth center . . . I believe that by the time she decides to seek information about family planning methods and use one of them, she is mature and understands how to use them . . . So, I can't stop her.

Access to and use of social media. The availability of social media platforms and information and communication technology tools can facilitate knowledge about and information sharing on adolescent health. Platforms such as Facebook offer opportunities for adolescents to engage around different topics and can, as the Uganda Virus Research Institute (UVRI) website has shown, offer a space for adolescents to debate, ask questions, and receive prompt responses from experts on issues related to SRH (Semwanga et al. 2016). Some social media platforms are also helpful because of the anonymity they provide, which shields adolescents who are hesitant to discuss sensitive SRH issues in person with practitioners and counselors. According to other studies, UVRI's sensitization strategy substantially increased the knowledge of SRH and access to specific goods and services, such as contraceptives and STI diagnosis, counseling, and management, including for HIV, particularly among sexually active university students in Uganda (Nuwamanya et al. 2020).

3. Factors hindering the delivery and expansion of AFHS

Factors hindering AFHS service delivery and expansion included structural and service delivery barriers, as well as individual and interpersonal factors.

Structural barriers

Gaps and contradictions in legal and policy frameworks can hinder the smooth implementation of AFHS. Although some legislation, particularly the Constitution (1995), the Children Act (2016), and the Penal Code of Uganda (1954), stipulate that children younger than age 18 should not access or use certain services without the consent of an eligible adult, the *National Policy Guidelines and Service Standards for Sexual and Reproductive Health and Rights* (2012) state that all adolescents, irrespective of their age or mental status, are eligible to access AFHS. The contradictions in the referenced policies create confusion and adversely impact risk communication and advocacy efforts to garner support for AFHS.

In addition to the discrepancies noted, the GoU faces challenges in disseminating available policies to implementers at the frontline of service, especially to health workers, teachers, and religious and other civic leaders. Hence, there is a disconnection between what the policies mandate and what is practiced.

Some policies, such as the National Youth Policy (MoGLSD, 2016) and the Adolescent Health Policy (MoH 2004), have not been updated to incorporate emerging evidence and lessons learned on AFHS in Uganda. Similarly, local councils have not enacted specific ordinances or bylaws to enhance adolescent health in the communities as anticipated in the existing policies (MoH and UNFPA 2017).

Inadequate funding to enable provision and scale-up. As noted earlier, very limited public funding is available to support the delivery of AFHS. Furthermore, where there is private sector engagement, programs tend to be expensive. Although donor-financed programs are essential, they are also often unpredictable and unsustainable. Even though RMNCAH conditions account for 60 percent of Uganda’s disease burden, reproductive health accounts for only 9.5 percent of the health sector expenditure (MoH 2022). Within the RMNCAH continuum, adolescent health services account for an even smaller proportion of expenditure.

A study by Deogan, Ferguson, and Stenberg (2012) indicated that the average annual additional expenditure per capita for scaling up AFHS in 74 low- and middle-income countries ranged from US\$0.38 in 2011 to US\$0.82 in 2015, which is approximately US\$1.02 per adolescent in 2011 to US\$4.70 in 2015. Assuming an average unit cost of UGX21,189 (US\$5) per SRH service, using RHU estimates, the costs for AFHS become prohibitive for most users, especially for rural adolescents, who face greater risks but have limited options for care and support. Furthermore, the funding constraints also impact the ability to provide the full package of AFHS services—in line with the Adolescent Health Policy for adolescents. This results in facilities and centers providing services for which there is external financing and neglecting other areas, such as mental health or NCD risk factors, both of which have a rising incidence.

Inadequate collaboration among stakeholders in various sectors. Although adolescent health requires collaboration of stakeholders in the health, education, and social development services sectors, there is little intersectoral collaboration among these stakeholders to enable effective implementation and increased outcomes. One key informant noted that

Promoting adolescent health necessitates continuous dialogue with all stakeholders and better coordination of interventions across sectors for efficient use of available resources . . . but this is not happening . . . Coordination of adolescent health interventions can be done well in the community development sector . . . This sector has halls and outdoor spaces in the subcounties, in which adolescents usually meet for many things such as talks, music, and sports . . . so we can increase access to AFHS by mainly providing information, and this will lead to uptake of other services.

Remote locality of the health facility and community. The study found that health facilities located in rural and remote areas rarely provide AFHS, thus limiting availability and access to these services by their adolescent populations. This issue was especially the case in the facilities and communities located in the islands of the Mayuge district. This finding concurs with those of earlier studies, which found that significantly more health facilities in rural areas lack AFHS than those in urban settings (Nalumansi 2016).

Service delivery barriers

Service delivery barriers included frequent stock-outs of essential medicine and commodities, poor customer service, poor hygiene in the health facilities, negative attitudes toward providing SRH information to young people, and an inadequate number of trained health workers and community resource personnel.

Frequent stock-outs of essential medicine and commodities for adolescent health. Health facilities encounter frequent stock-outs of the commodities vital for the delivery of AFHS, such as condoms, medicine, and STI tests (Nalumansi 2016). This issue not only discourages some adolescents from visiting the health facilities and youth-friendly centers but also compels some to seek the required services from alternative sources, as one key informant pointed out:

Sometimes vital medicines and commodities, like gloves and condoms, run out, and some health facilities go up to two months without restocking, and young persons who visit the facility to obtain condoms often leave without them . . . To minimize frequent shortages of vital medicines and commodities, they should be delivered to health facilities regularly and in large quantities.

Poor customer service. Lack of privacy, long waiting times, and poor health worker attitudes hinder adolescents from participating in HIV care services (MoH 2018). Lack of privacy is usually due to limited space in the health facilities (Bukonya et al. 2017), while long waiting times are attributed to the high number and diverse needs of clients and to low staffing levels (Nalumansi 2016). Furthermore, some of the sampled health facilities neither had clearly demarcated youth-friendly corners nor had signs and labels in the local language that showed where the different services were offered (MoH and UNFPA 2017). Study respondents in the FGDs noted,

At the health facility, I usually go for services, . . . many of us arrive in the morning and wait throughout the day without meeting a health worker . . . Some of us are disturbed [by this] and believe going to the health facility for the services is a waste of time . . . so some of us just request our relatives to take us to private facilities.

Whenever we go to the health facility for care, health workers first serve older clients before they serve the pregnant adolescents . . . because they think we are still young.

The health facility we use does not have signs and instructions to show where to obtain the different services . . . They should help and mount signs that show the adolescent service points from the entrance ‘til the drug-dispensing point.

Poor hygiene in some health facilities. Earlier studies have shown that some health facilities, especially in rural areas, lack proper toilets and experience an irregular supply of clean water, detergents, and electricity, which not only leads to poor hygiene and vermin infestation on the wards but also deters clients from seeking services in these facilities (Atuyambe et al. 2005, 2015; Flaherty, Kipp, and Mehangye 2005; Mbonye 2003; MoH and UNFPA 2017; Nabugoomu et al. 2018). Several adolescent boys and girls who participated in the FGDs expressed similar views.

Negative attitudes toward providing SRH information to young people.

Despite the ongoing delivery of AFHS in schools and the community, access to SRH information and education materials is limited, particularly among older adolescents both in and out of school. This issue was attributed to an insufficient supply of information, education, and communication materials on SRH in schools by the MoES and in the community by the MoH, and the negative attitudes, particularly among teachers, parents, and religious leaders, toward provision of such materials to young people, as one key informant stated:

I usually feel uncomfortable being served by health workers who are old . . . They are friendly when serving fellow adults, but their attitude changes when serving adolescents . . . They behave like soldiers . . . So, I usually feel better being served by those that are a bit young because they understand well whatever I say.

Inadequate number of trained health workers and community resource persons. Recent reports have indicated that 60 percent of health workers lack basic competencies in the provision of AFHS (Akaturkwa et al. 2019), which implies that a substantial number of service providers in the health facilities could be encountering challenges in serving adolescents. Findings also have shown that although VHTs are expected to provide basic health education to community members, including young people, none of them has received training in ASRH education. This issue hinders the proper delivery of information and other basic health services to young people in the community, as one key informant pointed out:

We are expected to extend friendly health services to adolescents in the community through [VHTs], but they have not been trained to ensure proper delivery of the services to young people in the community . . . We need modules for training [VHTs] in delivery of [AFHS] . . . Without proper training, they may not be able to ensure confidentiality of the services they give to the adolescents . . . We also think that it is necessary to co-opt adolescent peers on [VHTs].

Individual and interpersonal factors

Individual and interpersonal factors included misinformation on AFHS objectives and benefits; gender, age, and other factors that can affect AFHS access; limited knowledge about the available services; and personal and community stigma.

Misinformation on the objectives and benefits of AFHS. Some community members, particularly teachers, parents, and religious and cultural leaders, disapprove of AFHS, because they believe these services are meant to indirectly introduce sex education to young people and promote access to health commodities, such as condoms and other contraceptives, thereby promoting promiscuity. These beliefs also negatively affect the provision of, access to, use of, and expansion of AFHS in the health facilities and schools owned by religious and cultural institutions.

Gender, age, and other factors that make access to AFHS difficult. Being a girl, being a young adolescent, being out of school, having disabilities, and being poor and dependent on others for survival each contributed to poor access to

and use of services. This finding was corroborated by several key informants in the different districts involved in this study. One pointed out,

The adolescents that are out of school, disabled, and domestic workers have difficulty accessing most of the existing adolescent health services because of lack of information, money for transport and other costs for service, and someone to either encourage or financially support them [to] reach the service centers . . . and those who succeed to access the services do not usually disclose their problems.

Limited knowledge about the available AFHS among adolescents and community members. Young people who are unaware of the available AFHS corners in the health facilities or school or community and the specific services offered are less likely to seek them than those who know of their existence (Denno, Hoopes, and Chandra-Mouli 2015). This finding is corroborated in the observations of several young in-school adolescent girls involved in one of the FGDs. When asked about the services offered in the youth-friendly corner at the nearby health facility, one of whom stated,

Maybe those who are aware of the available youth corners and services go to them . . . for us [on] this side, we do not know of a youth-friendly corner in the health facility and the specific services they offer . . . They should establish them and also inform us about the services that are offered.”

Additionally, adolescents who sought AFHS often discussed their bad experiences with fellow peers, which discouraged others from seeking the existing health services. Earlier studies also found that lack of community awareness and the sharing of negative experiences create suspicions about and objections to the services among stakeholders (Denno, Hoopes, and Chandra-Mouli 2015).

Personal and community stigma about teenage pregnancy. Fear of shame, blame, and judgment deter adolescents from reporting and seeking the necessary services for their SRH needs, either from parents or from other family members, health workers, school teachers, or other knowledgeable members of the community. This reason was highlighted in the interview with one pregnant adolescent girl:

It is shameful and scary to go to the health facility and queue for antenatal or other services with adult women . . . When I had a pregnancy, I remember sitting at the back of the service place for some time and when one of the workers asked me for the reason for waiting at the back, I did not reply . . . I waited for everyone to go out first before I moved forward to talk to the midwife.

Table 4.5 presents a summary of the factors that hinder utilization of AFHS as reported by different research participants. Data in this table indicate that the most dominant factors across all participants are fear of being judged by others, rudeness and the negative attitudes of health workers, the high cost of accessing the available AFHS, and low socioeconomic status. In addition, the importance of each factor varies according to the type of research participants and level of involvement in the implementation of AFHS.

TABLE 4.5 Summary of factors hindering the utilization of AFHS, as reported by study respondents

	ADOLESCENTS	CAREGIVERS	KEY INFORMANTS IN DISTRICTS AND HEALTH FACILITIES	KEY INFORMANTS IN NATIONAL AGENCIES
1	Fear of being judged by others (111)	Religious beliefs, community expectations, and social cultural norms concerning adolescent access to SRH services (9)	Fear of being judged by others (50)	Misperceptions about accessing and using some AFHS (7)
2	Rudeness and negative attitudes of health workers (87)	Fear of being judged by others (7)	Personal and community stigma and discrimination for using AFHS (39)	Fear of being judged by others (6)
3	High cost of the available services (60)	Long queues and waiting time for services (5)	Religious beliefs, community expectations, and sociocultural norms regarding adolescent access to SRH services (38)	Lack of information on available AFHS (5)
4	Low socioeconomic status (54)	Rudeness and negative attitudes of health workers (4)	Lack of information on available AFHS (36)	Limited funding and other resources for adolescent health (4) Few health workers and heavy workload (4)
5	Lack of medicine, services, and other commodities (44)	Low socioeconomic status of adolescents (3)	Social cultural norms regarding adolescent access to SRH service (31) Rudeness and negative attitudes of health workers (31)	Lack of medicines, services and other commodities (3)

Source: This table is original to this publication.

Note: The numbers in parentheses denote frequency of the specified response among respondents. AFHS = adolescent-friendly health services; SRH = sexual and reproductive health.

RECOMMENDATIONS

To address the findings of the study, the MoH, the MoLG, the MoES, and the MoGLSD, in collaboration with other stakeholders, should do the following:

- Improve planning and implementation of services by reviewing and harmonizing the existing legislations, policies, and guidelines for AFHS and disseminate them widely among the managers and implementers of adolescent health programs, notably health workers, teachers, parents, religious and cultural leaders, and community-based resource persons, including VHTs.
- Discuss and build consensus on the appropriate definitions and minimum package and standards for AFHS for different settings, particularly the health facilities, schools, and community. The Pathfinder tool in table 4B.1 in annex 4B can be adapted for this purpose.
- Increase funding for and scale up proven, cost-effective AFHS delivery and utilization approaches in health facilities, schools, and the community. In particular, focus on making all health facilities adolescent responsive, training service providers in the facilities on AFHS delivery, providing teacher- and peer-driven SRH education and counseling in schools, providing health facility-driven community outreach, and providing community-led sensitizations on ASRH services.

- Create an adolescent-responsive health care delivery system by training health workers in health facilities and mentoring members of VHTs in the provision of AFHS and furnishing them with simplified guidelines or handbooks on the delivery of AFHS to guide their work.
- Establish multisectoral mechanisms to coordinate planning, financing, implementing, and scaling up of AFHS at the national and decentralized levels.
- Establish interministerial collaboration to oversee the development of appropriate information and educational materials as well as implementation of nonclinical AFHS in schools and the community.
- Strengthen collaboration and coordination among the AIDS control, adolescent health, and school health programs to leverage the available funding to broaden (a) the number of service providers trained and mentored in the delivery of AFHS and (b) the coverage of facility services.
- Develop a comprehensive, multisectoral operational plan and budget for scaling up adolescent health interventions, incorporate it in the second RMNCAH Sharpened Plan, and mobilize the necessary resources for its implementation.
- Incorporate AFHS indicators into the HMISs, data collection and reporting forms, and quality and performance assessment tools to enable periodic and continual assessment of the coverage, quality, and impacts of this intervention.
- Raise awareness among adolescents at service delivery points, such as health facilities, schools, and communities, by putting up sign posts and conducting outreach to the communities where they live.
- Encourage implementing partners to support efforts that engage peers and community models, including those in schools and using young VHTs as peers, to assuage adolescents' fear of being judged for seeking AFHS services, the greatest barrier they reported.
- Address the negative attitudes of health workers toward adolescents seeking SRH services by introducing training in adolescent health.
- Carry out further research to establish a baseline for the actual coverage and utilization of clinical and nonclinical AFHS based on an agreed-upon definition, minimum package, and criteria for various settings, especially for health facilities, schools, and the community. This baseline will be important for further research on the effectiveness of AFHS in the country.

ANNEX 4A ASPECTS OF ADOLESCENT-FRIENDLY HEALTH SERVICES

TABLE 4A.1 Characteristics of adolescent-friendly health services

CHARACTERISTICS	
<p>Adolescent-friendly health services need to be accessible, equitable, acceptable, appropriate, comprehensive, effective and efficient. These characteristics are based on the WHO Global Consultation in 2001 and discussions at a WHO expert advisory group in Geneva in 2002. They require:</p>	
<p>1 Adolescent-friendly policies that</p> <ul style="list-style-type: none"> fulfil the rights of adolescents as outlined in the UN Convention on the Rights of the Child and other instruments and declarations, take into account the special needs of different sectors of the population, including vulnerable and under-served groups, do not restrict the provision of health services on grounds of gender, disability, ethnic origin, religion or (unless strictly appropriate) age, pay special attention to gender factors, guarantee privacy and confidentiality and promote autonomy so that adolescents can consent to their own treatment and care, ensure that services are either free or affordable by adolescents. 	<p>4 Adolescent-friendly support staff who are</p> <ul style="list-style-type: none"> understanding and considerate, treating each adolescent client with equal care and respect, competent, motivated and well supported.
<p>2 Adolescent-friendly procedures to facilitate</p> <ul style="list-style-type: none"> easy and confidential registration of patients, and retrieval and storage of records, short waiting times and (where necessary) swift referral, consultation with or without an appointment. 	<p>5 Adolescent-friendly health facilities that</p> <ul style="list-style-type: none"> provide a safe environment at a convenient location with an appealing ambience, have convenient working hours, offer privacy and avoid stigma, provide information and education material.
<p>3 Adolescent-friendly health care providers who</p> <ul style="list-style-type: none"> are technically competent in adolescent specific areas, and offer health promotion, prevention, treatment and care relevant to each client's maturation and social circumstances, have interpersonal and communication skills, are motivated and supported, are non-judgmental and considerate, easy to relate to and trustworthy, devote adequate time to clients or patients, act in the best interests of their clients, treat all clients with equal care and respect, provide information and support to enable each adolescent to make the right free choices for his or her unique needs. 	<p>6 Adolescent involvement, so that they are</p> <ul style="list-style-type: none"> well informed about services and their rights, encouraged to respect the rights of others, involved in service assessment and provision.
	<p>7 Community involvement and dialogue to</p> <ul style="list-style-type: none"> promote the value of health services, and encourage parental and community support.
	<p>8 Community based, outreach and peer-to-peer services to increase coverage and accessibility.</p>
	<p>9 Appropriate and comprehensive services that</p> <ul style="list-style-type: none"> address each adolescent's physical, social and psychological health and development needs, provide a comprehensive package of health care and referral to other relevant services, do not carry out unnecessary procedures.
	<p>10 Effective health services for adolescents</p> <ul style="list-style-type: none"> that are guided by evidence-based protocols and guidelines, having equipment, supplies and basic services necessary to deliver the essential care package, having a process of quality improvement to create and maintain a culture of staff support.
	<p>11 Efficient services which have</p> <ul style="list-style-type: none"> a management information system including information on the cost of resources, a system to make use of this information.

Source: WHO 2003.

ANNEX 4B ASSESSING ADOLESCENT-FRIENDLY HEALTH SERVICES

TABLE 4B.1 Tool for assessing adolescent-friendly health services

CHARACTERISTICS SUGGESTIONS	YES	NO	FEASIBLE SUGGESTIONS FOR IMPROVEMENT
Health facility characteristics			
1. Is the facility located near a place where adolescents—both female and male congregate? (youth center, school, market, and so on)			
2. Is the facility open during hours that are convenient for adolescents—both female and male (particularly in the evenings or at the weekend)?			
3. Are there specific clinic times or spaces set aside for adolescents?			
4. Are RH services offered for free, or at rates affordable to adolescents?			
5. Are waiting times short?			
6. If both adults and adolescents are treated in the facility, is there a separate, discreet, entrance for adolescents to ensure their privacy?			
7. Do counseling and treatment rooms allow for privacy (both visual and auditory)?			
8. Is there a code of conduct in place for staff at the health facility?			
9. Is there a transparent, confidential mechanism for adolescents to submit complaints or feedback about SRH services at the facility?			
Provider characteristics			
1. Have providers been trained to provide adolescent-friendly services?			
2. Have all staff been oriented to providing confidential adolescent-friendly services? (receptionist, security guards, cleaners, and so on)			
3. Do the staff demonstrate respect when interacting with adolescents?			
4. Do the providers ensure the clients' privacy and confidentiality?			
5. Do the providers set aside sufficient time for client-provider interaction?			
6. Are peer educators or peer counselors available?			
7. Are health providers assessed using quality-standard checklists?			
Program characteristics			
1. Do adolescents (female and male) play a role in the operation of the health facility?			
2. Are adolescents involved in monitoring the quality of SRH service provision?			
3. Can adolescents be seen in the facility without the consent of their parents or spouses?			
4. Is a wide range of RH services available? (family planning, STI treatment and prevention, HIV counseling and testing, ante- and postnatal care, delivery care)			
5. Are there written guidelines for providing adolescent services?			
6. Are condoms available to both young men and young women?			
7. Are there RH educational materials, posters or job aids on site which are designed to reach adolescents?			
8. Are referral mechanisms in place? (for medical emergencies, for mental health and psychosocial support, and so on)			
9. Are adolescent-specific indicators monitored on a regular basis? (for example, number of adolescent clients, disaggregated by age and sex)			
Total ticks			
ADOLESCENT-FRIENDLY SERVICE	Yes	No	Somewhat

continued

TABLE 4B.1, continued

CHARACTERISTICS SUGGESTIONS	YES	NO	FEASIBLE SUGGESTIONS FOR IMPROVEMENT
After completing the checklist, count the number of “yes” responses to get the overall score. Scoring of “adolescent friendliness” is as follows:			
• 0–13: Services not adolescent friendly.			
• 14–20: Services somewhat adolescent friendly.			
• 21–25: Services very adolescent friendly.			

Source: Adapted from African Youth Alliance / Pathfinder International (Senderowitz 1997).

Note: RH = reproductive health; SRH = sexual and reproductive health; STI = sexually transmitted infection; WHO = World Health Organization.

REFERENCES

- ACP/STD, MoH (Ministry of Health), and USAID / Uganda SUSTAIN. 2014. *Assessment of Adolescent HIV Care and Treatment Services in Uganda*. Kampala: MoH.
- African Union. 2006. African Youth Charter. <https://au.int/en/treaties/african-youth-charter>.
- Akatukwasa, C., F. Bajunirwe, S. Nuwamanya, N. Kansime, E. Aheebwe, and I. K. Tamwesigire. 2019. “Integration of HIV-Sexual Reproductive Health Services for Young People and the Barriers at Public Health Facilities in Mbarara Municipality, Southwestern Uganda: A Qualitative Assessment.” *International Journal of Reproductive Medicine* 2019: 6725432. doi:10.1155/2019/6725432.
- Asire, B., et al. 2017. “Adolescent HIV Care and Treatment in Uganda: Care Models, Best Practices and Innovations to Improve Services.” *Journal of Infectious Diseases & Preventive Medicine* 5 (1). doi:10.4172/2329-8731.1000150.
- Atuyambe, L., F. Mirembe, A. Johansson, E. K. Kirumira, and E. Faxelid. 2005. “Experiences of Pregnant Adolescents—Voices from Wakiso District, Uganda.” *African Health Sciences* 5 (4): 304–9. <https://doi.org/10.5555/afhs.2005.5.4.304>.
- Atuyambe L., S. Peter, S. Kibira, J. N. Bukenya, C. Muhumuza, R. R. Apolot, and E. M. Mulogo. 2015. “Understanding Sexual and Reproductive Health Needs of Adolescents: Evidence from a Formative Evaluation in Wakiso District, Uganda.” *Reproductive Health* 12: 35. doi: 10.1186/s12978-015-0026-7.
- Biddlecom, A. E., A. Munthali, S. Singh, and V. Woog. 2007. “Adolescents’ Views of and Preferences for Sexual and Reproductive Health Services in Burkina Faso, Ghana, Malawi and Uganda.” *African Journal of Reproductive Health* 11 (3): 99–110.
- Bukenya, J. N., E. Mulogo, S. P. S. Kibira, C. Muhumuza, and L. M. Atuyambe. 2017. “Health Facilities’ Readiness to Provide Friendly Reproductive Health Services to Young People Aged 10–24 Years in Wakiso District, Uganda.” *Global Journal of Reproductive Medicine* 2 (3): 555588. doi:10.19080/GJORM.2017.02.555588.
- Dennis, M. L., E. Radovich, K. L. M. Wong, and O. Owolabi. 2017. “Pathways to Increased Coverage: An Analysis of Time Trends in Contraceptive Need and Use Among Adolescents and Young Women in Kenya, Rwanda, Tanzania, and Uganda.” *Reproductive Health* 14 (1): 130. doi:10.1186/s12978-017-0393-3.
- Denno, D. M., A. J. Hoopes, and V. Chandra-Mouli. 2015. “Effective Strategies to Provide Adolescent Sexual and Reproductive Health Services and to Increase Demand and Community Support.” *Journal of Adolescent Health* 56 (S1): S22–41. doi:10.1016/j.jadohealth.2014.09.012.
- Deogan, C., J. Ferguson, and K. Stenberg. 2012. “Resource Needs for Adolescent Friendly Health Services: Estimates for 74 Low- and Middle-Income Countries.” *PLOS One* 7 (12): e51420. doi:10.1371/journal.pone.0051420.
- Flaherty, A., W. Kipp, and I. Mehangye. 2005. “‘We Want Someone with a Face of Welcome’: Ugandan Adolescents Articulate Their Family Planning Needs and Priorities.” *Tropical Doctor* 35 (1): 4–7. doi:10.1258/0049475053001813.

- Guttmacher Institute. 2019. "In Uganda, Sexual and Reproductive Health Services and Information Fall Short for Adolescents." News release. Guttmacher Institute. <https://www.guttmacher.org/news-release/2019/uganda-sexual-and-reproductive-health-services-and-information-fall-short>.
- Mbonye, A. K. 2003. "Disease and Health Seeking Patterns Among Adolescents in Uganda." *International Journal of Adolescent Medicine and Health* 15(2): 105–12. doi:10.1515/ijamh.2003.15.2.105.
- MoGLSD (Ministry of Gender, Labour and Social Development). 2016. *National Youth Action Plan: Theme—Unlocking Youth Potential for Sustainable Wealth Creation and Development*. Kampala: MoGLSD. <http://www.mglsd.go.ug>. <http://www.mglsd.go.ug>.
- MoH (Ministry of Health). 2004. *National Adolescent Health Policy for Uganda*. Kampala: MoH.
- MoH (Ministry of Health). 2008. *Uganda School Health Policy*. Kampala: MoH. <http://library.health.go.ug/publications/policy-documents/uganda-school-health-policy>.
- MoH (Ministry of Health). 2010. *Health Sector Strategic and Investment Plan 2010/11–2014/15*. Kampala: MoH. <http://library.health.go.ug/download/file/fid/1121>.
- MoH (Ministry of Health). 2011. *National Adolescent Health Policy-Strategy 2011–2015*. Kampala: MoH.
- MoH (Ministry of Health). 2012. *Adolescent Health Policy Guidelines and Service Standards*. 3rd ed. Kampala: MoH.
- MoH (Ministry of Health). 2015. *Health Sector Development Plan 2015/16–2019/20*. Kampala: MoH. <https://www.health.go.ug/cause/health-sector-development-plan-2015-16-2019-20/>.
- MoH (Ministry of Health). 2016. *Investment Case for Reproductive, Maternal, Newborn, Child, and Adolescent Health Sharpened Plan for Uganda 2016/17–2019/20*. Kampala: MoH. <https://www.health.go.ug/cause/reproductive-maternal-newborn-child-and-adolescent-sharpened-plan-for-uganda-2016-17-2019-20/>.
- MoH (Ministry of Health). 2018. *Process Evaluation of Implementation of Adolescent HIV SRH Responsive Services in Uganda for the Year 2017*. Kampala: MoH.
- MoH (Ministry of Health). 2019a. *Annual Health Sector Performance Report 2018/19*. Kampala: MoH. <http://library.health.go.ug/publications/performance-management/annual-health-sector-performance-report-20182019>.
- MoH (Ministry of Health). 2019b. *The National Adolescent Health Landscape and Recommendations for Improved Service Delivery Report 2019*. Kampala: MoH. <https://www.health.go.ug/cause/the-uganda-national-adolescent-health-landscape-and-recommendations-for-improved-service-delivery-report/>.
- MoH (Ministry of Health). 2022. *National Health Accounts 2016–2019*. Kampala: MoH. <http://library.health.go.ug/index.php/health-system-financing/health-financing-accounting/ministry-health-national-health-accounts-2016>.
- MoH and UNFPA (Ministry of Health and United Nations Population Fund). 2017. *Assessment of Adolescent and Youth Sexual and Reproductive Health (AYSRH) in Uganda*. Final Report. Kampala, Uganda
- Nabugoomu, J., G. K. Seruwagi, K. Corbett, E. Kanyesigye, S. Horton, and R. Hanning. 2018. "Needs and Barriers of Teen Mothers in Rural Eastern Uganda: Stakeholders' Perceptions Regarding Maternal/Child Nutrition and Health." *International Journal of Environmental Research and Public Health* 15(12): 2776. doi:10.3390/ijerph15122776.
- Nalumansi, B. Y. T. 2016. *Assessment of Youth Friendly Health Service Delivery in the East and Southern Africa Region*. Uganda Report. New York: UNFPA.
- Ngwenya, N., N. Busisiwe, S. Lerato Mchunu, J. Ferguson, J. Seeley, and A. M. Doyle. 2020. "Behavioural and Socio-Ecological Factors That Influence Access and Utilisation of Health Services by Young People Living in Rural Kwazulu-Natal, South Africa: Implications for Intervention." *PLOS One* 15 (4): e0231080.
- NTIHC (Naguru Teenage Information and Health Centre). n.d. "Naguru Teenage Information and Health Centre." <https://www.ntihc.or.ug/>.
- Nuwamanya, E., et al. 2020. "Effectiveness of a Mobile Phone Application to Increase Access to Sexual and Reproductive Health Information, Goods, and Services among University

- Students In Uganda: A Randomized Controlled Trial.” *Contraception and Reproductive Medicine* 5 (1): 31. doi:10.1186/s40834-020-00134-5.
- RHU (Reproductive Health Uganda). 2018. “Accelerating Universal Access to Sexual Reproductive Health Services: Annual Report 2018.” RHU, Kampala. <https://www.rhu.or.ug/wp-content/uploads/2019/09/RHU-Report-2018-Print-Final.pdf>.
- Republic of Uganda and United Nations. 2019. “National Multi-Sectoral Coordination Framework for Adolescent Girls 2017/2018–2021/2022.” <https://www.unicef.org/uganda/reports/national-multi-sectoral-coordination-framework-adolescent-girls>.
- Salam, R., J. K. Das, Z. S. Lassi, and Z. A. Bhutta. 2016. “Adolescent Health Interventions: Conclusions, Evidence Gaps, and Research Priorities.” *Journal of Adolescent Health* 59(4): S88–92. doi:10.1016/j.jadohealth.2016.05.006.
- Semwanga, J. R., et al. 2016. “Engaging Social Media as an Education Tool on the Fly: The Use of Facebook for HIV and Ebola Prevention and Awareness among Adolescents in Uganda.” *BMC Infectious Diseases* 16 (2): P7. doi:10.1186/s12879-016-1466-6.
- Senderowitz, J. 1997. “Reproductive Health Outreach Programs for Young Adults.” <https://www.semanticscholar.org/paper/Reproductive-Health-Reproductive-Health-Outreach-Senderowitz/7b57b8a903f3a8d50f22bf420ca92900c1eb5e5e>.
- Senderowitz, J., C. Solter, and G. Hainsworth. 2002. “Clinic Assessment of Youth Friendly Services: A Tool for Assessing and Improving Reproductive Health Services for Youth.” Pathfinder International. <https://www.pathfinder.org/publications/clinic-assessment-youth-friendly-services-tool/>.
- Sexual Reproductive Health Rights Civil Society Organizations in Uganda and CEHURD. 2016. “The State of Sexual Reproductive Health and Rights in Uganda: Emerging Issues.” Paper submitted to the universal periodic review of Uganda, second cycle of the Twenty-sixth session of the UPR Human Rights Council. October 31–November 11, 2016. <https://uprdoc.ohchr.org>.
- SUSTAIN. 2017. “Adolescent Friendly Health Services Change Package: Synthesis of the Most Robust and Effective QI Interventions to Improve Adolescent Friendly Health Services in SUSTAIN Supported Hospitals in Uganda.” USAID / SUSTAIN, Kampala; University Research Co., Chevy Chase, MD. https://pdf.usaid.gov/pdf_docs/PA00TB46.pdf.
- UBOS (Uganda Bureau of Statistics). 2017. “Uganda Demographic and Health Survey 2016: Key Indicators Report.” UBOS, Kampala. https://www.ubos.org/wp-content/uploads/publications/03_2018Uganda_DHS_2016_KIR.pdf.
- UBOS (Uganda Bureau of Statistics). 2021. *Uganda National Household Survey 2019/2020*. Kampala: UBOS. https://www.ubos.org/wp-content/uploads/publications/09_2021Uganda-National-Survey-Report-2019-2020.pdf.
- UNFPA (United Nations Population Fund). 2013. “UNFPA Strategy on Adolescents and Youth: Towards Realizing the Full Potential of Adolescents and Youth.” UNFPA, New York. <https://www.unfpa.org/resources/unfpa-strategy-adolescents-and-youth>.
- UNFPA (United Nations Population Fund). 2017. “UNFPA Uganda Annual Report 2017” <https://www.unfpa.org/annual-report-2017>.
- Vu, L., B. Burnett-Zieman, C. Banura, J. Okal, M. Elang, et al. 2017. “Increasing Uptake of HIV, Sexually Transmitted Infection, and Family Planning Services, and Reducing HIV-Related Risk Behaviors among Youth Living with HIV in Uganda.” *Journal of Adolescent Health* 60 (2S2): S22–28. doi:10.1016/j.jadohealth.2016.09.007.
- WHO (World Health Organization). 2003. “Adolescent-friendly Health Services: An Agenda for Change.” <https://apps.who.int/iris/handle/10665/67923>.
- WHO (World Health Organization). 2012. “Making Health Services Adolescent Friendly: Developing National Quality Standards for Adolescent Friendly Health Services.” <http://www.who.int/iris/handle/10665/75217>.
- WHO (World Health Organization). 2014. *Health for the World’s Adolescents: A Second Chance in the Second Decade*. <https://apps.who.int/iris/handle/10665/112750>.
- WHO (World Health Organization). 2015. *Adolescent Health*. http://www.who.int/topics/adolescent_health/en/

WHO (World Health Organization). 2017. *Global Accelerated Action for the Health of Adolescents (AA-HA!): Guidance to Support Country Implementation*. Geneva: WHO.

WHO (World Health Organization) and ExpandNet. 2010. "Nine Steps for Developing a Scaling-Up Strategy." <https://apps.who.int/iris/handle/10665/44432>.

WHO (World Health Organization) and UNAIDS. 2015. "Global Standards for Quality Health Care Services for Adolescents: A Guide to Implement a Standards-Driven Approach to Improve the Quality of Health-Care Services for Adolescents." <https://apps.who.int/iris/handle/10665/183935>.

5 Factors Contributing to RMNCAH and Family Planning Outcomes among the Batwa, Benet, and Ik in Uganda

ELIZABETH KWAGALA AND MIRIAM GESA MUTABAZI

EXECUTIVE SUMMARY

As past studies among indigenous peoples have indicated, members of such groups experience disproportionately high levels of maternal and infant mortality, malnutrition, cardiovascular illnesses, HIV/AIDS, and other infectious diseases, such as tuberculosis and malaria. Within Uganda, the Batwa, Benet, and Ik, three of the country's indigenous groups, face significant socioeconomic constraints that further impede their ability to achieve good health outcomes, particularly in reproductive, maternal, newborn, child, and adolescent health (RMNCAH). While national performance on RMNCAH indicators is mixed, implementation in these specific communities is consistently worse, and this issue impacts the country's ability to comprehensively address its primary disease burden.

Several factors account for the disparities in RMNCAH outcomes. For example, the Batwa, Benet, and Ik live in remote mountainous areas that lack roads and basic social infrastructure, such as schools and health facilities. Consequently, in their respective districts, these groups experience relatively higher maternal and neonatal deaths and markedly low antenatal care (ANC) and postnatal care (PNC) attendance, skilled birth attendance, and use of modern contraceptives, in contrast to other populations.

To illustrate this last point, a review of existing studies showed that (a) infant deaths among the Batwa were 21 percent, as compared with 5 percent among the non-Batwa (Ohenjo et al. 2006; Stephens et al. 2005, 2006); (b) life expectancy at birth was 28 years, as opposed to 50 years among the general population as of 2002 (Nyatanyi 2020; UBOS 2016); and (c) lifetime experience of violence was 100 percent, as compared with 70 percent among the general population (Ramsay 2010; MoH 2016a). At the district level, no specific data are available for Benet and Ik on maternal and newborn health (MNH) and family planning status. However, the maternal mortality ratio (MMR) for Kapchorwa district (the residence of the Benet prior to its subdivision) was 600 per 100,000, as compared with 435 per 100,000 for the entire country as of 2011 (Mwesigye 2011).

Despite efforts to expand limited health services to the Batwa, Benet, and Ik, the challenges of inaccessibility, combined with difficulties in overcoming socio-cultural barriers, have contributed to the groups' continued marginalization. Such exclusion risks the undermining of many of the gains made thus far to improve care for mothers, newborns, children, and adolescents on the national level and threatens Uganda's goals for universal health coverage. Importantly, exclusion also undermines Uganda's overall progress toward achieving national and global targets, such as the United Nations Sustainable Development Goals (SDGs). Yet the paucity of precise and current data on the socioeconomic determinants of access to and use of RMNCAH services for these populations hampers efforts to enhance service delivery as well as to more coherently address the broader issue of health disparities in Uganda.

Study objectives

The specific objectives of this study were as follows:

- Examine the MNH care and family planning *status* of Batwa, Benet, and Ik female and male adolescents and adults;
- Examine the MNH care and family planning *practices* among Batwa, Benet, and Ik female and male adolescents and adults;
- Assess the familial, cultural, religious, and other factors that influence MNH care and family planning practices in the Batwa, Benet, and Ik communities; and
- Provide recommendations for enhancing the delivery of services to the Batwa, Benet, and Ik.

Methodology

The study used a cross-sectional exploratory approach, based on a literature review, 12 in-depth interviews (IDIs), and 39 key informant interviews (KIIs), as well as analysis of data from the District Health Information Software version 2 (DHIS2). Key informants and in-depth interviewees included policy makers and program managers at the national level and health service managers and providers at the district level. Although planned, data collection from all designated female and male adolescents and adults could not be undertaken due to the inability to conduct face-to-face interviews at the community level owing to the COVID-19 lockdown and to the challenges of indigenous peoples' unfamiliarity with telephones. Research was carried out in the three districts, of Uganda where each of the groups is concentrated: Kween district, in the Eastern region (Benet); Kisoro district, in the Southwestern region (Batwa); and Kaabong district, in the Northeastern region (Ik).

Key findings

The study's key findings included the status of and practices in MNH and family planning, as well as familial, cultural, religious, and other factors.

Status of MNH and family planning

ANC, skilled birth, and PNC are substandard, and the maternal death rate is high among these groups as compared with the nonindigenous communities in

Uganda. Few pregnant women among the Batwa, Benet, and Ik attend the minimum required number of ANC or PNC visits, and the majority of births are not attended by trained health workers in health facilities. Contributing to these findings are (a) the lack of health facilities in the communities, hindering access; (b) the high poverty level, making the cost of transport and other fees associated with MNH and family planning unaffordable; (c) the significant illiteracy rate, leading to limited knowledge of the value of RMNCAH and family planning services; and (d) perpetual food insecurity, especially among the Batwa, exacerbating mother and newborn malnutrition.

Practices in MNH and family planning

Each of the three groups engages in unique positive and negative practices that improve or endanger mothers' and newborns' well-being. Some helpful practices are (a) the assignment of light work and the provision of nutritious foodstuffs to expectant mothers; (b) the prevention of spousal violence during pregnancy; and (c) mandatory months-long postpartum abstinence, especially among the Ik. However, findings show several detrimental practices that threaten positive MNH outcomes: (a) the preference for home delivery, due to the lack of proximate health facilities and the fear of negligence or discriminatory behavior from health workers; (b) the seclusion of mother and newborn for days after delivery; and (c) the discouraging of breastfeeding and the administering of traditional herbal mixtures of unproven efficacy for a period after birth. These practices not only contribute to delaying or not seeking appropriate care in a health facility but also create more health complications, which lead to poor maternal and child health (MCH) consequences, such as damage to the uterus, heavy bleeding, sepsis, and death. The public health facilities that serve the three indigenous communities are mostly dilapidated and lack a sufficient number of skilled health workers, accommodation for health workers and patients, and adequate essential medical equipment, medicine, and supplies necessary for quality RMNCAH service delivery and positive outcomes.

Positive family planning outcomes in the communities are thwarted by husbands' limited involvement in family planning decision-making, the desire for many children to bolster the low populations and perpetuate society, limited knowledge and misperceptions about various modern contraceptive methods, fear of greatly exaggerated side effects, and the belief that people who use contraception are promiscuous.

Familial, cultural, religious, and other factors

The Batwa, Benet, and Ik hold cultural values, superstitions, and faith-based beliefs that influence their preference for traditional MNH care at home with the assistance of a traditional birth attendant (TBA), visiting a health facility only if the situation worsens. The study found that maternal and neonatal deaths are common because of poor hygiene and sanitation at home, the inability of TBAs to manage labor and delivery complications, and superstitious beliefs about pregnancy and childbirth and thus objections to skilled birth attendance. In addition to in-home childbirth, some of the groups' other precepts with potentially harmful consequences include female genital cutting and newborn body incision rituals, particularly among the Benet; umbilical cord disposal rituals to prevent sorcery and the application of unsanitary concoctions to the umbilical cord stump; and the use of traditional herbs and other substances for treating pregnant women and newborns. Strong beliefs

and traditions also negatively impact the use of modern contraceptives among the three groups, who believe such contraceptive use interferes with God's creation and would result in serious side effects, foremost among them impotence and thus extinction.

Recommendations

To improve the situation and factors associated with MNH among the Batwa, Benet, and Ik, the Ministry of Health (MoH), in partnership with the Ministry of Gender, Labour and Social Development (MoGLSD), Ministry of Local Government (MoLG), and respective local governments and civil society organizations (CSOs), including religious and cultural institutions, should in the short term pursue the following:

- Carry out sustained periodic community outreach services, including education on harmful cultural practices and on available RMNCAH services and their value when administered at a health facility. This work should be complemented with the use of community-based events and mobile telephones for health education, starting with young people, and with improvements made to roads to RMNCAH service delivery points in the community.
- Initiate partnerships with community-based organizations and cultural, religious, and other civic leaders to ensure ongoing participation of the indigenous communities in RMNCAH planning and management.
- Upgrade to the Health Center IV (HC IV) level those health facilities that serve the communities, equip them with the relevant staff, and ensure adequate staff accommodation and remuneration. In addition, introduce maternity waiting homes to reduce the delays in accessing appropriate care and family planning services.
- Train and recruit health care workers from the indigenous groups to provide RMNCAH services in their communities.
- Adopt a multisectoral approach to address RMNCAH, which is inadequate due to the communities' existing socioeconomic circumstances. Of particular impact on RMNCAH access and outcomes were these communities' displacement and the disruption of their habitat and livelihoods by the government and neighboring communities, lack of nearby essential social infrastructure for health and education, and the absence of roads and means of transportation.

In addition, the MoH, in partnership with development partners, should engage the Uganda Bureau of Statistics (UBOS) to collect periodic comprehensive statistical data on the various indicators related to RMNCAH, especially neonatal and maternal morbidity and mortality of the indigenous groups in Uganda. This research will enable evidence-based advocacy, as well as planning and implementation of MNH and family planning interventions that are responsive to the needs of these groups.

INTRODUCTION

RMNCAH conditions in Uganda continue to present a critical public health challenge, accounting for over 60 percent of years of life lost in the country (MoH 2016b). Despite the progress made in reducing the MMR and neonatal

deaths, several MCH indicators remain deficient. The MMR as of 2016 was 336 maternal deaths per 100,000 live births, which was higher than the estimated global ratio of 211 per 100,000 live births (WHO 2019a, 2019b), and according to UBOS, in 2016, 28 percent of maternal deaths and 18 percent of pregnancy-related deaths occurred among teenagers (UBOS and ICF 2018). In addition, the rate of ANC attendance (of at least four times) was approximately 64 percent, and the rate of receiving PNC within 2 days was 54 percent for women and 56 percent for newborns (UBOS and ICF 2018).

Globally, indigenous groups' access to and use of RMNCAH services tends to be poorer than that of the rest of the population. (See definitions of maternal health and indigenous groups in box 5.1.) Studies in several countries show that indigenous or marginalized groups generally have low levels of immunization; limited knowledge of the various modern contraception methods; and limited access to and use of ANC, PNC, and neonatal care services. In addition, these groups also have higher levels of fertility and infant and child mortality (Crivelli et al. 2013; Islam, Islam, and Banowary 2009; Larkins and Page 2015; Marini 2018; Mukasa 2012; Nandi et al. 2020; Smylie and Lana 2014; Stephens et al. 2006).

This study focused on the three most vulnerable indigenous groups in Uganda—the Batwa, Benet, and Ik. Poor RMNCAH outcomes among these groups contribute to decelerating Uganda's progress toward achieving UHC and SDG 3, which emphasizes “leaving no one behind” (UNCDP 2018). Major barriers to the three indigenous groups receiving RMNCAH care and other social services, such as education, include their physical isolation from neighboring communities and facilities, lack of formal education, high unemployment, and high levels of poverty.

In addition, the Batwa, Benet, and Ik were displaced from parts of their respective traditional habitats by ongoing wildlife conservation programs. This displacement caused disruptions in their cultural heritage and a drastic transition in their livelihoods, from nomadic hunters and forest food gatherers to agriculturalists (ACHPR and IWGIA 2006; Harper 2012). It also engendered socioeconomic and political marginalization that exacerbated poverty and impeded access to basic social services (Awor, Nabiryo, and Manderson 2020;

Box 5.1

Definitions of key terms

In this study, *maternal health* is defined as the social, physical, and psychological care and well-being of women throughout pregnancy, childbirth, and the postpartum period. *Newborn health* is defined as the social, physical, and psychological care for babies in the first month of life (WHO 2019a). *Family planning* is defined as the spacing and timing of births through the use of either modern or traditional and temporary or permanent methods of birth control, such as the use of contraceptives by individuals and spouses to attain

the desired and manageable number of children (Hatry 2006).

Indigenous groups are defined as the minority groupings of people of the same ethnicity who live in their traditional habitats and families, maintain socio-cultural and economic identities and structures that are different from those of the dominant neighboring societies, and are marginalized and deprived of their basic rights, such as access to health and education services, due to their cultural and socioeconomic way of life (Republic of Uganda 1995, 2007).

MoGLSD, 2017; Mukasa 2012; Mukasa and Byansi 2019; Nandi et al. 2020; Terborgh et al. 1995).

Studies have shown that, without adequate access to MNH and family planning services, infant deaths among the Batwa by 2006 were 21 percent as compared with 5 percent among the non-Batwa (Ohenjo et al. 2006; Stephens et al. 2005, 2006). The life expectancy at birth for this group was 28 years, as compared with 50 years among the general population as of 2002 (Nyatanyi 2020; UBOS 2016), and the lifetime experience of violence was 100 percent as compared with 70 percent among the general population (Ramsay 2010; MoH 2016a). The MMR for Kapchorwa, the previous district of residence of the Benet, was 600 per 100,000, as compared with 435 per 100,000 for the entire country as of 2011 (Mwesigye 2011). No specific data on the MNH and family planning situation of the Benet and Ik exist, a prime motivation for this study.

Socioeconomic status of indigenous groups in Uganda

In Uganda, indigenous groups experience diverse vulnerabilities that limit their access to social services. The Batwa (population of approximately 6,700) reside on the slopes of Mount Rwenzori and Muhavura in Kisoro district; the Benet (approximately 8,500) reside on the escarpments of Mount Elgon in Kween district; and the Ik (approximately 13,900) reside on the slopes of Mount Murungole near Kidepo National Park in Kabong district (Berger 2019; UBOS 2016); all these locations are in inaccessible mountain forests. Large areas of their traditional habitat were gazetted as conservation parks for wildlife and natural forests. Therefore, many of the indigenous people were displaced and currently live in secluded areas close to the national parks, which lack roads and basic social amenities, such as schools and health facilities. The displacements have led to a shortage of land and food, disruption of the sociocultural structure and lifestyle, loss of livelihoods, and the adoption of risky behaviors, such as high consumption of alcohol (ACHPR and IWGIA 2006; Harper 2012).

The socioeconomic situation of these indigenous groups varies in some instances. Among the Benet, some of those who were displaced are landless, while others acquired land in adjacent areas, which they use for mixed subsistence farming. This latter group cultivates food crops and has food surpluses, but sales for income are limited due to the poor roads. Most of the Ik now live near Kidepo National Park and largely engage in subsistence agriculture, including livestock raising (mainly goats and sheep) and beekeeping (ACHPR and IWGIA 2006; Harper 2012). The Ik lost their cattle during continuous raids by the neighboring Turkana and Karamojong. Alcohol consumption (the local brew) is common among the Ik. In terms of social infrastructure, the Karinga district, which is the home district of the Ik, has only one primary school, one secondary school, and one Health Center III (HC III).

Among the Batwa, few families are settled and involved in agriculture, even though they have many children. Therefore, many lack food and often survive by engaging in dancing for visitors, casual work, or begging or scavenging in garbage dumps. A few are employed by the Uganda Wildlife Authority (UWA) project as tour guides and entertainers for tourists, from which they earn income used to purchase land, grow crops, provide school fees for children, and access basic health services. Whereas these casual jobs have provided income for some Batwa, some key informants considered the activities dehumanizing and unhelpful to the socioeconomic transformation of the indigenous communities.

Furthermore, the three indigenous groups tend to be distrustful of outsiders and rarely interact or intermarry with members of neighboring or other communities.

In recognition of the social disparities faced by the indigenous communities, the Ik are actively lobbying for increased government support, with representation in the local government and Parliament. The community seeks better education and health services as well as roads and electricity supply. The Batwa and Benet, on the other hand, are rarely represented in the political and technical structures at any level. This has limited advocacy for their access to better education, health, and other basic services.

Interventions related to RMNCAH

The government, in partnership with development agencies and CSOs, has put in place several interventions (some since phased out) to address the inequities in the Batwa, Benet, and Ik communities. In particular, the Adventist Development and Relief Agency, Compassion International, and the United Organisation for Batwa Development in Uganda (UOBDU) are supporting the education of Batwa children. CARE International and the UWA have purchased land and constructed houses for some of the Batwa, and the Sustain for Life integrated program has constructed a maternity waiting shelter for Batwa people at the Mutolere Hospital. Family Health International 360 has constructed a HC in the Benet subcounty; Reproductive Health Uganda (RHU), the World Wide Fund for Nature, and Marie Stopes International have provided family planning and other sexual and reproductive health (SRH) services, such as cervical cancer screening, to the Batwa and Benet. The Uganda Reproductive, Maternal, and Child Health Services Improvement Project (URMCHIP) have provided results-based financing (RBF) to Kween district, and some of the funding is used to partner with TBAs and support them with a modest monthly allowance. Mercy Corps and Health International have built maternity waiting shelters at health facilities that serve the Ik and have provided SRH education and services to them.

Other interventions include the following:

- The provision of voucher cards to the Batwa to access health services in a nearby private facility;
- The provision of transportation and food to the Batwa patients admitted to health facilities;
- Community education and engagement of TBAs and Village Health Teams to ensure that Benet women seek MNH services at health facilities; and
- The training of health workers in the provision of services that are responsive to rights, gender-based violence, and HIV care in Karamoja region.

Study rationale

There are insufficient specific data about the substandard uptake and use of RMNCAH services among the Batwa, Benet, and Ik. In fact, there are no MNH or family planning data on the Benet and Ik. Lack of data precludes the development and implementation of evidence-based interventions that would address the disparities in health outcomes between these groups and the general population—and thus promote the well-being of the indigenous

groups (ACHPR and IWGIA 2009; Kwagala 2013; Ohenjo et al. 2006; Smylie and Lana 2014; Stephens et al. 2005, 2006).

The knowledge gap begets four key questions that merit research, namely,

- a. What is the current MNH and family planning status of Batwa, Benet, and Ik women, their spouses, and adolescents?
- b. What are the current MNH and family planning practices of the three groups of indigenous women, their spouses, and adolescents?
- c. What factors are responsible for those practices among the three indigenous groups? and
- d. What are the stakeholders' perspectives on how to improve the RMNCAH situation among these groups?

Objectives of the study

Based on the gaps noted, the objectives of the study were the following:

- Examine the MNH care and family planning *status* of Batwa, Benet, and Ik female and male adolescents and adults;
- Examine the MNH care and family planning *practices* among Batwa, Benet, and Ik female and male adolescents and adults;
- Assess familial, cultural, religious, and other factors that influence MNH care and family planning practices in these communities; and
- Examine stakeholders' perspectives on enhancing MNH care and modern contraceptive use in these communities.

Conceptual framework

Examination of the objectives for this study was guided by the conceptual framework for assessing factors influencing MNH and family planning practices among indigenous groups (figure 5.1), which lends itself to the MEASURE Evaluation conceptual framework for addressing family planning and reproductive health in the community (MEASURE Evaluation 2019). This framework sets forth that the cultural, socioeconomic, and political circumstances prevailing in the national, district, and community environment influence the service delivery and interpersonal and personal attributes of the indigenous groups, and those in turn either positively or negatively affect their level of knowledge and access to and uptake of MNH and family planning services. The framework further asserts that service delivery and interpersonal attributes have the potential to influence some personal attributes, such as religion, education, marital status, and property ownership.

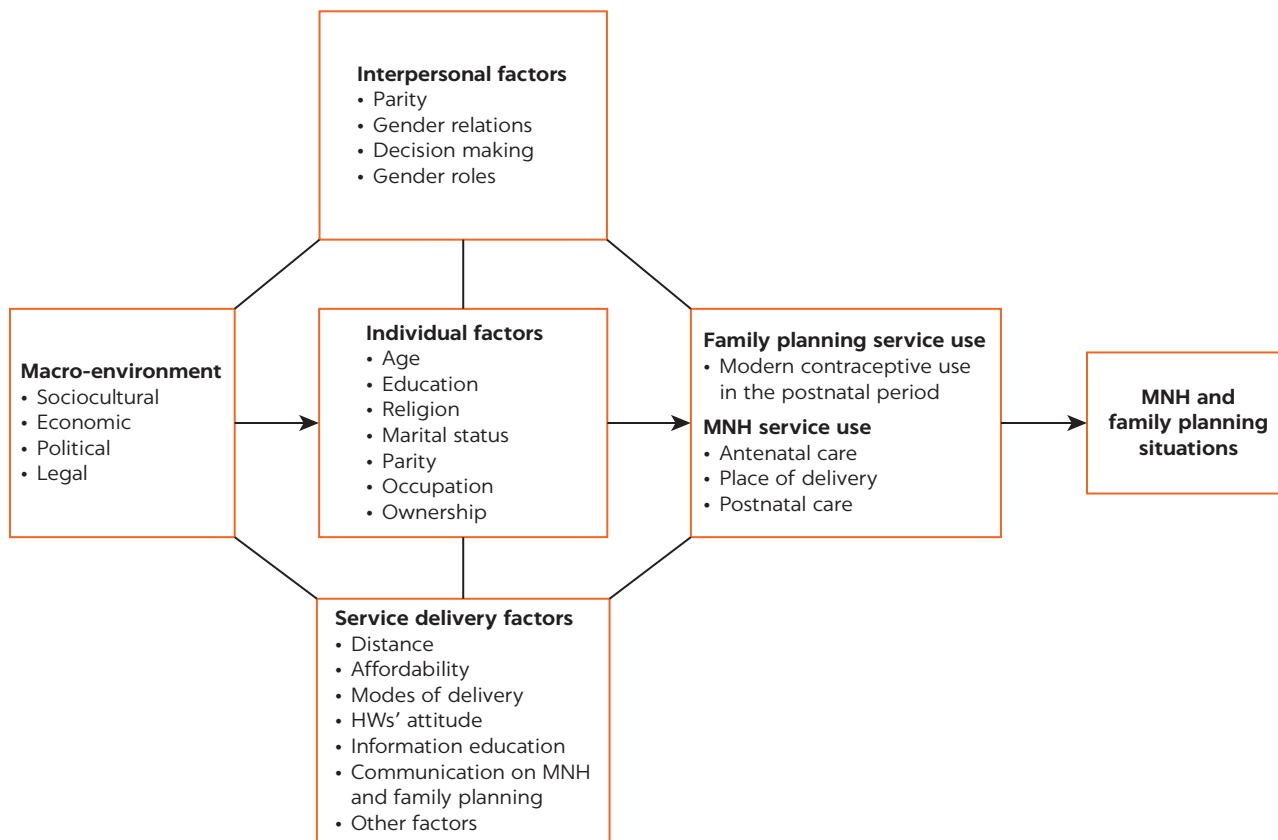
METHODOLOGY

This section discusses the study design, sites, and population; data collection methods, tools, and procedures; data management and analysis; ethical considerations and assurance; and study limitations.

Study design

This cross-sectional, exploratory study used a literature review; analysis of the DHIS2 data to generate MNH and family planning indicators; and primary

FIGURE 5.1
Conceptual framework for assessing factors affecting MNH and family planning practices



Source: Adapted from MEASURE Evaluation 2019.

Note: HWs = health workers; MNH = maternal and newborn health.

qualitative data. Twelve IDIs and 39 KIIs were conducted to collect data from policy makers and program managers at the national level, health service managers and providers (including civic and cultural leaders) at the district level, and female and male adolescents and adults in the Batwa, Benet, and Ik communities.

Study sites

This study was conducted in three districts of Uganda: (a) Kween district, in the Eastern region, which the Benet inhabit; (b) Kisoro district, in the Southwestern region, where the Batwa reside; and (c) Kaabong district, in the Northeastern region, where the Ik live. These districts were selected because of the indigenous groups' substantial settlements there.

Study population

The 51 participants involved in this study consisted of the following:

- In each selected indigenous group: unmarried male and female adolescents and women and men ages 15–24 and married women and men ages 25–30;
- In each selected district: one of each of the following: district cultural head, district health officer, Health Management Information System (HMIS) focal

- person, community development officer, local women’s counselor, health facility in-charge, MNH service provider, leader of a dominant religious faith in the area, cultural leader, TBA, service provider in a nongovernment or private health organization, and male champion of family planning; and
- One MCH or family planning program manager from each of the following: the MoH, World Health Organization (WHO), UNFPA, RHU, and Action for Women and Awakening in Rural Environment.

Data collection methods, tools, and procedures

The research sites and participants were selected purposively. The National Census Report was used to identify the three districts with substantial settlements of Batwa, Benet, and Ik (UBOS 2016). The research participants were chosen based on their access to a telephone handset, substantial knowledge and experience in MNH care and family planning services provision, or role in the community or district or relevant national government institution, development organization, or CSO.

Review of relevant literature

Program reports and published literature related to the health and socioeconomic well-being of indigenous groups were retrieved from various institutional websites and reviewed to understand their past MCH and family planning situations and corroborate the information with the study’s interview data. Some of the reviewed documents include the SDGs; the African (Banjul) Charter on Human and Peoples’ Rights, which commits governments to guarantee the right of its citizens to health; the 1995 Constitution of the Republic of Uganda; the *Health Sector Development Plan 2015/16–2019/20*; the *Investment Case for Reproductive, Maternal, Newborn, Child and Adolescent Health Sharpened Plan for Uganda 2016/17–2019/20*; the Uganda Management of Social Risk and Gender-Based Violence Prevention and Response Project; and the 2017 *Five-Year Indigenous Minority Peoples Plan* (for the Batwa in Kisoro district). The other reviewed literature is provided in the reference list.

Review of DHIS2 and health facility data

The DHIS2 for the three districts and service records for the health facilities most visited by the indigenous community members were scrutinized for specific MCH and family planning indicators, such as the number of ANC visits for women, facility deliveries, newborn (ages 0–7 days) deaths per 1,000 live births, maternal deaths per 100,000 live births, PNC visits to a health facility, fresh and macerated stillbirths, the main causes of deaths, community-based family planning distribution, and contraceptive methods’ prevalence (including condom use) for the three indigenous groups and the general population. Data obtained using this method helped answer Objectives 1 and 2 of this study.

KIIs

The KIIs were conducted with various national and district-level civic leaders, program managers, facility managers, and health workers. The objective was to obtain an overall perspective on their knowledge, oversight roles, and general information on the practices and factors that affect access to and use of MNH

and family planning services among the indigenous groups. Data obtained were corroborated with IDIs to answer all objectives of the study.

IDIs

The IDIs were conducted with the married and unmarried women and men specified in the research participants section to obtain specific perspectives on their situations, experiences, and factors regarding access to and use of MNH care and family planning services. Data obtained were corroborated with data from the KIIs and literature review to answer all research objectives. Table 5.1 indicates the methods used to obtain data for each research objective.

The themes and some questions for the KII and IDI instruments and guides were adapted from the questionnaire used in the *Uganda Demographic and Health Survey 2016* (UBOS and ICF 2018), such as content from the Demographic Health Individual Woman tool (UBOS and ICF 2018) and other relevant standard study tools and resources (Manu et al. 2018; MEASURE Evaluation 2019).

The instruments and guides consisted of questions on the cultural and socio-economic circumstances of the indigenous groups; the appropriateness and challenges of the available MNH and family planning policies and guidelines; staffing, equipment, medicine and supplies, and services and their accessibility and use by the groups; the structural, community, family, individual, and social services factors affecting the MNH and family planning practices of the groups; and suggestions for improving the MNH and family planning well-being of the groups.

The interview guides were translated into the relevant local languages (Ngakarimajong, Kupusabiny, and Rufumbira) and retranslated to English to ensure accuracy, face validity, and standardization. The guides were also pre-tested among the research assistants for the three districts during training and virtually among participants in Kapchorwa district, which has similar characteristics to the target research sites, and afterward were revised and used for data collection.

Data collection procedures

To protect researchers and research participants against COVID-19, all interviews were conducted and audio-recorded virtually using Zoom and the telephone.

TABLE 5.1 Methods used to obtain data for each research objective

OBJECTIVES	METHODS
1. Examine the MNH care and family planning status of Batwa, Benet, and Ik female and male adolescents and adults	KIIs, IDIs, literature review, and DHIS2 data
2. Examine MNH care and family planning practices of Batwa, Benet, and Ik female and male adolescents and adults	KIIs, IDIs, literature review, and DHIS2 data
3. Assess familial, cultural, religious, and other factors that influence MNH care and family planning practices in the Batwa, Benet, and Ik communities	KIIs, IDIs, and literature review
4. Examine stakeholders' perspectives on enhancing MNH and modern contraceptive use in the Batwa, Benet, and Ik communities	KIIs and IDIs

Source: This table is original to this publication.

Note: DHIS2 = District Health Information Software version 2; IDIs = in-depth interviews; KIIs = key informant interviews; MNH = maternal and newborn health.

First, the researchers identified district research facilitators as well as male and female research assistants and trained them in virtual means of data collection. After training, researchers telephoned each district authority and leader of the selected indigenous community, notified them of the study, asked for their support and participation, and provided them with the names and telephone numbers of the research assistants. Second, the facilitators, with the assistance of community contact persons, prepared a list of potential research participants, including their telephone numbers, in line with the study requirements. Participants were purposively chosen based on their knowledge and their professional and lived experiences with MNH and family planning services, taking gender and age diversity into consideration. Third, each selected person was individually telephoned, briefed on the purpose and procedure of the study, and asked for verbal consent to participate.

Fourth, the participants then were asked to sit in a convenient, private place where they could be interviewed, and afterward, they were thanked for the information given and compensated for the time sacrificed to participate, using e-money. Interviews of community-level participants were conducted in their local languages. Audio interview recordings were uploaded to a Dropbox shared folder for further quality assurance and storage.

All interviews with research participants at the national level were conducted by researchers, while all interviews with research participants at the district and community levels were conducted by research assistants. Mobilization of all prospective research participants in the selected districts and communities was conducted by district facilitators.

Data management and analysis

The audio recordings were downloaded from the Dropbox folder. The data from the recordings were transcribed verbatim and translated from the local languages into English. The typed transcripts were mailed to the relevant research assistants to be reviewed for clarity and corrected as needed.

A codebook was prepared using a priori themes determined from the reviewed literature and the conceptual framework and objectives of the study. The codebook was then revised by adding the new themes derived from data analysis. Afterward, all data in the transcripts were exported to NVIVO software for qualitative data analysis, coded, and analyzed by identification of meaningful phrases that were later grouped to form codes. The codes were grouped to form categories, and the categories were grouped to form the final set of themes.

Manifest content analysis was employed to identify key themes in the data and to construe the factors that contribute to the MNH and family planning situations and practices among the indigenous groups and to make recommendations on strategies that may improve MNH and family planning well-being. In addition, excerpts representing the participants' expressed views were identified in the text and used to augment the key findings (Braun and Clarke 2006).

Ethical considerations and assurance

Ethical and quality assurance aspects of the study were ensured during the proposal development, review, and implementation phases. The Reproductive, Maternal, Newborn, Child, and Adolescent Health Operational Research

Program team of the MoH, World Bank, and Sweden plus the program's Advisory Committee reviewed the technical proposal and instruments and provided comments that were used to revise the entire research protocol. The revised protocol, instruments, and informed-consent forms were confirmed to meet the scientific standards of the National HIV/AIDS Research Committee and administratively approved by the Uganda National Council for Science and Technology.

During the implementation phase, the investigators trained the research teams and pretested and revised all instruments before data collection. Each research team consisted of men and women fluent in English and the languages of the local communities involved in the study. In addition, all interviews at the community level were conducted in a language understood by the research participants. The investigators supervised the research teams and held meetings with them to discuss and provide feedback on the data collection process on a daily basis. Informed consent was obtained from each of the participants prior to the interviews.

All interviews were audio-recorded, and the recordings were uploaded to a Dropbox shared folder and checked for audibility and completeness on a daily basis. Typed transcripts were exported to NVIVO software, which helped consolidate and minimize the loss of data.

Study limitations

Due to the restrictions on travel and face-to-face meetings instituted by the government to prevent the spread of COVID-19, virtual methods of data collection were used, specifically, telephone interviews and online meetings (for example, through Zoom). The virtual means of data collection limited extensive discussions owing to poor connectivity. Also, some indigenous people, particularly among the Batwa, were afraid of mobile telephones and so declined to be interviewed. Although the triangulation of methods and sources of information helped verify the data collected through telephone interviews, the lack of physical observation—which could have provided cues for probing into the lived MCH and family planning experiences of the research participants—may have affected this study's findings.

Furthermore, this study hoped to obtain additional information about the lived experiences related to MNH and family planning from male and female adolescents and older community members through face-to-face FGDs and IDIs. However, this was not possible due to the difficulty with mobilizing and conducting deeper discussions with them using the telephone. Additionally, the DHIS2 does not capture data on births and deaths and the care of mothers and newborns outside the formal health care system, and the majority of indigenous communities rarely used the health facilities for maternal and newborn care. Hence, some important information could have been missed in the findings. Future research on adolescents and older persons among the indigenous communities will be useful to more fully understand their MNH and family planning practices and underlying factors.

There are limited district-level data to consistently assess performance on key MNH and family planning indicators across all three indigenous communities within the districts where they reside. This limitation impeded the ability to do cross-analysis and also to provide a more comprehensive picture of the disparities faced using a common set of indicators.

FINDINGS

Findings include those for the status of MNH care and family planning use, MNH practices, and factors influencing MNH care and family planning practices.

1. Status of MNH care and family planning use

Objective 1 was to examine the status of MNH care and family planning of Batwa, Benet, and Ik female and male adolescents and adults.

MNH care

Findings for MNH care include ANC, skilled birth, and PNC attendance; other MNC care; and family planning.

ANC attendance. All service providers in the health facilities that serve the Batwa and Benet communities reported that few pregnant women attend ANC the recommended four times. One health service provider in a health facility that serves Batwa pregnant women, when asked to comment on their ANC attendance, stated,

Almost all of them do not meet the minimum requirement for ANC attendance of at least four times during pregnancy. In the past month, none of them attended . . . I have never seen a Mutwa woman completing the four minimum antenatal visits . . . That would be a miracle. They attend a few times and stop due to fear of being denied access to similar services in future.

Improvement in ANC attendance among some of the Batwa was attributed to ongoing community education outreach and support from their husbands to seek ANC.

Skilled birth attendance. Few pregnant women among the three indigenous communities are assisted by health workers in their deliveries compared with the general community. DHIS2 data from July 1, 2019, to June 30, 2020, for the Kween, Kabong, and Kisoro districts showed that approximately 15 percent of the Benet, 5 percent of the Ik, and none of the Batwa women who obtained antenatal care had skilled birth attendance. By contrast, 45 percent of ANC attendees in the Kween district as a whole, and 43 percent in the Kaabong district, had skilled birth attendance.

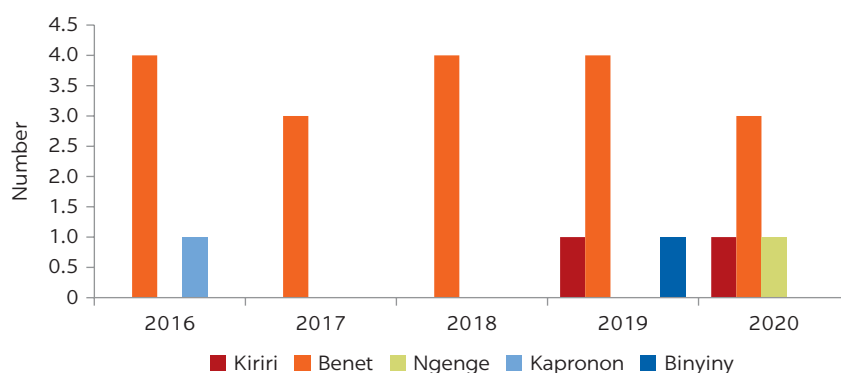
PNC attendance. The PNC attendance of mothers among the indigenous groups is also limited because few of them deliver in health facilities. PNC attendance at 6 weeks was estimated at 24 percent among Benet pregnant women and up to 50 percent among all pregnant women in Kaabong district; the rate was much lower among the Ik and was virtually nonexistent among the pregnant Batwa women. One health worker in a health facility that serves the Batwa said,

Postnatal care among Batwa women is zero . . . Since I started working in this health facility, I have never seen any of them attending the postnatal clinic.

Other MNH care

DHIS2 statistics showed that the MMR in the districts of Kisoro and Kaabong was 111 and 123 per 100,000 live births, respectively, while the MMR in Kween was 420 deaths per 100,000 live births, which is high when compared with 336 per 100,000 live births among the general population (UBOS and ICF 2018). Service records from July 2019 to December 2020 for the health facilities

FIGURE 5.2
Number of annual hospital-based maternal deaths in each subcounty of Kween district, 2016–20



Source: World Bank, based on Health Management Information System data for Kapchorwa hospital.

Note: No bar indicates no maternal deaths.

serving the Sabinu region further showed that 8 of the 9 maternal deaths in the region were from the Kween district. In Kween district, Benet subcounty, which is home to the Benet people, registered a higher number of maternal deaths during 2016–20. This last district also recorded a high number of neonatal deaths, 21, compared with the neighboring Bukwo district, which recorded zero deaths. Figure 5.2 shows variations in maternal deaths by subcounty in Kween district.

The maternal and neonatal deaths among the three indigenous groups could be much higher, because most of the deliveries and deaths that occur in the community are not reported or documented. Several interviewees in Kisoro, when asked about maternal and neonatal deaths among the Batwa, responded to this effect:

You can never know when a Mutwa loses a child; they bury their dead secretly and never publicize their loss beyond their circles.

Family planning

Because of the desire among the three indigenous groups for large numbers of children, use of modern family planning methods, especially contraceptives, is very low. According to key informant sources, the use of modern contraceptives by the Ik was estimated to range from 0.4 to 4 percent and to be virtually nonexistent among the Benet and Batwa. As one health worker in Kisoro stated,

I have been providing family planning services for the last 8 years, but I have never offered any family planning service to a Mutwa [woman] . . . Since 2020, I have attended to only three Batwa who delivered in this hospital, but none of them requested family planning service.

However, the majority of the three indigenous peoples do use natural methods of spacing and limiting birth, such as lactational amenorrhea, herbs, and postpartum abstinence. In addition, because of increasing literacy and RMNCAH education campaigns through community outreach and the media, the young people among the three indigenous groups are more informed about various family planning methods and are less opposed to their use. One research

participant selected from a national nongovernmental organization offering health services to these groups observed,

The young people are breaking ranks with adults . . . Many of them integrate with the surrounding nonindigenous communities and are becoming less averse to utilization of family planning services.

2. MNH practices

Objective 2 was to examine MNH care and family planning practices among Batwa, Benet, and Ik female and male adolescents and adults.

Maternal care practices before and during pregnancy

There are many and diverse practices related to marriage, womanhood, pregnancy, and childbirth that influence MNH care among the Batwa, Benet, and Ik. Although they use traditional and modern MNH care services, many of them prefer their traditional health care methods.

All indigenous groups permit girls to marry early—the Batwa at age 13, the Benet at 15, and the Ik at 12 for arranged marriages—and all encourage them to produce a large number of children to make up for those who may die and to ensure the continued survival of their society. Female genital cutting or mutilation, which is performed as early as age 5 or at the appearance of first menses, is a cultural requirement and marks the transition from girlhood to womanhood among the Benet, setting the stage for early marriages. Ik women conceal pregnancy to prevent possible harm to the unborn baby through witchcraft. Many indigenous women receive limited support from their spouses and families. Pregnant women are not only neglected but are also overworked, abused, and beaten before and during pregnancy. This neglect and abuse is attributed to excessive consumption of alcohol by their spouses.

However, there are also some positive practices among these groups during pregnancy. Among the Ik, pregnant women are assigned little work and are counseled to avoid stressful situations, such as quarrelling and fighting, which can cause miscarriages and complications during delivery.

Maternal care practices during and after delivery

Findings for maternal care practices during and after delivery include those for delivery and PNC at home and at health facilities, checking and feeding pregnant women in labor, the management of pregnancy and delivery conditions using traditional medicine, care after delivery, and postpartum sexual abstinence.

Delivery and PNC at home. Findings indicate that the majority of pregnant women among the Batwa, Benet, and Ik deliver and receive PNC at home with the assistance of TBAs. The TBAs typically assist a delivery when the woman is in a kneeling posture (women usually kneel to give birth) and routinely visit the mother after delivery to treat wounds using herbs obtained from the forest close to the home. The TBAs' accessibility, friendliness, and timely response to pregnant women before, during, and after delivery encourage these communities to opt for their services instead of those of the health facility services.

Delivery and PNC at health facilities. To encourage pregnant Batwa and Benet women to obtain delivery and PNC services from the existing health facilities, the MoH identified and sensitized TBAs in these communities and engaged them as mobilizers. One health facility that serves the Benet uses URMCHIP RBF resources to provide transport refunds and a modest monthly allowance to TBAs.

These funds motivate TBAs to encourage community members to seek family planning services at health facilities, and they incentivize TBAs to identify and escort pregnant women, especially those in labor, to health facilities for care. As one TBA among the Benet in Kween district explained,

I identify and accompany pregnant women in this area to make sure they go for [ANC] and deliver at the health facility. After delivery, I also advise them about the danger of producing many children . . . If the mother already has more than five children, I warn them . . . I usually advise them that because of the economic hardships, it is not okay if you do not stop . . . You may insist on having another child and die in the process and leave them behind as orphans.

In addition, some pregnant women among the Batwa of Bukimbiri are given emergency funding by local CSOs such as UOBDU to use for transportation to health facilities for the delivery and purchase of food to eat during facility admission. Some local CSOs, such as the UOBDU, have a vehicle to transport women in labor to health facilities. These initiatives have encouraged pregnant women who otherwise would have stayed at home to instead deliver at health facilities and also obtain services for other diseases. One married pregnant Mutwa woman pointed out,

I would like to go to the hospital for care because it is possible to get many services. There are very many diseases now, and I might be having some of them . . . If I deliver from home, my child might get infected, but if I deliver at the hospital, I would be tested and given treatment in case I have HIV . . . At the hospital, the nurses educate us on what to do . . . give us tablets and injections so that we do not bleed to death . . . Several organizations have been sensitizing health workers about us, and many of them now know that we are human beings like other people.

Checking and feeding pregnant women in labor. Results indicate that TBAs are the main providers of care to indigenous pregnant women during pregnancy and delivery and also after delivery, and this care is carried out in various ways. Among the Ik, TBAs periodically visit the pregnant women, check and correct the positioning of the fetus, and provide them with local nutritious foods and beverages, especially tea and porridge, during labor.

Management of pregnancy and delivery conditions using traditional medicine. The pregnant women in the three indigenous groups use traditional medicine during pregnancy, delivery, and immediately after delivery. Traditional medicine is used specifically to ease the delivery process in cases of prolonged labor, especially among the Benet; to prevent postpartum hemorrhage, particularly among the Ik; and to facilitate production of breast milk, particularly among the Batwa.

Care after delivery. Positive practices among the Batwa and Ik include giving mothers of newborns local nutritious foods and reducing their workloads.

Postpartum sexual abstinence. All three indigenous groups practice postpartum sexual abstinence to ensure the mother and baby remain healthy. The length of this abstinence is approximately 5 months for the Batwa, 3–6 months for the Benet, and at least 12 months for the Ik, who enforce the practice by sleeping in separate beds and, in some cases, in separate residences.

Newborn care practices

Findings for newborn care practices included those for the umbilical cord and stump, feeding, bathing, and rituals.

Cutting the umbilical cord and treating the stump. Because most of the deliveries in these communities occur at home with the assistance of a TBA, cutting the umbilical cord and care of the newborn are carried out traditionally. The Batwa treat the umbilical stump using a mixture of potato leaves, charcoal, onion, and extracts of other herbs, and cow dung. The Benet use a mixture of either warm water and salt or cow dung and herbs and urine of a cow or goat; the Ik use a mixture of oil or ointment, stone dust, and salt.

Feeding newborns. The Batwa and the Benet feed newborns warm water with salt as they wait for the onset of the mother's breast milk. Among the Ik, newborns may not be breastfed for up to 2 days, as they wait for the responsible person to name it. Newborns are given locally brewed alcohol and oil during the naming ceremony. These practices deprive newborns of colostrum and weaken their immunity. In addition, the other lactating mothers are allowed to breast-feed the newborns of other women as they wait for the onset of the mother's breast milk, but this practice predisposes the newborns to infections.

Bathing newborns. The study found that whereas the Ik tradition allows mothers to bathe their newborns immediately after birth, the Benet and Batwa traditions do not. The Benet mothers usually wait a few days before they bathe their newborns, while the Batwa mothers wait for at least 7 days to do so.

Rituals performed on newborns. Results show that all three indigenous groups encourage seclusion of mothers and their newborns after birth. The length of seclusion is 4 days for the Ik, 8 days or until the umbilical cord stump detaches for the Batwa, and 7 days for a single child or up to 2 months for twins for the Benet. In addition, unlike the Ik and Benet, the Ik brand newborns with incisions on their bodies to prevent "brain" diseases. The incisions are treated using herbs. Table 5.2 provides a summary of key MNH care and family planning cultural practices among the three groups.

3. Factors influencing MNH care and family planning practices

Objective 3 of the study was to assess familial, cultural, religious, and other factors that influence MNH care and family planning practices in the Batwa, Benet, and Ik communities.

High levels of poverty, low education, and food insecurity

The majority of the people in the three indigenous groups (particularly the Batwa and Benet) are landless and experience immense socioeconomic hardships that can limit their ability to grow food (particularly the Batwa) and to access appropriate formal education and health services. The Batwa, in particular, live in extreme poverty. Thus, most pregnant women cannot afford the necessities for modern MNH care, such as mama kits, clothes, prescription medicine, and transport to and from the health facility. They also cannot afford food during admission to a health facility. Additionally, due to their displacement from their traditional habitat, the Batwa encounter perpetual food insecurity. Consequently, many mothers are malnourished, and some newborns are underweight at birth and often experience retarded development, as one married Mutwa woman said:

Some of us fail to get food while at the health facility. . . Personally, when I was admitted for delivery, I kept praying that I deliver quickly and leave the health facility due to lack of food.

TABLE 5.2 MNH care and family planning cultural practices of the Batwa, Benet, and Ik

MNH CULTURAL PRACTICE	BATWA	BENET	IK
Female genital cutting and mutilation	n.a.	Rite of passage	n.a.
Early marriage	age 13, early sex	age 15	Arranged at age 12
Concealment of pregnancy	n.a.	n.a.	Fear that disclosure would result in witchcraft to harm the infant
Cultural rituals that contribute to delays in care	Woman needs blessing from mother-in-law	Limited male participation	n.a.
Postpartum seclusion or confinement	8 days or detachment of the umbilical cord stump	7 days for one child, 2 months for twins	4 days
Postpartum abstinence	5 months	Minimum 3 months	Minimum 12 months
Incisions on newborn's body	n.a.	n.a.	To prevent "brain" diseases
Feeding newborns with substances other than their mother's breast milk	n.a.	Warm water and salt	Alcohol, oil; newborns not breastfed until the arrival of the person to name it; can be breastfed by other women
Treatment of umbilical cord stump	Mix of cow dung, extracts from potato leaves, charcoal, onion, and other herbal extracts	Mix of cow dung with herbs and sometimes with cow or goat urine	Oil or ointment, stone dust, and salt

Source: This table is original to this publication.

Note: n.a. = not applicable.

Traditional beliefs and cultural practices

The Batwa, Benet, and Ik hold cultural values that influence their strong preference for traditional MNH care at home with the assistance of a TBA, only visiting a health facility if the situation worsens. Maternal and neonatal deaths are common because of poor hygiene and sanitation at home, the inability of TBAs to manage labor and delivery complications, and superstitious beliefs that hamper skilled birth attendance. Among the Ik, concealment of pregnancy and the belief that the baby may die by witchcraft if a pregnant woman inadvertently reveals that she is pregnant by attending ANC early on can lead to delays in ANC attendance. One key informant in Kaabong district pointed out,

There is a cultural belief that if a pregnant woman attends ANC early, before movement of the fetus, the child will not live. So instead of seeking ANC in the first trimester, some of the Ik pregnant women attend ANC at 6–8 months and at times encounter complications which necessitate surgery.

Similarly, there is a belief among the Batwa that the mother-in-law must bless the woman when labor begins. Given that some of pregnant women do not live with their mothers-in-law, the ceremony might not occur immediately, and this issue can lead to delays in visiting a health facility.

Seclusion of the mother and newborn and prohibition of breastfeeding soon after delivery. This cultural practice not only deters mothers from accessing PNC and from breastfeeding their newborns within the recommended time but also predisposes newborns to infection and death.

Childhood or early marriage. Because of the low populations of the three indigenous communities, they desire a large number of children and therefore promote the marriage of girls as young as age 12 among the Ik and Batwa and age

15 among the Benet. The Ik and Benet communities strictly permit pregnancy of girls only after marriage, and those who violate this norm are usually ostracized and physically punished. Ik parents usually identify the persons their children are to marry. However, Batwa girls typically engage in transactional premarital sex and sexual activities and often become pregnant before marriage due to the high level of poverty in the community, as one opinion leader in Kisoro narrated:

Many Batwa girls become pregnant and marry when they are ages 13–18 years . . . I see many of them pregnant and having babies . . . I believe over 70 percent of them marry at an early age . . . Many boys also get married around the same age as the girls.

Child or early marriages among the indigenous groups can increase the risk of early pregnancy and lengthened the childbearing span, which in turn increases the risk of birth complications.

Female genital cutting and mutilation. This practice is culturally revered and marks the transition to womanhood among the Benet. In this community, genital cutting is often carried out by TBAs during early adolescence and occasionally during childbirth, and sometimes without consent, especially on women who became pregnant before being circumcised. Additionally, women who refuse to be circumcised are not allowed to milk the cows and goats or to collect cow dung from the kraal, causing social exclusion. Such women are also prohibited from participating in important ceremonies for their children. This traditional practice not only causes heavy bleeding, keloids, and sepsis around the genital area due to poor treatment of wounds but also contributes to prolonged labor and other related complications that sometimes lead to the disability and death of women and newborns, as one interviewee in Kween district pointed out:

Women go to TBAs because they want to fulfill the culture . . . If a woman is not cut, as she is pushing the baby and they are cutting her, so she accomplishes two things at the same time. Such persons cannot use health facility services. It is because they want to fit in the community.

Desire for a large number of children. The three indigenous groups do not use modern family planning services, such as contraceptives, due to the desire for a large number of children, particularly boys. Also, there is the conviction among the Benet that they have sufficient resources to support big families. Therefore, all of them encourage spacing instead of limiting births and believe that women who have a few or no boys do not have roots in the family and may be marginalized and lose property. Hence, many men and women continue to have children until the required number of boys in the family is attained to effectively protect their land and to avoid marginalization, as a key informant among the Ik said:

Let them give birth . . . We have enough land . . . We really need enough children to fill up this vacant land so that the Dodoth [nearby ethnic group] stop preventing the use of our land.

Another key informant among the Batwa stated,

We are few in number . . . How many shall we remain if we use family planning? I gave birth to several children, and they died, why should I use family planning again?

Belief that those who use contraceptives are promiscuous. The Benet and Ik believe that those who use modern contraceptives, condoms in particular, are promiscuous. Therefore, married women and men do not use contraceptives to avoid being labeled promiscuous by their spouses.

Limited knowledge about modern family planning methods. The study found that there is limited knowledge about modern contraceptives, especially the female condom, which is among the least known and used methods. Some Ik women remove the ring from the female condom and use it as a bangle. However, some cultural leaders are changing their attitudes toward family planning and are encouraging their community members to seek these services. A cultural leader of one of the communities involved in this study said,

Although I have not used family planning services before, I think it is good for our Batwa community, given our low levels of income. I support it . . . Because of not using it, I produced 12 children, and they have given me a hard time to raise them . . . One of us had caesarean births three times and almost died during the last operation. So they opted to use family planning to prevent more pregnancies. She would be dead [by now] if she had not done so.

Familial and gender relations

Decision-making concerning which family planning methods to use is contentious due to male resistance, particularly among the Batwa and Benet communities. Despite the promotion of male participation in MNH care and family planning in these communities by health service providers, men's participation is limited to covering some expenses for MNH care. This issue has not only limited pregnant women's preparedness for labor and birth at health facilities but also has encouraged them to seek services from TBAs. When asked about men's role in supporting women, a married Benet man responded,

Men do not support women in our community . . . it is the women's responsibility. When a woman is pregnant, I just wait for 9 months to have my baby . . . So, it is a woman's responsibility to care for her pregnancy and to look for the TBAs to assist with the delivery.

Substance abuse and gender-based violence

Findings for substance abuse and gender-based violence include alcoholism and intimate partner violence.

Alcoholism. Due to the three indigenous groups' ongoing habitat displacements, many men, and sometimes women, particularly among the Batwa and Benet communities, have turned to excessive consumption of alcohol and other substance abuse, such as petrol sniffing, to cope with their frustration. Addiction to alcohol has led to widespread wasting of the meager income earned from casual work and to diminished productivity and has also contributed to food insecurity, gender-based violence, risky sexual behavior, and nonuse of contraceptives, especially condoms.

Intimate partner violence. Husbands beating their wives for using family planning was reported among the Batwa and Benet communities. Despite being beaten, pregnant women continue with their household chores and garden work, and those who do not comply are usually threatened with desertion. These experiences during pregnancy cause immense stress on pregnant women and

sometimes result in miscarriages, as a married woman in the Benet community related:

In this community, a woman has to continue doing casual work even if she is pregnant so that she can feed herself and family since the husband may not help . . . Husbands usually go to drink, return at night, and quarrel. So there is not much care given to pregnant women by husbands in this community . . . Although a pregnant woman is not supposed to do a lot of work, here we carry heavy loads, cultivate very large pieces of land . . . Some women are beaten so hard by husbands and miscarry . . . They usually beat women after consuming alcohol . . . They kick you so hard, even when you are near full term.

Religious beliefs

Results indicate that religious dogma negatively affects modern contraceptive use among the three groups. The Batwa and Ik, who follow the Catholic faith, usually cite Genesis 1:28, “Go multiply and replenish the earth,” to discourage believers from limiting the number of children by using modern contraceptives. Additionally, modern contraceptives are neither promoted nor offered to clients in health facilities founded and operated by the Catholic Church. The Benet, who adhere to the Islamic faith, are opposed to child immunization as well as to modern contraceptive use. Conversely, clergy in some new religions, particularly the “Come Out” Christian sect, discourage believers from using *any* health services. However, the clergy in the Anglican Church of Uganda support the use of family planning services and usually preach it to the believers. These clergy also allow program personnel to carry out sensitization sessions about RMNCAH in church, as one religious leader serving in the Batwa community said:

The Word of God [the Bible] says that we must give birth to children and fill the earth, but the world is now full of the people . . . We have to encourage people to think about producing the number of children they can support.

Misperceptions

Findings related to misperceptions included those related to pregnancy, childbirth, and family planning.

Misperceptions related to pregnancy and childbirth. The study found that the three indigenous communities have limited knowledge about fertility and modern contraception. In addition, whereas TBAs in these communities know some of the symptoms of unsafe pregnancy and birth complications, they have purportedly telepathic superstitions that can deter them and pregnant women from responding appropriately to the signs of unsafe pregnancy and birth. One superstition is the belief that uprooting a particular shrub in the forest helps sense a potential risk in pregnancy or delivery. This belief and its consequences are inferred from the excerpt of the interview with a TBA in the Batwa community, who pointed out that,

I can tell if the delivery is likely to be complicated by uprooting a small shrub. If one or more roots remain in the ground, then I know there is danger. So, I tell the expectant mother to prepare quickly, and we go to the health facility for safe delivery . . . Even my granddaughter has just returned from the health facility.

Such thinking also implies that TBAs are aware that some deliveries are beyond their capacity and therefore identify and send or escort some of the women with labor complications to health facilities for safe delivery.

Misperceptions related to the use and side effects of family planning. The study also found that the three indigenous communities, as noted earlier, have limited knowledge about the various family planning methods and their side effects. Hence, the communities have several misperceptions and fears about modern family planning. Some of the women who terminated family planning use and those who did not intend to use any of the cited modern methods believed that the male condom could remain in the woman's body and that modern contraceptives can cause birth defects, infertility, cancers, loss of libido, and death. These misperceptions are exemplified by the view of a married woman among the Ik, who commented,

Modern methods have side effects; the one which is placed in the arm sometimes moves up to the heart, and it causes death.

Health system challenges in the provision of services

Findings related to health system challenges to service provision included the low prioritization of funding to health facilities accessible to indigenous communities; poor roads, lack of transportation, and distant health infrastructure; inadequate facility infrastructure, medical equipment, medicine, and supplies; insufficient staffing and skills in MNH care; service providers' and community attitudes toward patients from indigenous communities; communication barriers; the lack of affordable services; and information and education about family planning.

Low prioritization of funding to health facilities accessible to indigenous communities. The MoH *Investment Case for Reproductive, Maternal, Newborn, Child and Adolescent Health Sharpened Plan for Uganda 2016/17–2019/20* recommended intensifying RMNCAH interventions—starting with districts with the most marginalized communities and where human resources for health, quality of care, and demand for services are very low as compared with the rest of the population (MoH 2016b). However, there are limited data on RMNCAH and limited investment in health facilities that serve the three indigenous communities to ensure proper planning and access to services.

Poor roads, lack of transportation, and distant health infrastructure. The Batwa, Benet, and Ik live in mountainous and remote areas that lack passable roads, quick means of transportation, and nearby health facilities and other social infrastructure, such as schools. These deficiencies contribute to poor access to and delayed or nonuse of MNH and family planning services. In the three indigenous communities, the majority of nonpregnant clients must walk at least 3 hours to the closest health facility, and for pregnant women it takes even longer to walk to the closest health facility that offers maternity services. Due to the rugged terrain, there are no motorized ambulances, and women sometimes deliver or die before they reach the health facility, as one key informant in Kween district said:

In June last year, two mothers died just after childbirth. One of them delivered at home, but she bled so much that by the time she reached the hospital, it was already too late, and she died. The second one delivered at home and developed high blood pressure afterwards . . . She was brought to the hospital but died upon arrival.

Furthermore, despite the ongoing RMNCAH community outreach initiatives, such as provision of transportation and waiting shelters at Kaabong for Ik and Mutolere hospitals for Batwa pregnant women, the majority of those who live in the most remote and inaccessible areas are not being reached and depend on maternity services offered by TBAs.

Inadequate health facility infrastructure, medical equipment, medicine, and supplies. Public health facilities that serve the three indigenous communities have inadequate essential equipment, medicine, and supplies for RMNCAH as well as accommodations for patients and health workers. Notably in short supply are suction machines, oxygen equipment, HIV test kits, scanning machines, incubators, theater equipment, family planning items, resuscitation equipment, blood banks, maternity beds and mattresses, and emergency medicine for the maternity section.

In addition, some health facilities lack a separate maternity ward, neonatal unit, or family planning clinic. Therefore, all patients are accommodated and cared for on one ward, which not only infringes on the women's privacy but also deters some from seeking the required services. For example, because of the lack of physical space, Usake HC II in Kaabong district keeps mothers for only 6 hours after delivery instead of the WHO-recommended 24 hours to make room for other mothers (WHO 2015). Hence, the discharged women often miss some of the essential PNC services. Further, the lack of accommodation for staff at some health facilities harms the morale of health workers and impedes the timely delivery of services.

Insufficient staffing and skills in MNH care. None of the health facilities that serve the three indigenous groups have a sufficient number of health workers, and some workers lack the essential skills in MNH care and the provision of some family planning methods. This issue lowers the quality of care services offered. The managers of health facilities that serve the Benet and Ik specifically reported (a) shortages in critical staff, such as midwives and anesthetists; (b) excessive staff workload; (c) long client waiting times for service; (d) limited consultation time with patients, which sometimes results in misdiagnosis; and (e) referral of patients with complications that could have been handled if the appropriate staff had been available. These impacts not only increase the costs and health risks to the patients but also pushes them to TBAs for cheaper care, as one district leader in Kaabong reported:

In some health facilities, nursing assistants are in charge and prescribe treatments for patients . . . This predisposes patients to risks.

This observation comports with the views of one health officer in Kisoro district, who said,

Due to the long waiting times at public facilities, patients that cannot pay for private services give up altogether.

Another district leader in Kisoro district observed,

The Batwa do not go to the health center once they learn that someone died there due to lack of attention or negligence . . . They just stay at home and use their local herbs, . . . and whenever they are referred to a health facility without giving them money for transport and upkeep, they will stay at home.

In addition to the inadequate staffing and skilled staff required to handle MNH complications, the dilapidated state of health facilities was reported to have contributed to neonatal and maternal deaths, discouraging many pregnant women in the three groups from seeking care. One TBA in the Ik community commented on the poor state of one of the HCs,

By the way, why don't you tell the government to improve the services at Usake Health Centre? Mchewww! [Jeers] . . . have you ever reached there? If you go there, one of these days, you will see what I am saying and even get disgusted.

Service providers' attitudes toward patients from indigenous communities. Respondents from all three groups reported feeling discriminated against by health workers. All the interviewed women in these communities reported that some health workers, especially nurses or midwives, detest them. They neglect and abuse the clients whenever they seek services, and this attitude not only makes the women uncomfortable with openly communicating their health concerns but also deters them from returning for subsequent care. One unmarried Mutwa woman who was interviewed pointed out that

Nurses are very rude to us whenever we go to the hospital for services . . . The insults are so much so that we feel out of place and ashamed. Some of us at times go to the hospital without bathing and emit repugnant odors, but instead of teaching us personal hygiene, we are just abused by the nurses.

This finding was corroborated by a married Mutwa man, who observed,

In the nearby hospital, there was a nurse who used to refuse to attend to the Batwa . . . She would first dodge them even if they are in pain. After being reported, she was given a warning. Thereafter she started attending to us . . . This gave some of us the confidence to go for care in the hospital.

Discriminatory attitude of neighboring communities toward indigenous persons. Furthermore, neighboring communities consider the indigenous persons primitive and inferior and rarely interact with them due to their traditional lifestyle and appearance. The discriminatory attitude of nonindigenous people has not only created suspicion among the indigenous people but also has discouraged them from obtaining MNH care from the health facilities that serve other communities, as one key informant in Kisoro district pointed out,

The Batwa are mistreated and despised in the health facility. So, the women often tell the relatives their experiences at the health facility, and these in turn discourage everyone else from going to health facilities, saying "they will kill your children."

Communication barriers between service providers and clients. Most of the health workers in health facilities that serve the three indigenous groups are not able to speak the local languages. This issue not only limits medical consultations but also deters use of the relevant services, particularly by the Ik.

Affordability of services. Affordability is a major barrier to the use of services. Although MNH care and family planning services are free at public health facilities, they do not provide transport, food needed during admission,

prescription medicine and other supplies, mama kits, clothing for the mother and newborn, or additional requirements. The high cost of these essentials hinders many Batwa, Benet, and Ik pregnant women from accessing appropriate MNH care and family planning, as one maternity in-charge for a health facility serving the Batwa said:

Many Batwa do not come to the health facility, because they cannot afford the costs . . . A maternity waiting shelter was constructed, but few of them use it due to the high costs of transport.

Information and education about family planning services. This study found that counseling is provided to pregnant women in the three indigenous communities before receipt of the preferred family planning method. Several indigenous married women who received ANC reported that they were informed about the various family planning methods, including their importance, side effects, and how to use them, before decision-making. This finding was substantiated in an interview by one of the married Mutwa women, who observed,

Most of us are poor and do not have enough money to buy clothes and food and pay school fees for our children. So whenever we visit the health center, health workers usually tell us that we need family planning to have the number of children we can manage . . . They advise us to have an interval of 4–5 years. I discussed with my husband, and we decided to wait until our baby reaches 5 years.

However, there are instances where some indigenous women are given some family planning methods, such as tubal ligation, without their knowledge or without involvement and consent of their spouses. This issue not only causes domestic conflicts but also discourages other women from using family planning services, as one married Mutwa man said:

My wife has had three caesarean sections . . . The three children I have now are old. [After] the last one, I would be having two or three more children following her, but my wife has not conceived. I think her uterus was overturned [she had a tubal ligation] during the third caesarean section.

In addition, several married women among the three indigenous communities reported that the time allocated to family planning during ANC talks was too short to enable them to understand the messages, some health workers lacked technical knowledge in providing long-acting methods, and health facilities often lacked the long-term commodities and essential staff and equipment to administer them. These factors discourage the uptake of some family planning services by the three groups, especially the Ik and Batwa.

4. Summary of findings

The high maternal and newborn deaths in indigenous communities are attributed to (a) sociocultural barriers, (b) delays in seeking health care at the health facilities, (c) patient perceptions of the poor quality of service available at facilities, (d) inaccessibility of health services for both financial and logistical reasons, and (e) fear of discrimination by health care providers and poor patient

support. In addition, given the remote nature and harsh terrain, most communities go to HC II facilities for service rather than to the HC IV facilities. This issue compounds MNH complications in this population, given the limited capacity of health workers and the package of services provided at this level of the health care delivery system. These results are consistent with those of earlier studies in developing countries, which found that health system challenges, such as lack of appropriate services and negative attitudes of service providers, deter indigenous people from accessing and using services offered in health facilities in developing countries (Islam, Islam, and Banowary 2009; Larkins and Page 2015; Terborgh et al. 1995).

Barriers to choosing family planning include inadequate knowledge about the various methods; fear of side effects; preference for child spacing instead of birth control; the desire for large numbers of children to prevent societal extinction; and the belief, especially among followers of the Catholic and Islamic faiths, that those who use family planning methods are promiscuous. Furthermore, men wield significant control and influence in family planning decisions and tend to resist its use. These findings are consistent with those of earlier studies, which found that fear of family planning side effects, the desire for many children (Crivelli et al. 2013; Ohenjo et al. 2006; UNFPA 2018; Stephens et al. 2005, 2006; WHO 2018a, 2018b), and inadequate education and counseling on the rationale and socioeconomic benefits of family planning all contribute to the low uptake of contraceptives among indigenous people (Gray 1987; Ruma 2016; Terborgh et al. 1995).

In addition to the direct health-specific factors that impact MNH service delivery and utilization, the indigenous communities also face socioeconomic disparities in access to services that further impact their overall health outcomes. These disparities include food insecurity, poverty, low levels of education, conflicts and instability, and political marginalization. Tangible progress in addressing the MNH outcomes in these communities, therefore, hinge on a broader and more comprehensive approach to socioeconomic development.

The influence of cultural beliefs and practices, as well as male and female roles, is pervasive and ingrained. Efforts to address these influences and pressures, therefore, will require dedicated investments in community sensitization, with strong emphasis on building trust and respect from the indigenous communities—over the long term.

In addition, although the government, in partnership with development agencies and CSOs, has put in place various interventions to address inequities in the three indigenous groups, the interventions do not comprehensively address their MNH care and family planning service needs. The interventions are fragmented and are mainly facility or institution based rather than community based; therefore, the impact on their socioeconomic situation and MNH well-being is low.

Overall, the limited availability of reliable MNH and family planning data for each of the indigenous groups—at the district level—is a binding constraint to evidence-based programming. Further, the absence of district-level statistics on various key indicators (Smylie and Lana 2014; Stephens et al. 2006) obscures the gravity of the disparities faced by these communities vis-à-vis the national population and also impacts the ability to effectively advocate for service delivery improvements.

RECOMMENDATIONS

To improve the situation and address barriers to MNH among Uganda's indigenous groups—including the Batwa, Benet, and Ik—the indigenous groups, the MoH, in partnership with the MoGLSD, the MoLG, and respective local governments and CSOs, including religious and cultural institutions, should, in the short term, do the following:

- Carry out sustained periodic community education and outreach services, sensitizing communities to harmful cultural practices and to available RMNCAH services and the value of obtaining them at health facilities. This work should be complemented with use of community-based events and mobile telephones for health education, starting with young people, and with improvements in roads facilitating access to RMNCAH service delivery points in the community.
- Initiate partnerships with community-based organizations and cultural, religious, and other civic leaders to ensure sustained participation of the indigenous communities in RMNCAH planning and management. More specifically, partner with the community-based organizations of the three indigenous groups—such as the Benet Lobby Group, the Batwa Development Program and the UOBDU, and the Ik Agenda for Development—to mobilize community members toward planning and implementation of RMNCAH interventions in the community.
- Upgrade to the HC IV level those health facilities that serve indigenous communities, equip them with the relevant staff and ensure adequate accommodation and remuneration for them, and introduce maternity waiting homes in the three indigenous communities to reduce delays in accessing appropriate MNH care and family planning services.
- Train and recruit health care workers from the indigenous groups to provide RMNCAH services in their communities.
- Adopt a multisectoral approach to RMNCAH in these communities that take into consideration their socioeconomic circumstances, including displacement and disruption of their habitat and livelihoods by the government and neighboring communities, lack of roads and means of transportation, and lack of nearby essential social infrastructure for health and education.

In addition, the MoH, in collaboration with development partners, should engage the UBOS to collect comprehensive statistical data on various indicators related to RMNCAH, especially neonatal and maternal morbidity and mortality among the indigenous groups in Uganda. This research will enable evidence-based advocacy as well as planning and implementation of MNH and family planning interventions that are responsive to their needs.

REFERENCES

ACHPR and IWGIA (African Commission on Human and Peoples' Rights and International Working Group for Indigenous Affairs). 2006. *Report of the African Commission's Working Group of Experts on Indigenous Populations/Communities*. Banjul, The Gambia: ACHPR; Copenhagen: IWGIA. https://www.iwgia.org/images/publications/African_Commission_book.pdf.

- ACHPR. 2009. *Report of the African Commission's Working Group on Indigenous Populations /Communities: Research and Information Visit to the Republic of Uganda, 14–17, 24–29 July 2006*. Banjul, The Gambia: ACHPR; Copenhagen: IWGIA. <https://www.iwgia.org/en/resources/publications/305-books/2535-mission-to-the-republic-ofuganda-report-from-the-african-commissions-working-group-on-indigenous-populations-communities-july-2006.html>.
- Awor, P., M. Nabiryo, and L. Manderson. 2020. "Innovations in Maternal and Child Health: Case Studies from Uganda." *Infectious Diseases of Poverty* 9: 1–8.
- Berger D. N. 2019. *The Indigenous World 2019*. Copenhagen: International Work Group for Indigenous Affairs.
- Braun, V., and V. Clarke. 2006. "Using Thematic Analysis in Psychology." *Qualitative Research in Psychology* 3 (2): 77–101.
- Crivelli, V., J. Hautecouer, C. Hutchison, A. Llamas, and C. Stephens. 2013. "Improving Indigenous Maternal and Child Health." In *State of the World's Minorities and Indigenous Peoples 2013: Events of 2012*, edited by Beth Walker. London: Minority Rights Group International. <https://minorityrights.org/publications/state-of-the-worlds-minorities-and-indigenous-peoples-2013-september-2013/>.
- Gray, A. 1987. "Family Planning in Aboriginal Communities." *Community Health Studies* 11 (3): 165–75.
- Harper, S. 2012. "Social Determinants of Health for Uganda's Indigenous Batwa Population." Africa Portal, Backgrounder no. 32. <https://www.africaportal.org/publications/social-determinants-of-health-for-ugandas-indigenous-batwa-population>.
- Hatry, H. P. 2006. *Performance Measurement: Getting Results*. 2nd ed. Washington, DC: Urban Institute Press; Lanham, MD: Rowman & Littlefield Publishers.
- Islam, M. R., M. A. Islam, and B. Banowary. 2009. "Determinants of Exposure to Mass Media Family Planning Messages among Indigenous People in Bangladesh: A Study on the Garo." *Journal of Biosocial Science* 41 (2): 221.
- Kwagala, B. 2013. "Birthing Choices among the Sabinu of Uganda." *Culture, Health & Sexuality* 15 (S3): S401–14.
- Larkins, S. L., and P. Page. 2015. "Access to Contraception for Remote Aboriginal and Torres Strait Islander Women: Necessary but Not Sufficient." *Sex Health* 12: 231–39.
- Manu, A., S. Arifeen, J. Williams, E. Mwasanya, N. Zaka, B. A. Plowman, and K. Dickson. 2018. "Assessment of Facility Readiness for Implementing the WHO/UNICEF Standards for Improving Quality of Maternal and Newborn Care in Health Facilities—Experiences from UNICEF's Implementation in Three Countries of South Asia and Sub-Saharan Africa." *BMC Health Services Research* 18 (1). doi.org/10.1186/s12913-018-3334-0.
- Marini, J. 2018. "Caring for Maternal Health Needs in Indigenous Communities with Local Midwives." Women Deliver, New York. <https://womendeliver.org/2018/maternal-health-needs-indigenous-communities-local-midwives/>.
- MEASURE Evaluation. 2019. *Overview of FP and Reproductive Health Indicators Database: Conceptual Framework*. This framework document is no longer available. A successor by Data for Impact, University of North Carolina at Chapel Hill, can be found at <https://www.data4impactproject.org/prh/overview/conceptual-framework/>.
- MoGLSD (Ministry of Gender, Labour and Social Development). 2017. "Uganda Management of Social Risk and Gender Based Violence Prevention and Response Project: The 5-Year Indigenous Minority Peoples Plan (IMPP). The Batwa–Kisoro District." Kampala: MoGLSD.
- MoH (Ministry of Health). 2016a. "Indigenous People's Plan (IPP): Uganda Reproductive, Maternal, Neonatal and Child Health Improvement Project: Final Report." Kampala: MoH.
- MoH (Ministry of Health). 2016b. *Investment Case for Reproductive, Maternal, Newborn, Child and Adolescent Health Sharpened Plan for Uganda 2016/17–2019/20*. Kampala: MoH. <https://www.health.go.ug/cause/reproductive-maternal-newborn-child-and-adolescent-sharpened-plan-for-uganda-2016-17-2019-20/>.
- Mukasa, N. 2012. "The Batwa Indigenous People in Uganda and Their Detachment from Forest Livelihood: Land Eviction and Social Plight." *Anuario De Acción Humanitaria Y Derechos Humanos: Yearbook of Humanitarian Action and Human Rights* 10: 71–84.

- Mukasa, S., and P. Byansi. 2019. "The Sexual and Reproductive Health Needs of Hard to Reach Groups in Uganda." *Sexually Transmitted Infections* 95 (S1). doi:10.1136/sextrans-2019-sti.440.
- Mwesigye, S. 2011. "The Bleak Picture of Kapchorwa's Maternal Health." *Observer*, May 25, 2011. <https://www.observer.ug/news-headlines/13575-bleak-picture-of-kapchorwa-maternal-health>.
- Nandi, M., J. Moore, M. Colom, A. D. R. G. Quezada, A. Chary, and K. Austad. 2020. "Insights into Provider Bias in FP from a Novel Shared Decision Making Based Counseling Initiative in Rural, Indigenous Guatemala." *Global Health, Science and Practice* 8 (1): 10–17. doi:10.9745/GHSP-D-19-00377.
- Nyatanyi, T. 2020. "Understanding Barriers to Accessing Healthcare among the Most Deprived of the Deprived—The Case of the Batwa in Southwestern Uganda." M.A. thesis, Harvard Medical School. <https://nrs.harvard.edu/URN-3:HUL.INSTREPOS:37364902>.
- Ohenjo, N. O., R. Willis, D. Jackson, C. Nettleton, K. Good, and B. Mugarura. 2006. "Health of Indigenous People in Africa." *The Lancet* 367 (9526): 1937–46.
- Ramsay, K. 2010. "Uncounted: The Hidden Lives of Batwa Women." Minority Rights Group International, London. https://archive.crin.org/en/docs/MRG_Brief_Batwa_women_2010ENG-1.pdf.
- Republic of Uganda. 1995. Constitution of the Republic of Uganda. Republic of Uganda. 2007. Equal Opportunities Act. <http://www.eoc.go.ug/sites/equalopportunities/files/publications/equal-opportunities-commission-act-2007.pdf>.
- Ruma, S. C. A. S. 2016. "Knowledge of Contraception among Indigenous Peoples of Manipur Coming for Abortion in a Tertiary Hospital." *Journal of Dental and Medical Sciences* 15 (10): 27–29.
- Smylie, J., and D. Lana. 2014. "Strong Women, Strong Nations: Aboriginal Maternal Health in British Columbia." National Collaborating Centre for Aboriginal Health, Prince George, British Columbia. <https://www.nccih.ca/docs/health/FS-AboriginalMaternalHealth-Smylie-EN.pdf>.
- Stephens, C., C. Nettleton, J. Porter, R. Willis, and S. Clark. 2005. "Indigenous Peoples' Health—Why Are They Behind Everyone, Everywhere?" *The Lancet* 366 (9479): 10–13.
- Stephens, C., J. Porter, C. Nettleton, and R. Willis. 2006. "Disappearing, Displaced, and Undervalued: A Call to Action for Indigenous Health Worldwide." *The Lancet* 367 (9527): 2019–28.
- Terborgh, A., J. E. Rosen, R. S. Gálvez, W. Terceros, J. T. Bertrand, and S. E. Bull. 1995. "FP Among Indigenous Populations in Latin America." *International Family Planning Perspectives* 21: 143–49 and 66.
- UBOS (Uganda Bureau of Statistics). 2016. *The National Population and Housing Census 2014: Main Report*. Kampala: UBOS. https://www.ubos.org/wp-content/uploads/publications/03_20182014_National_Census_Main_Report.pdf
- UBOS and ICF. 2018. *Uganda Demographic and Health Survey 2016*. Kampala: UBOS; Rockville, MD: ICF.
- UNCDP. 2018. "Leaving No One Behind." UNCDP Committee for Development Policy. https://sustainabledevelopment.un.org/content/documents/2754713_July_PM_2_Leaving_no_one_behind_Summary_from_UN_Committee_for_Development_Policy.pdf.
- UNFPA (United Nations Population Fund). 2018. "Indigenous Women's Maternal Health and Maternal Mortality." Fact sheet. <https://www.unfpa.org/resources/indigenous-womens-maternal-health-and-maternal-mortality>.
- WHO (World Health Organization). 2015. "Postnatal Care for Mothers and Newborns: Highlights from the World Health Organization 2013." <https://www.who.int/docs/default-source/mca-documents/nbh/brief-postnatal-care-for-mothers-and-newborns-highlights-from-the-who-2013-guidelines.pdf>.
- WHO (World Health Organization). 2018a. "Family Planning / Contraception Methods." Fact sheet. <https://www.who.int/news-room/fact-sheets/detail/family-planning-contraception>.

WHO (World Health Organization). 2018b. "Maternal Mortality." Fact sheet. <https://www.who.int/news-room/fact-sheets/detail/maternal-mortality>.

WHO (World Health Organization). 2019a. "Maternal and Newborn Health." <http://www.euro.who.int/en/health-topics/Life-stages/maternal-and-newborn-health/maternal-and-newborn-health>.

WHO (World Health Organization). 2019b. "New Global Targets to Prevent Maternal Deaths." <https://www.who.int/news/item/05-10-2021-new-global-targets-to-prevent-maternal-deaths>.

6 Factors Influencing the Use of Modern Family Planning Methods among Sexually Active Individuals in Uganda

XAVIER NSABAGASANI

EXECUTIVE SUMMARY

This study examined the factors that enable or hinder the use of modern family planning (FP) methods in Uganda, including gender, culture, religion, and human rights. The study sought to provide the evidence stakeholders can use to devise suitable policies and strategies for enhancing modern FP use among sexually active individuals.

Study objectives

The study's objectives were as follows:

1. To assess the contextual, sociocultural, religious, gender, and human rights factors that can explain modern FP use among sexually active women and men, including adolescents, across Uganda.
2. To examine the sociocultural, religious, gender, and human rights factors that can explain the nonuse of FP among these populations.
3. To identify ways to improve the use of modern FP methods by these populations.

Methodology

This cross-sectional study mainly used qualitative methods—key informant interviews (KIIs) and in-depth interviews (IDIs), reviews of relevant literature and documents, and focus group discussions (FGDs) and consensus panels—to obtain data on modern FP services use. Sources included policy makers and program managers in government ministries and staff working with national-level civil society organizations (CSOs), international donors, and implementing partners. In addition, purposively selected women; adolescents and their caregivers; health care providers; and religious, cultural, and other civic leaders at the district level provided information. The study was conducted in 11 districts that represent the key sociocultural groupings in Uganda: Arua for Lugbara, Bududa for Bagisu, Gulu for Luo (Acholi), Iganga for Bugosa, Kabale for Banyankole-Bakiga, Kabarole for Batoro, Kampala for Baganda and other

tribes, Kasese for BaKonzo, Kotido for Karamajong, Soroti for Iteso, and Wakiso for Baganda and other tribes. In Kampala, only KIIs were conducted and focused on national-level informants, implementing partners, and donor groups. Data were transcribed into words, transferred into NVivo computer software, and analyzed by predetermined and emerging themes.

Key findings

Key findings include the factors for promoting and explaining the use and non-use of modern FP methods, as well as for recommendations.

Factors promoting the use of modern FP methods

Both supply-side and demand-side factors can influence FP use. Supply-side factors included the availability of financial support from government and various international health development partners to train service providers and provide free FP commodities, especially in public health facilities. Another key factor was the sensitization of women who seek FP and other health services, such as HIV/AIDS care or immunizations, to available contraception methods.

Demand-side factors were mainly sociocultural and socioeconomic and included the urbanization of a growing labor market in which employers do not provide maternity or paternity leave and a lack of reliable childcare services, conditions that can encourage FP use. The economic hardship resulting from unemployment or underemployment, especially in urban areas, also supports using FP to regulate the number of children. Among women, the desire to remain physically strong and attractive—whether the woman is employed, single and sexually active, cohabiting, or in an unstable marital relationship—contributes to FP choices.

Factors explaining the nonuse of modern FP methods

Four factors can help explain women's nonuse of FP: (a) service delivery constraints, (b) sociocultural and gender concerns, (c) religious beliefs, and (d) human rights concerns.

- *Service delivery constraints* included the regular stock-out of modern contraception methods; the high cost of transport and services, especially for implant removal in private health facilities; and inadequate client assessment and counseling about appropriate modern FP methods and their side effects.
- *Sociocultural and gender concerns* included parents' desire to have many children to expand their clans or numerically dominate other ethnicities, to benefit from the bride price of daughters as a source of wealth, or to outcompete cowives to inherit a larger share of the family's property in the future. Also reported were disinterest in or disagreements over FP use among spouses, the periodic presence of the spouse, and inadequate involvement of male spouses in decision-making processes before enrollment in FP services.
- *Side effects* included users experiencing reduced sexual desire; excessive bleeding during menstruation; barrenness or infertility; nausea, headaches, or genital itching and pain; and excessive weight gain or loss.
- *Religious considerations* included beliefs that modern contraception use not only promotes immorality among single and married people but also

threatens God's creation, the sanctity of marriage, and the continuity of humanity, all of which should be fulfilled through procreation.

- *Human rights aspects* included disharmony between the laws and policies regarding the age of sexual consent and the right of access to FP by adolescents; the provision of modern contraception to adolescents by health workers, which has led to objections by parents and religious or cultural leaders; the contradictions between the right of women to seek FP and choose a method without interference and men's perceived right to know the methods being used by their partners, which not only can create partner mistrust and violence but also can hinder consistent FP use; the patriarchal social structure and family expectations of married women to produce as many children as possible regardless of ability to care for them, which violates their right to choose the number of children to produce; and the continued abuse of the rights of vulnerable women by their partners linked to FP use and the unsatisfactory responses of the police and courts of law to family and procreation issues.

Recommendations

The GoU should harmonize legal and policy frameworks to address inconsistencies in FP access in Uganda, including the following recommendations from this study:

- The MoH, partnering with the Ministry of Justice and Constitutional Affairs (MoJCA); the Ministry of Gender, Labour and Social Development (MoGLSD); and the Ministry of Education and Sports (MoES), can develop relevant guidelines; tools; and information, education, and communication (IEC) materials on (a) FP rights; (b) the sociocultural barriers to FP use; (c) the facts, misperceptions, and management of FP side effects; (d) gender rights and male participation in FP services and use; and (e) the socioeconomic and health benefits of modern contraception. These materials should be disseminated to all stakeholders.
- Identify all public health laws, policies, and sociocultural norms related to the age of sexual consent and access to modern FP services that contradict the international and regional conventions on sexual reproductive health/family planning (SRH/FP) rights, to which Uganda is a signatory, and then lobby Parliament to debate and harmonize them.
- Review all school and adolescent health policies, particularly the *National School Health Policy* (MoH 2008) and the *National Adolescent Health Policy-Strategy* (MoH 2011), to clarify the ages for and circumstances of access to modern FP services and other reproductive health rights for sexually active adolescents, and then disseminate these to various stakeholders.
- Mainstream FP matters into all relevant ongoing national-sector programs for adolescents and youth, such as the School Health Education and Youth Livelihood Programs, to leverage existing resources to enhance FP use.

In addition, the MoH should improve the availability of different modern FP methods, as well as support approaches for effective use of traditional FP methods, to improve the overall success of contraception, by doing the following:

- Strengthen partnerships with religious and cultural leaders to develop and disseminate accurate, culturally appropriate, and practical information on

the facts and misperceptions about FP, as well as on its socioeconomic and health benefits.

- Spearhead the mainstreaming of FP aspects into other relevant national policies and programs, such as the livelihood programs for young women and out-of-school adolescents, to harness the country’s demographic dividends in line with its third National Development Plan.
- Lobby the Ministry of Finance, Planning and Economic Development to increase funding for modern and traditional FP services and to ensure that program managers and district local government leaders prioritize and implement them.

INTRODUCTION

Uganda has a population of 41.6 million with an annual population growth rate of 3 percent (Uganda Bureau of Statistics [UBOS] 2020). This high rate is driven by the country’s high total fertility rate of 5.4 children per woman (UBOS and ICF 2018), a challenge that has been recognized and addressed in national strategic documents, including the National Development Plan III (NDP III) 2020/21–2024/25 (National Planning Authority 2020) and the Health Sector Strategic Plan III (HSSP III) 2020/21–2024/25 (MoH 2020b).

Furthermore, the rate of FP use among married women ages 15–49 is 39 percent and is only 35 percent for modern methods, and the rates of unmet need for contraceptives are 28 percent among married women and 32 percent among sexually active unmarried women (UBOS and ICF 2017). Among the sociocultural subregions in Uganda, Karamoja has the lowest rate of contraception use at 7 percent, while Bugisu and Kigezi have the highest rates at 43 percent each (UBOS and ICF 2017).

To further accelerate the achievement of these targets by 2020, FP was prioritized as a key intervention area in the Reproductive, Maternal, Newborn, Child, and Adolescent Health (RMNCAH) Sharpened Plan 2016/17–2019/20 (MoH 2016b). This plan recommended a human rights approach in the delivery of FP services—the right of individuals and couples to freely and responsibly determine the number of children they desire and when to produce them.

Study rationale

Despite the universal (99 percent) knowledge of at least one modern FP method among women and men (UBOS and ICF 2017) and the existing investments in RMNCAH interventions, use of modern FP services in Uganda has not reached the set targets in the Health Sector Development Plan for 2015/16–2019/20 (MoH 2020a). Some studies have examined gender and sociocultural factors influencing the use of FP (Kabagenyi, Habaasa, and Rutaremwa 2016; Kabagenyi et al. 2014a, 2014b, 2016; Zimmerman et al. 2021). However, these studies did not provide an in-depth understanding of the sociocultural, religious, gender, and human rights perspectives influencing the use or nonuse of modern FP methods or services across the country. This knowledge gap begets two key questions that merit research: (a) What sociocultural, religious, gender, and human rights factors explain the use or nonuse of modern FP methods among married and sexually active unmarried individuals in Uganda? and (b) What strategies are needed to improve the use of modern FP methods among these individuals? Therefore, this study examined these questions to provide evidence that

stakeholders can utilize to devise suitable policies and strategies for enhancing modern FP use among sexually active individuals across the country.

Research objectives

The study objectives were as follows:

1. To assess the contextual, sociocultural, religious, gender, and human rights factors that can explain FP use among sexually active women and men, including adolescents, across Uganda.
2. To examine the sociocultural, religious, gender, and human rights factors that can explain FP nonuse among these populations.
3. To identify ways to improve modern FP use in these populations.

Definition of key terms

This study uses the following definitions:

- *FP* is regulating the number of children to produce and determining the intervals between their births using a range of modern or traditional contraception methods.
- *Modern contraception methods* include oral contraceptive pills, implants, injectables, the contraceptive patch, the vaginal ring, intrauterine devices (IUDs), female and male condoms, female and male sterilization, vaginal barrier methods (including the diaphragm, cervical cap, and spermicidal agents), the lactational amenorrhea method (LAM), emergency contraception pills, the standard days method, the basal body temperature method, the two-day method, and the symptothermal method (World Health Organization 2023).
- *Sociocultural factors* are the social, economic, religious, and cultural circumstances that can affect FP use in society (Ball and Crawford 2010).
- *Gender rights* entail the provision of equal responsibilities, opportunities, and treatment to individuals regardless of gender.
- *Reproductive and FP rights* are treated as part of basic human rights in this study, but recently they have been used to refer to the individual freedom to decide when and how to use FP.
- *FP as a human right* entails the availability of laws, policies, and programs to address quality, inequality, and other human rights concerns of modern FP, including the empowerment of individuals, particularly women, to realize and demand their rights (Hardee et al. 2014).
- *Married men and women* are couples joined as husband and wife by a legally recognized religious, civil, or traditional institution.
- *Cohabiting* is living together in a long-term intimate relationship not sanctioned by a legally recognized religious, civil, or traditional institution.

Conceptual underpinnings

This study was guided by the United Nations Population Fund's (UNFPA's) conceptual underpinnings for analyzing contextual factors that can enable or hinder access to modern FP from a human rights perspective. These ideas include emphasizing gender equity and equality, targeting marginalized groups, engaging duty bearers and rights holders, and being sensitive to culture and religious values (UNFPA, 2006).

METHODOLOGY

This section discusses the study's design and population; data collection methods, tools, and procedures; data management and analysis; quality control and data triangulation; ethical considerations and assurance; and research limitations.

Study design

This cross-sectional study used qualitative methods (KIIs, IDIs, FGDs, and consensus panels) to collect data from modern FP services users, providers, and policy makers, as well as a review of the relevant literature.

Research districts were selected purposively using a strategy of maximum variation to ensure diverse views (Patton 2002). First, all districts in Uganda were categorized according to 10 main cultural groupings: Acholi, Baganda, Bagisu, BaKongo, Bakiga, Batoro, Busoga, Iteso, Karamajong, and Lugbara. One district was then chosen from each sociocultural area based on the implementation of the results-based financing (RBF) program under the Uganda Reproductive Maternal Child Health Improvement Project (URMCHIP) and its performance in the national league tables for RMNCAH indicators. The 11 selected districts were Arua, Bududa, Gulu, Iganga, Kabale, Kabarole, Kampala, Kasese, Kotido, Soroti, and Wakiso. The Kampala district was included because it is the locality for all key national-level research participants.

In each district, one subcounty was selected that had a well-functioning health facility and the desired research participants—cultural and religious leaders and users and nonusers of modern FP. An adjacent subcounty was added in instances in which some eligible research participants were not available in the initially selected subcounty.

Study population

Research participants included RMNCAH policy makers and managers of FP programs in key national-level government ministries, development support agencies, and CSOs. District-level participants included health team members, political leaders, administration and finance officers, health facility managers, and service providers. From the general population, married and unmarried sexually active female and male individuals of diverse age groups and FP experiences participated.

National- and district-level research participants were selected by their roles in policy making, planning, financing, implementation, or supervision of reproductive health or FP services. Their names were obtained from the MoH and other agencies that support FP services, and each participant was contacted directly for interviews. District health officers (DHOs) were contacted by telephone and requested to provide the names of and contact information for the SRH/FP officers, health facility in-charges and service providers, and leaders of religious and cultural institutions. Service providers were identified with the help of health facility managers based on their years of experience in FP service delivery. Sexually active individuals with the desired SRH/FP experiences were identified with the help of health services providers and Village Health Teams (VHTs) members and individually

TABLE 6.1 Study research participants, by data collection method and sample type

RESEARCH PARTICIPANTS	METHOD	KEY INFORMANTS	SAMPLE TYPE		SAMPLE SIZE
			FP USERS	FP NONUSERS	
Unmarried women ages 15–45 (postpartum with infants of ≤2 months)	IDIs	n.a.	6	6	12
Married women ages 15–45 (postpartum with infants of ≤2 months)	IDIs	n.a.	11	11	22
Sexually active women with disabilities	IDIs	n.a.	7	7	14
Sexually active men with disabilities	IDIs	n.a.	7	5	12
Unmarried postpartum fathers ages >15 with infants ≤2 months	FGDs	n.a.	5	5	10
Sexually active married men ages >30	FGDs	n.a.	5	5	10
Sexually active married men ages 15–25	FGDs	n.a.	5	5	10
Sexually active married women ages 25–45	FGDs	n.a.	5	5	10
Sexually active married women ages 15–25	FGDs	n.a.	5	5	10
Cohabiting women ages 15–25	FGDs	n.a.	5	5	10
Cohabiting women ages 25–45	FGDs	n.a.	6	4	10
Cohabiting men ages >15	FGDs	n.a.	5	5	10
Health workers providing FP services	KIIs	11	n.a.	n.a.	11
Cultural leaders	KIIs	08		n.a.	08
Religious leaders	KIIs	60		n.a.	60
National-level participants	KIIs	16		n.a.	16
Consensus panel participants		9		n.a.	9

Source: This table is original to this publication.

Note: FGDs = focus group discussions; FP = family planning; IDIs = in-depth interviews; KIIs = key informant interviews; n.a. = not applicable.

contacted for IDIs and FGDs. Table 6.1 describes the study groups and participant sample sizes.

Data collection methods, tools, and procedures

Data were collected from February 1 to March 31, 2021, using the methods outlined as follows.

Literature review

Relevant literature published online and legal, policy, program, and service delivery documents deposited in organizational websites were retrieved and searched for information on the provision and use of FP among different population groups in Uganda and elsewhere in the world. In addition, other reports were obtained from individual researchers and managers of FP services in the relevant development support agencies, government ministries, CSOs, district local governments (DLGs), and health facilities. The reviewed literature and documents are specified in the References list at the end of this chapter.

IDIs

A total of 60 IDIs were conducted with postpartum mothers and with men and women with disabilities ages 15–49 to obtain information about their knowledge, perspectives, factors, and suggestions regarding the use of modern FP methods.

KIIs

KIIs were conducted with 95 respondents, including policy makers, managers, leaders of religious or cultural institutions, and other FP program stakeholders at the national, district, and health facility levels. These interviews were conducted to solicit their perspectives on and experiences with FP services, specifically the policy framework, human rights aspects, service delivery, and factors influencing demand and practices. The number of informants in each research district was determined using the principle of data saturation; additional participants were recruited only for gaps in the collected data or omissions of some research participants thought to have crucial information for the study.

FGDs

A total of 80 FGDs were held with sexually active men and women to explore their knowledge, attitudes, and perceptions about FP as a human rights issue, as well as the key barriers to and enablers for use. FP services users were identified from health facility records, and VHTs helped identify nonusers from the communities close to the selected health facilities. Each FGD comprised 6 participants and was conducted by telephone.

Consensus panels

A total of 9 consensus panels were held with district-level stakeholders in FP services delivery to discuss and validate preliminary field findings and recommendations for improving both FP use and reproductive health in general. Each panel discussion consisted of 6 officers from relevant district-level departments, including the District Health Team, political leaders, and general administration and finance officers. The proceedings were audio-recorded and later transcribed by the research assistants. All panel discussions were held virtually using the Zoom online meeting platform and moderated by the district-based research supervisors. Due to network challenges, the use of video cameras was discouraged during the Zoom meetings.

Data collection procedures

KIIs, IDIs, FGDs, and consensus panel guides were developed, pretested, and used to collect data from the research participants. All qualitative data collection processes were conducted virtually by telephone and Zoom to avoid the risk of COVID-19 infection. First, district-based research supervisors and assistants were recruited in each study district and trained how to conduct interviews and FGDs by telephone and Zoom. Afterward, the principal investigator obtained the names and telephone numbers of SRH/FP program officers in the relevant development agencies, government ministries, CSOs, and DLGs from the health specialist in the World Bank country office and the commissioner for reproductive and child health in the MoH. Each national-level SRH/FP program officer was called, briefed about the study, and requested to suggest a convenient date and time to be interviewed, on which they were called again, explained the verbal informed-consent process, and interviewed by the principal investigator and two research assistants in English.

Similarly, the health officer of each study district was called and requested to provide the names of and contact information for the SRH/FP local officers, health facility in-charges and service providers, and relevant leaders in key religious and cultural institutions. These participants were called, briefed about the study, explained the verbal informed-consent process, and

interviewed by district-based supervisors and research assistants either in English or the local language.

In addition, the district-based research assistants requested SRH/FP services providers and VHT members for each selected health facility to review service records and provide telephone numbers for the sexually active married and unmarried clients who use or do not use modern FP methods. Those with a postpartum history of <2 months and other desired demographic attributes were selected and called to set up a date and time to participate in detailed interviews and discussions moderated by pairs of district-based research assistants.

During the interview sessions, each participant was requested to find a convenient, quiet, and private place to sit where they were greeted, explained the study's purpose and procedures, and requested to participate. Those who agreed were interviewed, thanked for participating, and compensated for any costs incurred.

Each FGD consisted of six participants and two research assistants conversant in the local language. One research assistant moderated the session, and the other took notes. Each interviewer and participant attended the FGD session from their respective homes to prevent the spread of COVID-19. For each FGD session, the moderator (a) called the notetaker and participants to ascertain their availability and explain how to participate in the discussions by telephone or other virtual means, (b) briefed them about the study, (c) assigned each a unique reference number to use instead of their names during the discussions, (d) asked each again for verbal consent, and (e) moderated the discussions. The notetaker wrote and recorded the proceedings. At the end of each session, each participant was allowed to ask questions, thanked, and compensated for any costs incurred.

Data management and analysis

All audio-recorded interviews and discussions were transcribed, translated into English, typed, and exported into NVivo QSR International Version 12 software for coding and analysis by the predetermined and emerging research themes. Furthermore, some relevant verbatim quotes and case studies were extracted from the typed texts and used to substantiate the findings.

Quality control and data triangulation

The RMNCAH Operational Research Program Advisory Committee, World Bank team, and Maternal and Child Health Technical Working Group in the MoH reviewed and provided feedback on the research protocol and instruments. In addition, all research instruments were translated into the local languages spoken in the 10 research districts to standardize the questioning of respondents during data collection. Research supervisors and assistants were selected with the help of the Makerere University School of Public Health by their academic qualifications, research experience, and fluency in the local language. All were trained in the study's research objectives and processes (including virtual data collection using the telephone and Zoom), as well as in research ethics. All instruments were pilot tested in a district that was not involved in the study before the actual data collection began and were revised as appropriate.

The telephone conversations were paused and resumed whenever participants cited audibility problems. All proceedings were simultaneously audio-recorded and handwritten. The principal investigator talked to the research

assistants daily to review and guide the data collection process. The audio recordings for each IDI and FGD were separately transcribed and translated by the district research assistants and further checked and verified by the district supervisors to prevent incorrect data reporting. All qualitative and quantitative data, including those derived from the literature review, were triangulated into the report's findings. Preliminary research results were presented to meetings of the district and national stakeholders for validation.

Ethical considerations and assurance

The ethical aspects of this study were assured by review and approval of the research proposal and instruments, including its plan for consent, privacy, confidentiality, and COVID-19 risk mitigation by the National HIV/AIDS Research Committee and the Uganda National Council for Science and Technology.

Research limitations

All interview and discussion data were collected virtually by telephone or Zoom. As such, it was not possible to physically observe the research participants for nonverbal cues during the interviews to further triangulate their responses. This issue may have affected the study's findings. However, the researchers used alternative methods such as listening for murmurs, laughter, spontaneity, conversation pauses, interjections from other participants, and other verbal expressions to ascertain the integrity of responses during the telephone interviews (Silverman 2001).

Furthermore, virtual interviews ran longer than expected due to connectivity interruptions. As a result, some participants dropped out before the interviews were completed. This issue limited the scope and depth of responses to some questions.

Some potential research participants either failed to fulfill the interview appointments due to heavy work schedules or refused to take part in the virtual interviews and discussions due to a fear of discussing FP matters with people they could not see physically or the fear of possible eavesdroppers on the telephone or online. Therefore, some important perspectives about FP knowledge, perceptions, attitudes, use, and factors may have been missed.

FINDINGS

Several factors enabled or hindered modern FP use among sexually active individuals (see also table 6A.1 in annex 6A).

Factors enhancing the use of modern FP methods

The following factors enhanced the use of modern FP methods: contextual, convenience, human rights, sociocultural and religious, and gender related.

Contextual factors

Modern FP methods were introduced in Uganda in 1957; the open use of modern contraception began in 1968 and stagnated at 7 percent in later years (Kamulegeya et al. 2022).

Favorable laws and policies. In 1995, the National Population Policy was adopted to further increase FP prevalence from 7 percent to 15 percent (Andi et al. 2014) and to halt the spiraling upward population growth rate and harness the demographic trends. This policy facilitated the expansion of modern FP services in the country, and by 2017, the national contraception prevalence rate was 35 percent (UBOS and ICF 2018). To further improve families' health, safety, and management, the NDP III 2020–25 (National Planning Authority 2020) and the HSSP III 2020–25 (MoH 2020b) incorporated strategies for increasing access to SRH, including FP information and services, by reviewing adolescent health policies to adequately address gender-based violence and SRH rights of young people, as well as providing appropriate training and age-appropriate information on FP services, male involvement, side effects, and myths and misperceptions to health workers and the community.

In addition, in 2014 the GoU launched a 5-year Costed Implementation Plan (CIP) to decentralize FP services. This plan was valued at UGX 622 billion (US\$1.3 million), and approximately 60 percent was projected to come from donors (MoH 2014). The major sources of donor funding for FP services included the United States Agency for International Development (USAID), UNFPA, the Netherlands, Jhpiego, and Germany. Approximately 25.4 percent of the FP budget was spent on procurement of contraceptives, medicine, and other consumables, with condoms and injectables accounting for most of the expenditures. Overall, national expenditures on FP services increased overtime, but universal FP coverage has not yet been achieved due to factors discussed later in this chapter.

In addition, the Constitution of the Republic of Uganda (GoU 1995), Article 129 (1) of the Penal Code Act, and other complementary legislation permit women and men to seek redress in courts of law and other appropriate authorities in cases of human rights abuses, such as gender-based violence resulting from choice of a FP method without the consent of a spouse, caregiver, or significant other. In addition, the MoH, MoES, and MoGLSD have developed policies and strategies consistent with the international human rights conventions¹ that guarantee the right of FP access by both men and women. Uganda's key policy documents in this area include some of the following:

- *Adolescent Health Policy Guidelines and Service Standards* (MoH 2012),
- *National Family Planning Advocacy Strategy and Implementation Plan for 2020–25* (MoH 2021),
- *National Gender Policy* (GoU 2007),
- *National Male Involvement Strategy for the Prevention and Response to Gender-Based Violence in Uganda* (MoGLSD 2017),
- *National Policy Guidelines and Service Standards for Reproductive Health and Rights* (MoH 2012),
- *National Population Policy* (MoFPED 2020),
- *National Strategy for Male Involvement in RMNCAH and HIV/TB* (MoH 2019),
- *National Youth Policy* (MoGLSD 2016),
- *Patient's Charter* (Republic of Uganda 2009),
- *Policy Guidelines for Male Involvement in SRH Service Delivery* (MoH 2019), and
- *RMNCAH Investment Case: Sharpened Plan for 2016/17–2019/20* (MoH 2016a).

These policies stipulate the health rights related to using contraception as FP and the strategies for its delivery to various population groups, including adolescents and youth.

Technical and financial support to scale FP services. The government, in collaboration with health development partners, provides technical and financial support to interventions that increase access to and use of FP services. This support, which benefits public- and private-sector health facilities, covers the development of relevant policies and strategies that guide implementation of FP interventions as well as technical and financial assistance in operationalizing them. At the National Family Planning Conference in 2014, the President of Uganda announced an annual allocation of UGX 5 billion (US\$1.9 million) for FP services.

However, the bulk (82 percent) of the funding for FP services came from development partners (MoH 2016a).² Some partners provided direct support to government, while others worked through government and nongovernment implementing partners. For example, UNFPA's FP programs are implemented through the MoH system and CSOs such as Marie Stopes Uganda (MSU) and Reproductive Health Uganda (RHU) to increase the distribution of FP commodities; to train health workers in FP service provision; and to disseminate IEC messages to the public about the benefits of modern FP and where to access contraception. However, USAID funding for FP was channeled primarily to various nongovernment implementing partners, who then directly supported the public and private health facilities with funds and other resources to deliver FP services within a specified time. Respondents pointed out that project-based support enables real-time funding for FP services, and these services are costly and unsustainable without continued donor support.

Service availability. The GoU and partners have increased notably financing to public- and private-sector health facilities, thus improving access to FP services. For example, UNFPA and other development partners have supported government, nongovernment, and faith-based organizations such as MSU; RHU; and the Uganda Catholic Medical Bureau, Uganda Protestant Medical Bureau, and Islamic Medical Association of Uganda to increase (a) the procurement and distribution of essential FP commodities; (b) health worker and VHT training in FP counseling and service delivery; and (c) community education about the benefits of using modern FP methods, available modern contraception, and where to find these commodities. These efforts have helped improve the supply and reduce contraception stock-outs and the ability of midwives, nurses, and medical officers to provide all types of FP commodities, including tubal ligation and vasectomy surgery (Alege et al. 2016).

Convenience factors

Most of the sexually active unmarried and married women who participated in the FGDs reported that they most often used the injection method to prevent pregnancies because it can be used discreetly and has minimal side effects, whereas only a few used IUDs because they can be discerned by the partner and have adverse effects during sexual intercourse. The Uganda Demographic Health Survey (UDHS) of 2016 also noted that 9.4 percent of adolescent girls ages 15–19 used contraceptives, and most (4.3 percent) used injection, followed by condoms (3.3 percent) and implants (0.9 percent).

Human rights factors

Several human rights factors have affected FP use in Uganda.

FP advocacy. Policy makers, program managers, service providers, human rights activists, religious leaders, cultural leaders, and sexually active men and women had varied views about access to and use of FP methods which, in some instances, has enabled or undermined their use by different population groups. Overall, the program managers, service providers, and human rights activists tended to support the right of access to modern FP methods and to legal action against their abuse, while policy makers and religious and cultural leaders seemed more likely to support the right of access to traditional FP methods and to negotiated consent with significant others before use. Some respondents were not aware of the overlap between traditional and modern methods.

Adolescents' right to FP. Despite opposition from some parents and religious and cultural leaders to the provision of contraceptives to adolescents, some CSOs such as RHU advocate for adolescents' rights to FP access to reduce the high teenage pregnancy rate of 25 percent (UBOS and ICF 2018). In addition, the Ugandan Penal Code Act defines *defilement* as “unlawful . . . sexual intercourse with a girl under the age of eighteen years” and makes the offense punishable by death (Republic of Uganda, Penal Code Act 2007 para. 129(1)).

FP access and sources of information. Most FP users in this study reported that they received information on the benefits and side effects of modern contraception methods, especially implants, mostly from colleagues and service providers during the periodic antenatal and immunization care visits at the health centers. This information helped users dispel some misperceptions and make informed decisions about FP use and management. Health workers were most often mentioned as sources of FP information, as stated by one cohabiting woman:

The reason why I joined FP was that I was taught many times about FP. I was told about its advantages and the disadvantages.

Other sources of information included friends, as well as television and local radio programs, in addition to implementing partners such as MSU, RHU, UNFPA, the RISE Program (in the Kotido district), and community meetings:

In the past, most women in the Lugbara community were confined in the home and largely engaged in domestic chores. . . . But now, many of them attend village meetings through which they access information about FP and the available socioeconomic opportunities in the communities.

Overall, knowledge of at least one modern FP method is nearly universal in Uganda. The UDHS 2016 reported that 99 percent of women and 99.8 percent of men have heard about one modern method (UBOS and ICF 2017), and 67.2 percent know about side effects or other associated problems.

Sociocultural and religious factors

Several sociocultural and religious factors have affected FP use in Uganda (see also box 6.1).

Socioeconomic hardships. Sexually active women and men in urban areas of districts such as Wakiso and Arua, especially those who are educated, are increasingly changing their attitudes toward the use of modern FP methods, opting to use these rather than face the socioeconomic challenges associated

Box 6.1

Sociocultural factors that promote FP and are changing perceptions: A view of the Wakiso district

Wakiso is atypical of the districts studied, both because it encompasses both metropolitan and rural areas and because its population is highly diverse. Inter-marriage between ethnic groups is common, leading to cultural diffusion. The district contains many single mothers who are self-reliant, some depending on small trade and informal housework arrangements.

- **Religious, social, and economic factors.** Religion in Wakiso does not seem to affect FP. This fact may be partly due to urban social and economic challenges associated with unemployment and underemployment, such as low income and the high cost of living, which induce couples to plan for fewer children.
- **Gender issues and human rights.** Gender issues are many and wide-ranging. The fragmentation of families has left many households headed by women, with some women abandoned by their spouses and others made single through separation. Women in this district are integrated

into the labor market and often are the main family breadwinners. The education of girls also is highly valued. Taking a human rights-based approach to FP was popular among women participating in the study's meetings. Women were excited that this approach could relieve them from gender-based violence and address the challenges of FP access and quality, as well as their right to choose a method. Some women also argued that they could sue husbands if they stopped them from using FP.

- **FP coverage and use.** Also atypically, the district is well covered by both public and private FP services, especially in urban areas. Those individuals who can afford transport can visit FP facilities. Although many destitute families cannot afford FP due to the cost of transportation, private-sector FP services, and the contraceptives themselves, nevertheless, access is good, with a wide exposure both to FP information and to advocates promoting gender equality.

Note: FP = family planning.

with producing and caring for many children. This usage has encouraged some young people, especially in urban areas, to use modern contraception. As one cohabiting man in a group of 15–25-year-olds pointed out during an FGD,

I am using FP so that I produce few children that I can feed and care for without much hustle. . . . I currently live in a small house, located in a township; . . . it has limited space [so] many children cannot sleep comfortably.

Another cohabiting man in the same age group said,

Some of us use FP to enjoy sex without producing children . . . so, when we want children in future, we will stop using them [FP].

Unemployment in rural and urban shanty areas. Some women and men who participated in the study indicated that they either have abandoned their spouses or have adopted FP to minimize the burden of caring for too many children and to have time for gainful employment. Several participants in the FGDs for married women ages 25–45 in Arua, Bududa, and Kabale agreed with the following view:

Caring for many children is cumbersome when you do not have a job. . . . It is also difficult to be effective and retain the job when you produce frequently . . . so I decided to use a modern FP method, [which] enabled me

to get time to work, earn money, and effectively care for the children. . . .
FP has brought about personal development and happiness at home.

A similar view was expressed by another participant in an FGD for married women ages 15–25:

[The use] of FP helped me to plan the births as a woman, have time to work, get money to support my children [and] family, and to reduce poverty in the family.

Changing attitudes toward polygamy and producing many children. Today, traditional polygamous families are becoming increasingly unpopular, especially among communities in urban settings, due to the high cost of sustaining such families and, in some cases, due to land shortages. Therefore, some married women and men, including those in monogamous relationships, are using modern FP methods to ensure smaller, more manageable families. One participant in an FGD in Kabale had the following view:

After the current baby, I will produce one more kid and stop. . . . I have realized that when you produce a few children, it is possible to educate and feed them well without much stress. . . . Right now, land and food in Kabale is not enough. . . . we cannot also afford proper clothing and education for our children . . . so we use FP.

Furthermore, some women in traditional or religious polygamous marriages have changed their attitudes about “outcompeting” other wives to have many children, instead adopting traditional ways to avoid frequent pregnancies and childbearing, such as sending their spouses to their cowives during ovulation. As one participant in Arua in an FGD for cohabiting women ages 15–25 stated,

I am married to a man who has other women, but I produce my children once in [every] 3 years. . . . I usually tell my spouse to go to [the] others [cowives] when it is unsafe [a high likelihood of conception] and allow him back in a safe period [immediately after menstruation]. . . . This has helped me to produce each child after every 2.5 years . . . unlike my [cowives] who produce theirs almost every year. Although our religion does not allow us to use modern FP methods, we regulate births by avoiding sex during the unsafe sexual periods like that.

Cultural values and behaviors that promote child spacing. The cultural leaders in this study reported that some of their cultural norms encourage spouses to abstain from sex for at least 6 months after childbirth to avoid conception and other health problems such as emaciation or the death of the infant during the postpartum period. In addition, some cultural leaders, particularly in the Acholi and Arua subregions, reported that they usually advise young people, especially girls, to preserve their virginity to ensure respect in school and marriage, as well as advise married community members to limit the number and maintain the spacing of their children. One cultural leader shared the following view:

Apart from the drunkards in our communities, the men and women in this area respect people who do not rush for sexual intercourse . . . community members believe that those who rush for sex are disrespectful and not interested in intimate relationships. . . . They also believe that respectful couples don’t harass each other [and do] make decisions together and always support each other. . . . If there are members in the community who

produce children frequently, the elders can summon them to a clan meeting and ask why they produce children one after another like rats [laughs] . . . and later advise them to control and space their births.

Religious support for FP that ensures life and responsible parenting. Nearly all the religious leaders involved in this study reported that they encourage their followers to use FP methods; however, they emphasize traditional methods. More liberal leaders preferred those modern methods that do not include the termination of the life, including that of the unborn.³ All the religious leaders agreed that FP enables spouses to have manageable numbers of and well-spaced children. The leaders also encouraged the use of modern FP methods in situations in which a woman has a mental illness or is otherwise incapable of managing the pregnancy and caring for the infant. The methods proposed include abstaining from sex in the case of youth and sleeping in separate beds during periods of potential pregnancy in the case of married couples. One Catholic religious leader stated,

The Catholic faith is divine and human . . . it teaches and advocates for use of various FP methods that do not take away the life of anyone, including those unborn. . . . It also advocates for responsible parenthood. . . . In this faith, we believe that God is the Creator of everything and, as such, the only giver and taker of life. If God is the Creator of everything, then all respect should be given to him as the author and owner of life. So, any FP method that leads to abortion or death of the unborn is blasphemous. . . . In the Catholic faith, we believe that all life begins at conception, and so everyone's life, including the fetus, deserves preservation.

Gender-related factors

Several gender-related factors have supported FP use in Uganda.

Male support for FP use. This study found that when men were involved in FP—by providing money for transport or other services, physically escorting their partner to services, participating in discussions with service providers about options, or supporting their partners when they experienced side effects—men encouraged the use of modern FP methods. One participant in an FGD of postpartum unmarried fathers said,

Women will never be able to effectively use FP methods without support from their spouses . . . So, men should be involved in the discussions to understand that, when a woman produces few children, she gets enough time to regain the energy lost at every childbirth, avoids the complications that usually come about due to frequent childbirth such as malnutrition . . . and becomes healthy, as do the children themselves.

Similarly, one woman with a disability who participated in an IDI remarked,

I have a family of three children. Before I produced the first child, we did not discuss with my husband about the use of FP . . . but before I conceived the second and third children, we discussed and agreed with my husband to use a modern contraception method to space them and avoid any further delivery complications due to disability [inability to walk with legs].

Uncertainty about partners' commitment to a stable relationship. This study found that sexually active unmarried couples and people with disabilities used modern FP methods due to uncertainty about their partner's commitment

to the relationship and fear of being neglected during pregnancy, delivery, and child development. Many women ages 15–30 who participated in the FGDs agreed with the following observation:

Some men are obstinate, uncaring, and cannot even provide necessities for the family . . . but just continue to produce more children! Some of us at times have to dig in other people's gardens to get money for food and school fees for the children. So, some of us choose contraceptives and maintain the marriage, while others just separate.

Women's political and socioeconomic emancipation. The involvement of women in community meetings and in participating in political leadership roles and socioeconomic activities not only empowers them to use modern FP methods but also inspires other women to do so. This view was expressed by one participant in an FGD of young cohabiting women of ages 15–25:

I have the final power to use any FP method because I am the one who always faces the direct consequences of overproducing. . . . I want to remain healthy; be able to work; and provide food, clothing, education, and health care for my children.

Women's desire for physical and mental fitness. This study found that some women used modern FP methods to remain physically fit and attractive and to avoid the stress associated with producing, caring for, and educating many children. This view was expressed by one participant in an FGD of cohabiting women of ages 15–25 in an urban setting:

Some of us use modern contraception methods to properly space the children, give the best care to them, get enough rest, and to remain healthy and smart [physically attractive] to partners, . . . but if you do not use FP and always produce and breastfeed children, you physically deteriorate and appear older than your age.

Women's HIV status. Pregnant women with HIV are usually advised to live positively and ensure their well-being by limiting pregnancies and delivering from health facilities to prevent mother-to-child transmission. Having HIV also influences some women to use modern FP methods, as one 25-year-old married woman with HIV in postpartum pointed out:

When I conceived, I was advised and supported by my partner to deliver in the health center to avoid mother-to-child HIV transmission. . . . I was also informed about the various FP methods I can use to prevent pregnancies. . . . So, I had to get an implant . . . this has helped me to space the four children I now have.

Spousal abandonment of women with disabilities. The women with disabilities who participated in this study reported that they often were neglected and abandoned by their spouses, especially when they became pregnant, due to societal stigma and fear of complications during delivery, yet most lack the livelihoods to care for their children alone. Therefore, these women usually were advised by health workers and colleagues to use FP methods to avoid the health risks associated with some physical disabilities. One sexually active woman with disabilities who took part in an IDI said,

Some of us have partners we indulge in sexual intercourse with, but unfortunately many of them are interested in casual sex [instead of] marriage. Men often abandon us when they notice the pregnancy.

Excessive male consumption of alcohol. Men who consumed alcohol excessively often forced their wives into sexual intercourse and neglected them when they are pregnant, forcing them to use modern FP methods to avoid the problems of delivering and managing many children. Table 6.2 explains the reasons why women use modern FP methods in Uganda.

TABLE 6.2 Reasons why women use FP methods in Uganda, by personal situation

WOMEN'S SITUATION	REASON FOR FP USE	FP BENEFITS
Woman cohabiting or living with a boyfriend	<ul style="list-style-type: none"> To delay conception To have economic stability before bearing children To experience sexual pleasure before childbearing To manage uncertainty about a partner's commitment To retain work and support career development To attain career goals before marriage or childbirth To manage a history of partner unfaithfulness To avoid premature childcare responsibilities 	<ul style="list-style-type: none"> Prevention of unintended or underage pregnancy Fewer children to manage Healthy life for mother and child Limited childcare responsibilities, leading to achievement of career or livelihood aspirations Sexual enjoyment without pregnancy worries Education completion without pregnancy or childcare interruptions
Unemployed, single mothers	<ul style="list-style-type: none"> To manage a meager income and inability to afford food, rent, health care, and children's school fees To manage being the family breadwinner To manage the lack of an intimate or committed partner To reduce the fear of pregnancy and STIs 	<ul style="list-style-type: none"> Unfettered choice and consistent FP use to avoid STIs, HIV infection, and pregnancy Freedom to engage in economic survival activities
Happily married women	<ul style="list-style-type: none"> To have well-spaced, happy children To have a pleasurable sexual relationship with sufficient time to attend to their partner's needs To earn sufficient income to jointly support their family To afford children's basic needs, education, and health care 	<ul style="list-style-type: none"> Having time for productive livelihood activities Ability to look after children's health care, education, and basic needs Unified goals and values with their partner Partner jointly supporting family care expenses Joint discussion of and experience with FP options and their side effects
Women with a history of bad experiences with their spouse and pregnancy	<ul style="list-style-type: none"> To create time to work and earn personal income to support their family To avoid past mistakes The plan for children with a responsible and caring partner To create a better future for their children To remain healthy and sexually active 	<ul style="list-style-type: none"> Ability to adopt modern FP methods without hesitation and produce only the children they can care for with or without a spouse Being careful with each subsequent pregnancy Intolerance of abuse of their FP rights
Women with disabilities	<ul style="list-style-type: none"> To manage the lack of employment, income, and support to care for children To avoid community stigmatization of pregnant women with disabilities To work to support their family To reduce the fear of being neglected by their spouse during pregnancy, delivery, and child development To make their own reproductive life decisions 	<ul style="list-style-type: none"> Knowledge of various FP methods and how they can help their own well-being Protection against the risks of unwanted pregnancy and the challenges of producing and caring for children without support Ability to personally decide the number of and when to produce children
Working women	<ul style="list-style-type: none"> To consolidate work opportunities To maintain a good physical appearance and mental health To continue to work To remain attractive to their spouse 	<ul style="list-style-type: none"> Few, well-spaced, and manageable number of children Stability of work and personal relationships Attraction to their partner
Women with HIV	<ul style="list-style-type: none"> To maintain good health by limiting pregnancy and childbirth To avoid producing and caring for children with HIV To avoid pregnancy and delivery complications, distress, and morbidity To manage the need for medication support 	<ul style="list-style-type: none"> Access to delivery services with qualified health workers Reduced pregnancy and delivery distress Prolonged life with HIV

continued

TABLE 6.2, continued

WOMEN'S SITUATION	REASON FOR FP USE	FP BENEFITS
Women in polygamous marriages	<ul style="list-style-type: none"> To comply with their spouse's needs To reduce competition with cowives To avoid the challenges of producing and caring for many children To manage negligence or inadequate spousal income and support To limit the number of children and ensure their situation is better than that of cowives 	<ul style="list-style-type: none"> Special favors from their spouse Reduced competition for childbearing and a better quality of life for their children as compared with that of cowives
Women with spouses who consume alcohol excessively	<ul style="list-style-type: none"> To manage the limited childcare support from their spouse To avoid continued sexual abuse, especially forced sex, by their spouse To manage issue that alcoholic men cannot plan the number of children they should have, forcing women to limit that number because their husbands cannot provide for them To pursue paid work to meet their and their family's needs 	<ul style="list-style-type: none"> Personal and children's happiness despite domestic abuse Access to information about appropriate FP methods given their situation Reduction in pregnancy- and childcare-related burdens
Women who do not want additional children	<ul style="list-style-type: none"> To support their wanted number of children To manage personal health conditions incompatible with bearing more children To support personal development 	<ul style="list-style-type: none"> Healthier and more manageable children Ability to concentrate on their work and care for their existing family

Source: This table is original to this publication.

Note: FP = family planning; STIs = sexually transmitted infections.

Factors explaining women's nonuse of FP

This study identified political economy; service delivery; and sociocultural, religious, gender, and human rights factors that can discourage women from using modern FP methods.

Political economy

Several political economy factors were found to affect FP nonuse in this study.

Contradictory political messages. Political factors can contribute to the nonuse of modern FP services among sexually active women and adolescents, including inconsistent messages from political leaders about use and leaders' perceptions about promoting use. The president of Uganda is reported to have supported the practice of producing many children at various public occasions because producing many children provides labor for production and a ready market for local products, which has been interpreted by some as ignoring FP use (Daumerie and Madsen 2010). At the 2018 national FP conference, the same president is reported to have stated that all women should produce no more than four children and pledged additional government financing for FP to improve family well-being (which has been interpreted by others as promoting FP use to control the number of children). These conflicting messages were reported to have encouraged FP use among some sexually active women and adolescents.

Outsider influence. Some political and civic leaders believe that modern FP is ploy for "outsiders" to reduce their communities' population and thus take

over their resources in future. These leaders, therefore, often discourage their communities from using modern contraception, as one key informant observed:

The introduction of modern FP is a way of controlling the African population so that they [the Western world] can come over and occupy our land—[a] “hidden agenda” and a kind of “neo-colonialism” that undermines the rights of the black race.

Service delivery factors

Several service delivery factors were found to affect FP nonuse in this study.

Inadequate government funding. The National Health Accounts of 2015/16 indicated that only 18 percent of FP services funding in the country is from government, while the remaining 82 percent comes from development partners (MoH 2016a). In addition, whereas several districts developed budgeted FP Implementation Plans in 2018, several district respondents reported that few activities were implemented due to inadequate funding. One DHO affirmed this situation:

We receive insufficient resources for FP services every year from the primary health care budget and development partners . . . so it is not possible to offer FP services to remote areas of the district where majority of the women live.

Limited access to services. Many sexually active unmarried and married women in this study reported that they did not use modern FP methods for the following reasons:

- The long distance and unaffordable cost of transportation to facilities with FP services,
- Frequent stock-outs of preferred modern FP commodities (that is, injectables),
- Inadequate skills of health workers to administer preferred methods such as implants and IUDs, and
- The stigmatization of women who seek FP information and services from health facility workers.

These reasons were expressed in FGDs with married and unmarried women, particularly in Arua, Bududa, Kasese, and Kotido.

Inadequate client counseling. Some women reported that they were neither politely received nor adequately counseled about FP methods and side effects before or during their use. They also reported that contraceptives such as implants and IUDs were sometimes poorly inserted and had to be removed at a cost due to severe side effects. These experiences not only made some women discontinue use but also dissuaded others from using modern FP.

Most of the women with physical disabilities reported that health workers neither gave them information on contraception methods and their side effects nor the opportunity to discuss and choose the method they felt was suitable for them. Instead, the women were told to use methods that permanently prevent procreation to forestall any complications that may arise during the gestation, birth, and post-delivery due to their physical disabilities. Thus, the fear of being given contraceptives that would permanently end the ability to procreate dissuaded some women with disabilities from using modern FP methods.

Unfriendly health workers. Although advocacy has increased for providing SRH and HIV/AIDS services to adolescents and youth in a friendly manner, challenges remain in achieving this call, including a lack of adequate information about the content of adolescent-friendly health services, lack of skills to handle adolescents' psychosocial and sexual concerns, limited service space in health facilities, and health workers' negative attitudes toward delivering SRH/FP services to adolescents and youth (Atuyambe et al. 2015; Bukenya et al. 2017; Ninsiima, Chiumia, and Ndejjo 2021; Onukwugha et al. 2022).

Sociocultural factors

Several sociocultural factors were found that can affect FP nonuse in this study (see also box 6.2).

Fear of creating suspicion, animosity, and instability in marriage. In some cultures, childbearing is vital to marriage, and married women who use modern

Box 6.2

Sociocultural factors that suppress FP use: A view of the Bududa district

As in many of the rural districts studied, in Bududa traditional social and economic pressures urge couples to have as many children as possible, and strong religious sanctions, as well as popular myths, oppose the use of modern FP.

- **Social and economic factors.** Typically, the husband's parents expect daughters-in-law to produce many children in compensation for their expenditure on the bride price, usually paid in cows, to seal the marriage. To the married couple, the production of boys can guarantee clan preservation, power, and respect, while the production of girls promises future bride price income. There is great pressure to produce as many children as possible, especially for those in the royal clan. Both the married couple and the community look forward to fertile outcomes.
- **Religious factors and local beliefs.** The Catholic and Muslim religions emphasize traditional FP methods, whereas modern FP methods are condemned strongly. Because of the belief that modern FP destroys a woman's ovaries, these methods are spoken of as a form of murder of potential children. Widespread beliefs also exist that modern FP makes women too weak to be productive at their work; causes them to lose libido, affecting sex; and "disorganizes" women's biological systems by disrupting the menstruation cycles, which is characterized by overbreeding, being overweight, and being unable to lubricate during sexual intercourse. In addition, among the Bagisu people, each male circumcision ceremony is an occasion for community feasting, so social expectations to produce boys are high.
- **Gender issues.** The traditional culture in Bududa is demanding and punitive about the gender "duties" of men and women. Every circumcised man must marry, and those who do not are publicly belittled. Women's duty to produce more children is reinforced by other social realities. Many women wish to have more children to prevent their husbands from "getting more children from outside." Women also produce more children to protect their marriages.
- **FP access and use.** Women have no control over their reproductive health or the use of FP services, because their husbands make those decisions for them. In addition, although some health care workers in the district's health centers have been trained to administer modern FP methods and commodities such as implants and IUDs, some women cannot visit these centers due to far distances and mountainous terrain.

Note: FP = family planning; IUDs = intrauterine devices.

FP methods were reported to be disrespected and ostracized by elders, communities, and their spouses for undermining clan expansion and continuity. These women also are susceptible to domestic violence due to suspicions of infidelity and disinterest in the marriage. Thus, some women hesitated to access and use modern FP methods to maintain peace and stability in their marriages, as pointed out by one married woman in the 15–25 age group:

Use of FP can beget domestic conflicts, especially if the husband is not consulted or does not consent to it. . . . Here, some men dislike it, and when you use it secretly, they wonder why you do not become pregnant and think that you are either barren or disinterested in the relationship or [are] engaging in sex with other men, [which causes] separation.

Desire for many children. Many women and men in this study expressed negative views about the use of modern FP mainly due to the sociocultural beliefs and values associated with delivering many children, including the belief that each child brings forth special blessings, that some children could die in the future, that giving birth to many children expresses a deep love for the spouse and guarantees social security and clan expansion, and that using modern FP methods undermines the clan's continued existence. These beliefs were expressed by cultural leaders in Soroti and Acholi, one of whom stated,

In our culture, there are no unplanned deliveries . . . every child is important because each of them comes with its blessings. . . . Our culture loves children, and producing many of them ensures our continued existence and the strength and future of the world.

Results also show that some women do not use any FP method for fear of being criticized in society and abandoned by their spouses for taking longer than expected to conceive and produce children. This view was expressed by many cohabiting women ages 15–25 in the FGDs, as exemplified by one woman:

When you go for FP and take longer than expected to conceive and produce a baby, the husband may think that you are not capable of giving birth and decide to get another woman and impregnate her. . . . Because of these thoughts, I have refused to use any FP method.

Another reason for desiring many children, particularly in Bududa and Kasese, is that individuals who were born either as an only child or with a few siblings will, upon reaching adulthood, usually disregard FP and try to expand the clan to compensate for their small family background.

Cultural ceremonies that precipitate casual sexual activities. Some cultural practices, such as male circumcision among the Bagisu in the Bududa district, encourages boys to engage in early sexual intercourse after undergoing the circumcision ritual to prove their manhood. Most young people usually engage in sexual intercourse without using any FP method.

Desire for bridal wealth. This study found that producing many girls is believed to be a source of family wealth. Therefore, women who have given birth to few or no girls rarely used contraceptives to fulfill this expectation, as expressed by one informant during a KII:

In this district, men have to pay dowry to get a wife . . . and most people believe that producing girls is a source of wealth. . . . So, many couples, especially in rural areas, strive to produce many girls and a few boys so that they get cows in future.

In Arua, Bududa, Gulu, Kabale, Kabarole, Kotido, and Soroti, producing children is a key requirement in marriage, and culturally, childbearing is considered a form of compensation for the bride price paid to the woman's family before marriage. Therefore, if a married woman is suspected of deliberately refusing to produce children, she is chastised, and the bride price may be withdrawn from her parents for breach of the marriage contract. This issue compels some married women to avoid FP and produce as many children as possible.

Desire for children of varied gender. Several women involved in this study valued producing children of varied gender to obtain bride wealth when the girls are ready for marriage; to guarantee social security in the family with boys; and to inherit a substantial share of the family property, especially when the spouse dies. Therefore, married women with children of the same sex and those with only a few children in either gender tend to disregard FP to produce the desired number of children by gender. Several participants in FGDs of postpartum unmarried fathers expressed similar views, as did one participant in an FGD for unmarried postpartum mothers:

In this area, many clans prefer boys to girls. So, if the woman does not produce them, she will continue to conceive until the desired boy is produced. Also, if a woman fails to produce a boy and girl, it can cause discomfort in the relationship and break up the family.

Desire to dominate other ethnic groups. All leaders of minority tribes involved in this study were worried about their limited population and, as such, being dominated by other ethnic groups. Therefore, the tribes often encourage their clans and tribe mates to avoid FP to produce many children, protect their land, and guarantee their continued existence. These views were common among research participants in the Kabarole and Kasese districts in the Rwenzori subregion and the Kabale district in the Kigezi subregion, where the BaKonzo and Batoro and the Bafumbira and Bakiga, respectively, are worried about the growing number and dominance of another tribe on the limited land.

High family poverty level. This study found that poor women rarely used modern FP methods due to a limited understanding of contraception and the unaffordable cost of accessing these services. This issue was corroborated in an interview with one health worker in a district health facility:

Several mothers desperately need FP due to either the bad experiences they encountered during pregnancy and the delivery process or their inability to care for all the children, . . . But when they are advised to use any of the available modern contraception methods, they refuse . . . [and] they usually reply, "Musawo [health worker], don't tell me that . . . I am a poor woman, my mother and father passed on . . . so I cannot afford it. . . . I am relying on my husband for everything.

Being married to a wealthy spouse. Wealthy men and women rarely used FP and, therefore, tended to produce many children, because they felt they have enough wealth to care for them. This view was expressed by one participant in an FGD for women of ages 15–30:

Some of us do not use FP because our husbands can afford all the children and bills at home.

Fear of side effects. This study noted a widespread belief that modern FP methods have negative side effects, such as excessive bleeding during menstruation; dizziness, nausea, and headaches; diminished or excessive desire for sex in some women; weight gain or loss; genital itching and pain; and discomfort during sexual intercourse. Furthermore, some believed that poor nutrition exacerbates some of these effects. These views were expressed by both men and women in FGDs as reasons for not using modern FP methods, as one participant stated:

Some people don't use condoms, because when they use the condom, they don't get that sexual desire. . . . Some people complain that when they have sex with someone when they are using condoms, some women become very dry, while others get [itching], so they stop using those methods and do it their way. Coils make women over bleed . . . and hurt men during intercourse.

Another participant pointed out,

Some people in this area believe that, to minimize the side effects of using modern FP methods, a woman should have a balanced diet. . . . But some women and men are too poor to afford the balanced diet. So, they do not use any contraception methods.

In addition, nearly all the young unmarried men who participated in FGDs argued that, unlike condoms, which can help prevent HIV and sexually transmitted infections (STIs) transmission as well as unwanted pregnancies, other modern FP methods were used rarely because they did not protect against these infections.

Cultural leaders' opposition. The cultural leaders in this study reported that they often encouraged community members to use traditional FP methods to regulate the number and spacing of their children. The respondents viewed traditional FP as situations in which nothing external is applied to the body to prevent pregnancy, including LAM. Other natural FP methods mentioned include abstinence from sexual intercourse at the time when the woman is susceptible to pregnancy, namely the standard days method, or "moon beads" in the Uganda context, and the withdrawal method. These types of contraception also are considered modern given their scientific rationale when practiced correctly.

Respondents also mentioned other FP methods that did not have any scientific support, holding unfounded opinions that these methods did not have side effects, as well as the fact that these methods are free and convenient. Such methods included placing the shell of a snail on the woman's vagina, putting a pad with menstrual blood under the cooking stones and removing it if the woman desires pregnancy (practiced in Kabarole), smearing menstrual blood on a padlock and later washing off the blood stains when the woman wishes to conceive, and inserting herbs in the vagina during sexual intercourse to prevent pregnancy. Religious and cultural leaders promoting these methods tended to undermine the modern FP use in these areas.

Religious factors

Most religions in Uganda (Catholic, Protestant, Seventh Day Adventist, and Islam) supported FP in principle, differing in the methods they support based on their religious values. For example, Muslims emphasized that they want to avoid any contraception that causes harm to the body. Some religious leaders believed that the use of modern FP methods not only

threatens God's creation and the sanctity of marriage, which is fulfilled through procreation, but also promotes immorality among unmarried and married people.

All the leaders preferred and encouraged their followers to regulate the number and spacing of children using traditional FP methods as opposed to modern ones. They also emphasized the value of protecting human life and procreation to replace the dead, expand clans, and fill the world, which are forms of human rights achieved through traditional FP. Therefore, for example, Catholics do not allow their faith-based health facilities to provide modern FP methods to either women or men.

However, the broader perspective of FP rights requires that all health facilities provide equal access to all modern contraception methods, because individuals who want to use the services from these facilities given their near proximity cannot access their preferred methods.

We believe that something [a contraception method] which prevents bringing forth life and takes away anybody's life is not a human right. . . . A worthwhile human right should promote life physically, culturally, spiritually, emotionally, politically. . . . So, we emphasize natural FP as a human right and therefore encourage women and men to use natural methods which do not harm the body.

Some religious leaders expressed concerns about providing contraceptives to adolescents, which is against the Christian value of abstinence before marriage, and about some contraception methods (except for condoms), because they can support unprotected sex, hence undermining HIV/AIDS prevention efforts in this age group. One leader emphasized that

They should first know God, first grow older before they engage in sex.

The leaders also resented the use of condoms among unmarried people:

Why do you give condoms to somebody single? Why can't somebody who is single pray properly to get a partner so that . . . they get married properly and bring the issue to the church?

Gender factors

Several gender factors were found that can support FP nonuse in this study.

Migrant workers. Having a spouse who is a migrant worker was reported by respondents from Kabale and Arua as why women believe it is unnecessary to use FP due to periods of sexual inactivity. These women were more likely to use traditional methods or take contraception pills only when their husbands were due to return home. However, some were concerned when their husbands returned without prior notice, thus not allowing for time to secure contraception before sexual relations.

Spousal objections. Both men and women across all districts associated FP with promiscuity and infidelity. The men believed that modern FP encourages these vices among women because they do fear getting pregnant outside the marriage, and they prefer their wives to be occupied with many children so they do not have time to be unfaithful. The women believed that their husbands would have children with other women if they did not produce enough children. A high suspicion index among spouses can result in domestic conflicts and all forms of gender-based violence.

Competition among cowives in polygamous marriages. Women in polygamous marriages usually compete to produce many children, aiming to increase their share of family assets and the chance that one of their sons will become heir when the husband dies. These views were widespread among research participants in Arua and Kabale, who reported that few women in polygamous unions use FP.

Inadequate engagement of male spouses. Men are rarely targeted for or are involved in FP activities and, as such, some women who use modern contraception do not consult or notify their spouses. This situation limits FP use, because without the requisite awareness of FP's importance, men will continue to dominate the societal discourse and perpetuate negative behaviors that result in poor contraception use. This issue includes denying their spouses access to modern FP for the wrong reasons and having children outside marriage (culturally, men have more liberty to have children outside marriage). Moreover, one challenge reported by health workers was that it was the women who receive modern FP information, because few come to the health facilities with their spouses.

Conversely, some men felt that they were being sidelined in FP matters despite being key stakeholders. The men were not offered a wide range of choices for contraception other than vasectomy and condoms. Furthermore, they were targeted and reached less often by interventions, except for the few who accompanied their partners to health facilities to participate in decision-making. The men also felt they have the right to know the decisions made by their spouses—whether they disagreed or not—because some side effects, such as women's loss of libido during sex, can affect them as well.

Human rights factors

This study identified several overarching human rights quandaries that can contribute to nonuse of modern FP methods among sexually active women and adolescents:

- Policy and legal contradictions exist regarding the right of access to FP services, including the age of sexual consent and adolescents' use of modern contraception. Adolescents' access to FP has generated opposition from parents, health workers, and society in general.
- The secretive use of modern FP methods by some married women can facilitate their right of access to FP but also can undermine their spouses' perceived right to know about methods being used. This action and perception has not only created mistrust and gender-based violence among married couples but also has led to nonuse of modern contraception by some married women.
- All communities involved in the study were governed by a patriarchal social system that compels women to be submissive to men in making decisions about social, sexual, and other family matters, including modern FP use. The subordinate relationship to men in decision-making has deterred some married women from using modern FP without their spouse's permission.

Legal, policy, and societal contradictions. Although the relevant government ministries and agencies have developed legal and policy instruments that can facilitate FP use, some are contradictory and not yet operational due to financial constraints and a lack of stakeholder consensus about the political, economic, and sociocultural merits and demerits of adoption. For example, both

the 1995 Constitution of the Republic of Uganda (GoU 1995) and the 1954 Penal Code Act, Article 129(1) (GoU 1954) state that any person who performs a sexual act with another person who is younger than age 18 commits a defilement felony and, on conviction, could be sentenced to life imprisonment. However, the Universal Declaration on Human Rights (United Nations 2015); the International Covenant on Economic, Social and Cultural Rights (United Nations 1976); and the Convention on the Elimination of All Forms of Discrimination Against Women (United Nations 1981)—to all of which Uganda is a signatory—guarantee the right of young women to access FP information and choose their contraception method, which implies that people younger than age 18 can engage in sexual intercourse.

The contradictions in some laws and commitments have generated debate on the legality of enforcing the right of access to and use of FP, particularly among adolescents. Opponents of adolescents' right of access to and use of FP argue that it not only undermines abstinence from sex until marriage but also foments immorality and the risk of STIs. Proponents argue that the age of sexual consent should be reduced so that it matches present-day sociocultural realities as well as the provisions of various national FP policies and international human rights conventions. This finding is expressed in the following comment by one health worker:

[I] like the policy of offering FP services to adolescents as young as 10, girls . . . come for services by themselves and once someone comes for FP . . . it's better to counsel her, tell her the outcome, tell her what may come out, the likelihood of getting STIs, and getting incurable HIV . . . tell her the effects she might get, but in the end, you offer an FP service.

The difference in opinion on FP rights has contributed to the low use of modern contraception methods and to the persistent occurrence of teenage pregnancy among sexually active unmarried girls. This finding highlights the need to further engage and build consensus among stakeholders, especially parents and religious and cultural leaders, on the appropriate age of sexual consent and FP access, as well as pregnancy and STI prevention methods.

Limited access to information about side effects. Although it is a right for women to access correct information before deciding whether to use any modern FP method, the most recent demographic health survey showed that 32.8 percent of women of ages 25–49 who utilized modern contraception reported that they were not informed about the side effects of the method received. Also, 45 percent of the contraceptive use episodes in the 5 years preceding the survey were discontinued within 12 months, mainly due to concerns about side effects (UBOS and ICF 2018). This issue implies that limited knowledge of the side effects and their mitigation measures contributes to nonuse and discontinuation of modern FP among sexually active women.

Right to choose modern FP. Although married women have a right to decide on their own whether to use modern FP methods, this right often is overruled by their spouses', extended families', and society's expectations to produce as many children as possible. These expectations and the resultant ostracism by communities and domestic violence from husbands for using FP can deter many women from using modern contraception.

Unsatisfactory police and community response to abuse. Some married women who decided on their own to use modern FP methods can encounter

abuses such as battering and neglect, as well as abandonment and divorce. When these abuses are reported to the police, parents, community, or clan courts, no satisfactory action is taken. This situation not only discourages women from reporting such abuses to any of these structures but also compels some to discontinue modern contraception use to maintain matrimonial peace. This view was expressed by married women ages 25–45 in an FGD, as reported by one woman:

Reporting your husband to the police can easily lead to divorce or . . . he gets another wife, so this scares us a lot. Most women just leave their husbands and go back to their parents after this kind of disagreement so that they can sit down and talk about it as a family and as a clan, to come up with a solution. But involving . . . law enforcement is usually a “no” in my community.

Stakeholder perspectives about improving modern FP use

As detailed in table 6.3, stakeholders in this study have proposed several ways to improve modern FP use.

TABLE 6.3 Key stakeholder-cited challenges, potential resolutions, and desired outcomes for modern FP use in Uganda

KEY CHALLENGES	POTENTIAL RESOLUTIONS	DESIRED OUTCOMES
Disharmony in legal, policy, and societal provisions for age of sexual consent and modern FP use	Further engage and build consensus with stakeholders, especially parents and religious and cultural leaders, on an appropriate age for sexual consent and for FP access, as well as pregnancy and STI prevention methods for adolescents.	Increased adolescent use of appropriate FP methods and reduced teenage pregnancies
Gender-based violence associated with unilateral choice and use of modern FP	Develop IEC and advocacy messages about FP rights, and disseminate them to community groups, service providers, and law enforcement agencies, especially the police. Link abused clients to relevant social and protection services.	Mutual partner support for FP use
Inadequate funding for modern FP services and lack of prioritization of services in district plans and funding	Advocate for MoFPED, MoH, and FP program managers and district and local government leaders to earmark funding for FP services during the planning process.	Improved district programming and financing of FP services
Limited access to modern FP services	Establish FP services in all public and private not-for-profit health facilities.	Equitable coverage of FP services
Limited male involvement in modern FP use	Promote partner conversations about FP use. Deliver community sensitization campaigns on the importance of male involvement in FP for the well-being of women and children.	Increased male support for FP use
Misperceptions about modern FP's purpose and side effects	Talk with service providers, clients, and women with lived experiences in the community to identify the misperceptions and side effects of each FP method. Develop with stakeholders IEC materials explaining the facts about, the misperceptions about, and the management of the side effects of each method, and disseminate these materials to service providers, clients, and the community. Have health workers undertake community education campaigns that address the facts and misperceptions about FP's side effects.	Increased knowledge of FP's purpose and side effects Dispelled myths and misperceptions

continued

TABLE 6.3, continued

KEY CHALLENGES	POTENTIAL RESOLUTIONS	DESIRED OUTCOMES
Religious and cultural beliefs that negate modern FP use to determine the number and spacing of children, especially among young people	Promote the use of scientifically proven traditional FP methods alongside religiously acceptable modern methods. Develop IEC materials on the effective religious and culturally sensitive traditional and modern FP methods, and disseminate them to religious leaders, health service providers, and community members of different faiths.	Support for the use of effective modern and traditional FP methods that are responsive to religious and cultural sensitivities
Unaffordable cost of modern FP services	Subsidize the cost of FP services in both public and private not-for-profit health facilities. In public facilities, where such services are free, work to overcome poor individuals' inability to reach these facilities, because they cannot afford to pay for services in private facilities.	Increased access to modern FP by impoverished men and women

Source: This table is original to this publication.

Note: FP = family planning; IEC = information, education, and communication; MoFPED = Ministry of Finance, Planning, and Economic Development; MoH = Ministry of Health; STIs = sexually transmitted infections.

RECOMMENDATIONS

The GoU should harmonize legal and policy frameworks to address inconsistencies in FP access in Uganda, including the following recommendations from this study:

- The MoH, partnering with the MoJCA, the MoGLSD, and MoES, can develop relevant guidelines, tools, and IEC materials on (a) FP rights; (b) the sociocultural barriers to FP use; (c) the facts, misperceptions, and management of FP side effects; (d) gender rights and male participation in FP services and use; and (e) the socioeconomic and health benefits of modern contraception. These materials should be disseminated to all stakeholders.
- Identify all public health laws, policies, and sociocultural norms related to the age of sexual consent and access to modern FP services that contradict the international and regional conventions on SRH/FP rights, to which Uganda is a signatory, and then lobby Parliament to debate and harmonize them.
- Review all school and adolescent health policies, particularly the *National School Health Policy* (MoH 2008) and the *National Adolescent Health Policy-Strategy* (MoH 2011), to clarify the ages for and circumstances of access to modern FP services and other reproductive health rights for sexually active adolescents, and then disseminate these to various stakeholders.
- Mainstream FP matters into all relevant ongoing national-sector programs for adolescents and youth, such as the School Health Education and Youth Livelihood Programs, to leverage existing resources to enhance FP use.

CONCLUSION

This study has examined the sociocultural, gender, human rights, and structural factors that support or discourage the use of modern FP methods across key sociocultural groups in Uganda. The current FP services' programming and investments are skewed toward the right of access to modern contraception methods, even though some traditional FP methods are as effective in preventing and delaying pregnancy, harmless to the well-being of women and men, and widely acceptable to cultural and religious leaders. This issue highlights a need to adequately invest in promoting those scientifically proven and efficacious traditional FP methods alongside the modern methods to enhance FP outcomes among sexually active women and men. These efforts could be strengthened by providing complete and comprehensive information about all FP methods, including side effects to all stakeholders, and offering a range of services, including those supporting both traditional and modern methods.

The study also found that information is key to influencing FP use. Hence, sensitization and training of health workers and the community should be intensified, especially on the side effects of long-term and permanent methods of contraception. Overdependence on donors for financing FP services is an issue that has undermined sustainability. Hence, the GoU should increase financing for FP services. Furthermore, women's empowerment through education and access to employment opportunities tended to facilitate FP use. Hence, affirmative action for job opportunities and other livelihood engagement are needed for women.

A lack of coherence exists in the legal and policy framework for FP. While FP use has expanded and the mix of methods has diversified, the needs of some women and men are not being met by the current FP program because of the fear of side effects or religious and cultural concerns about some modern methods.

NOTES

1. For example, the Universal Declaration on Human Rights, International Covenant on Economic, Social and Cultural Rights, the Convention on the Elimination of All Forms of Discrimination Against Women, the Convention on the Rights of the Child, the Convention on the Rights of Persons with Disabilities, the African Charter on Human and Peoples' Rights, and the African Charter on the Rights and Welfare of the Child.
2. There is an excessive reliance on external financing for the national FP program.
3. The notion of *termination of life*, according to some religions, transcends mere abortion to include pregnancy prevention. One argument states that sperm and ovules are part of early life; hence, destroying them is destroying life.

ANNEX 6A FAMILY PLANNING USE IN UGANDA

TABLE 6A.1 Factors affecting FP use in Uganda, by cultural group

CULTURAL GROUP	SOCIOCULTURAL FACTORS	HUMAN RIGHTS FACTORS	RELIGIOUS FACTORS	GENDER FACTORS	OTHER FACTORS
Baganda and some other tribes	<ul style="list-style-type: none"> • Wakiso is a metropolitan area, encompassing both rural and urban settings. • Ethnic groups have intermarried, leading to a cultural diffusion. • Better access to FP services and exposure to FP information are available. • The area is well covered by public and private FP services, especially urban areas, but poor families cannot afford FP due to transport, services, and contraception costs. • Many single mothers are self-reliant, some depending on petty trade and informal work arrangements. • Some youths are cohabiting, and some have limited resources, but they have hope that their lives will get better. 	<ul style="list-style-type: none"> • Having a human rights-based approach to FP is popular. Women were excited that FP could relieve them from gender-based violence; that this focus can address the challenges of FP access, quality, and the right to choose methods; and that they could sue their husbands if they attempted to stop them from using FP. • In an urban setting, many people are exposed to human rights activists who advocate for gender equality. 	<ul style="list-style-type: none"> • Religion does not seem to affect FP use, due to the urban challenges that induce couples to plan for fewer children. Many nonmarried families exist, for whom religion is not a larger concern than is economic survival. 	<ul style="list-style-type: none"> • Gender issues are pronounced, covering a wide range of issues, including fragmented and single-parent families from spousal abandonment, divorce, or separation, as well as engagement in promiscuity. Domestic violence is more pronounced without systematic measures to address these conflicts. • Many women-headed households exist. • Women are integrated into the labor market and can be the main breadwinners for their families. • Education for girls is highly valued. 	<ul style="list-style-type: none"> • Modern FP services are available in public and private facilities. • People who can afford transport can travel to health facilities.
Bagisu	<ul style="list-style-type: none"> • Women have children to compensate for the bride price. • Boys preserve the clan, and the more children one has, the more powerful one becomes. • Producing more children earns one respect, and the community is happy for boys because the feast during their circumcision ceremony is a most-treasured event. • People are mandated to have children to maintain the next generation, especially those from the royal clan. 	<ul style="list-style-type: none"> • The belief exists that making FP a human right will encourage people to not have children, killing the next generation. 	<ul style="list-style-type: none"> • Catholics and Muslims emphasize traditional FP methods. • Modern FP use is considered murder, as the belief exists that it destroys the ovaries. • Using modern FP methods is considered disobedience to God's commandants and thus is a sin. 	<ul style="list-style-type: none"> • Women produce more children so that they might prevent their husbands from producing children with other women. • Women produce more children so that they can protect their marriages. • Husbands make all critical decisions about FP use. • Women do not control their own reproductive health. 	<ul style="list-style-type: none"> • The belief exists that FP disorganizes the woman's reproductive systems, which later affects child-bearing. • The belief exists that women who use FP are weak and unable to work. • High school dropout and teenage pregnancy rates are common.

continued

TABLE 6A.1, *continued*

CULTURAL GROUP	SOCIOCULTURAL FACTORS	HUMAN RIGHTS FACTORS	RELIGIOUS FACTORS	GENDER FACTORS	OTHER FACTORS
	<ul style="list-style-type: none"> • Culture demands that all circumcised men marry and have children. A cultural dance is performed to belittle men who are uncircumcised or unmarried. • Having many children can mean wealth if they are girls and security if they are boys. • A belief exists that FP's side effects, such as headaches, dizziness, and general body weakness, makes women unable to work. • The husband's family expects the woman to produce children to compensate for the dowry paid by the husband's parents. 				<ul style="list-style-type: none"> • The belief exists that women who use FP lose libido, which affects sex. • Most health services workers have been trained how to administer FP commodities such as implants and IUDs. • The mountainous terrain makes access to FP services difficult.
Bakiga	<ul style="list-style-type: none"> • A desire exists to produce an equal number of boys and girls, the boys for inheritance and the girls for bride wealth. • Cultural transformations exist around FP, as well as the difficulties related to having many children. • No outstanding cultural factors were mentioned that interfere with FP. • Condoms and vasectomies are available, but most men regard vasectomies as a type of castration. 	<ul style="list-style-type: none"> • Communities support FP as a human right because of a land shortage in the district. • Accessing health facilities for FP services can be difficult due to the hilly terrain and the negative attitudes toward the use of modern FP methods. • Individuals living in the most remote areas have challenges accessing FP services. 	The religions reviewed—Catholic, Anglican, and Pentecostal—all support traditional FP methods.	<ul style="list-style-type: none"> • Husbands work far from home and visit their wives only occasionally. • Women are enlightened about FP. • Many people understand the challenges of having too many children. • Men in Kabale want more FP options for themselves and resent vasectomy, which they view as a type of castration. 	<ul style="list-style-type: none"> • Land scarcity and fragmentation are issues. • Poverty and unemployment in the area can lead to male migration to other areas. • Hard-to-reach mountainous areas can make FP access difficult.

continued

TABLE 6A.1, continued

CULTURAL GROUP	SOCIOCULTURAL FACTORS	HUMAN RIGHTS FACTORS	RELIGIOUS FACTORS	GENDER FACTORS	OTHER FACTORS
BaKonso	<ul style="list-style-type: none"> The people of Kasese have a strong tribal identity, having wanted to form a country independent from Uganda, and thus support having a large population. Polygamous marriages make large families the norm. Circumcision is practiced. The desire to preserve their customs and identity can negatively affect FP use. A high value is placed on modern and traditional education. The culture is highly patriarchal, and men are considered the sole providers. A man without children is referred to as "a living dead," which discourages many from FP use. Given such worry, men are discouraged from using FP planning before they have children. Alcoholism and prostitution are condemned, which does not support FP use. Women do not inherit from their father's wealth, hence produce as many children as they can to indirectly inherit property of the spouse in case of death. Women can have access to their husband's property if they have children. The more children they have, the more property they are entitled to. 	<ul style="list-style-type: none"> Service providers are working to provide information to help women choose an appropriate FP method. Complete information on FP side effects is not being provided. Universal access to FP services is not guaranteed. 	<ul style="list-style-type: none"> Traditional FP methods are emphasized. 	<ul style="list-style-type: none"> Male involvement in FP is rare. Men oversee family decisions and resources. 	<ul style="list-style-type: none"> Employment opportunities are available in Hima Cement. Increased trade exists with the neighboring districts of the Congo, Rep. Recent skirmishes between the kingdom and the central government can challenge FP use.

continued

TABLE 6A.1, *continued*

CULTURAL GROUP	SOCIOCULTURAL FACTORS	HUMAN RIGHTS FACTORS	RELIGIOUS FACTORS	GENDER FACTORS	OTHER FACTORS
Busoga	<ul style="list-style-type: none"> • Issues of sexuality are not discussed with children. • Adolescent girls are not prepared for adulthood. • Women must provide sex when demanded; it is an obligation and not necessarily of their own free will. • Not marrying is a disgrace. • The belief exists that women's eggs will be burnt if they use FP. 	<ul style="list-style-type: none"> • The dignity of women is minimized. • Adolescent girls drop out of school early. • Adolescent girls stay home minding children. 	<ul style="list-style-type: none"> • Muslims do not support modern FP use but rather stress hard work for the family. 	<ul style="list-style-type: none"> • Pregnant women are commonly abandoned by the men responsible for their pregnancy. • Women discreetly seek FP services. 	<ul style="list-style-type: none"> • High levels of poverty, fertility, teenage pregnancy, and school dropout exist. • Commercial sex is not practiced in the open but in secret to preserve dignity. Women who have abortions can still apply for FP services.
Batoro	<ul style="list-style-type: none"> • Herbal medicines are used for FP. • Nonscientific methods are used for FP. • Cultural tradition has a strong influence on the people of Toro. • The Batoro kingdom encourages population growth because it believes there is still enough land and food for all. • The kingdom does not allow its people to use modern FP methods. • Families are monogamous, and households are small. • The strong belief that women can give birth whenever they feel so undermines child spacing. 	<ul style="list-style-type: none"> • FP services are provided but are difficult to access by vulnerable groups. 	<ul style="list-style-type: none"> • Emphasis is placed on traditional FP methods. • Guidance is given on having children they can afford to look after. • Modern FP use is discouraged. 	<ul style="list-style-type: none"> • Women's mothers-in-law strongly influence their sons concerning FP use, because they want their daughters-in-law to compensate for their large bride price by producing children. • Women fear their husbands finding other women with which to have children. 	<ul style="list-style-type: none"> • Land and food are plentiful; therefore, no worries exist about resources. • Alcoholism among men limits FP use and often provokes violence against women.
Iteso	<ul style="list-style-type: none"> • A high respect exists for cultural values. • A high value is placed on having children, especially girls because they help with domestic chores and their bride price is a source of wealth. 				

continued

TABLE 6A.1, continued

CULTURAL GROUP	SOCIOCULTURAL FACTORS	HUMAN RIGHTS FACTORS	RELIGIOUS FACTORS	GENDER FACTORS	OTHER FACTORS
Karamojong	<ul style="list-style-type: none"> Girls are viewed as precious because their dowry can garner 50–100 heads of cattle; a wife's parents must refund the dowry if she does not produce many children. Widespread polygamy is a way to grow the family and clan. Men believe that a woman who loves her husband should bear him many children. Literacy levels are low. Ateket is a council of male elders that makes decisions, and their word is final; those who ignore the council's decisions are marginalized. Elders are typically against FP use. 	<ul style="list-style-type: none"> Some men become violent on learning that their wives are using FP. A low regard exists for women's views on FP. The bride price is highly regarded. 	<ul style="list-style-type: none"> Traditional FP methods are emphasized. The Catholic religion is important in many marriages and in setting family values. Traditional FP methods are associated with cultural values. 	<ul style="list-style-type: none"> Society is male dominated. Gender-based violence due to FP use exists. Women are overburdened with domestic chores, because men do not share this work. Men demand that women provide food for them. Women fear men and so do not freely talk or express themselves. Decisions, which are final, are made by the Ateket, which has no women members. 	<ul style="list-style-type: none"> Myths and misperceptions exist about FP. High illiteracy levels exist. High alcohol consumption occurs among men, women, and children. Many families are pre-occupied with food challenges. Stealing cattle claims lives; therefore, children are produced to replace those who have died. An improvement in the security situation has led to some slight improvement in mindset. It currently is possible for the community to get together and talk about FP. Most communities live far from health facilities. Limited FP funds are available. Implementing partners are absent in the area.
Lugbara	<ul style="list-style-type: none"> Women are respected if they bear children for the family. Cows are given in exchange for women, who must compensate by producing children. Women who use FP are returned to their family home, and their bride price is refunded. Polygamy is a common occurrence. Elders make decisions and act as arbitrators about FP use. Elders play a large role in settling family disputes and are biased against FP use. 	<ul style="list-style-type: none"> Women have no voice in FP decision making. Domestic violence can occur because of FP use. 	<ul style="list-style-type: none"> Islam and Catholicism, which support traditional FP methods, are common. 	<ul style="list-style-type: none"> A male-dominated society governs community leadership and FP decision making. Male elders are uncompromising on FP use. Girls are treasured for their bride wealth. 	<ul style="list-style-type: none"> FP use is believed to disorganize the home. FP is believed to support the Western world's hidden agenda for black people.
Luo (Acholi)	<ul style="list-style-type: none"> Bride wealth is highly regarded. Elders influence family decisions. Cultural leaders condemn modern FP methods. 			<ul style="list-style-type: none"> Women seek FP discreetly. Some women tend to abide by what their husbands believe or say. 	

Source: This table is original to this publication.

Note: FP = family planning; IUDs = intrauterine devices.

REFERENCES

- Alege, S. G., J. K. Matovu, S. Ssensalire, and E. Nabiwemba. 2016. "Knowledge, Sources and Use of Family Planning Methods among Women Aged 15–49 Years in Uganda: A Cross-Sectional Study." *Pan African Medical Journal* 24 (1). doi:10.11604/pamj.2016.24.39.5836.
- Andi, J. R., R. Wamala, B. Ocaya, and A. Kabagenyi. 2014. "Modern Contraceptive Use among Women in Uganda: An Analysis of Trend and Patterns (1995–2011)." *Etude de la population Africaine (African Population Studies)* 28 (2): 1009. doi:10.11564/28-0-553.
- Atuyambe, L. M., S. P. Kibira, J. Bukenya, C. Muhumuza, R. R. Apolot, and E. Mulogo. 2015. "Understanding Sexual and Reproductive Health Needs of Adolescents: Evidence from a Formative Evaluation in Wakiso District, Uganda." *Reproductive Health* 12 (1): 1–10. doi:10.1186/s12978-015-0026-7.
- Ball, K., and D. Crawford. 2010. "The Role of Socio-Cultural Factors in the Obesity Epidemic." In *Obesity Epidemiology: From Etiology to Public Health*, edited by D. Crawford, R. W. Jeffery, K. Ball, and J. Brug, 105–119. Oxford Scholarship Online. New York: Oxford University Press. doi:10.1093/acprof:oso/9780199571512.003.0008.
- Bukenya, J. N., E. Mulogo, S. P. S. Kibira, C. Muhumuza, and L. M. Atuyambe. 2017. "Health Facilities' Readiness to Provide Friendly Reproductive Health Services to Young People Aged 10–24 Years in Wakiso District, Uganda." *Global Journal of Reproductive Medicine* 2 (3). doi:10.19080/GJORM.2017.02.555588.
- Daumerie, B., and E. Madsen. 2010. *The Effects of a Very Young Age Structure in Uganda*. Washington, DC: Population Action. https://www.seekcharlie.com/wp-content/uploads/2010/06/sotc_uganda_ccs.pdf.
- Government of Uganda. 1954. *The Penal Code Act, Chapter 120*. Kampala, Uganda. <https://www.fia.go.ug/sites/default/files/downloads/Penal%20Code%20Act.pdf>.
- Government of Uganda. 1995. *Constitution of the Republic of Uganda*. Kampala, Uganda. <https://www.parliament.go.ug/documents/1240/constitution>.
- Government of Uganda. 2007. *The Uganda Gender Policy*. Kampala, Uganda.
- Hardee, K., J. Kumar, K. Newman, L. Bakamjian, S. Harris, M. Rodrigues, and W. Brown. 2014. "Voluntary, Human Rights-Based FP: A Conceptual Framework." *Studies on Family Planning* 45 (1): 1–18. doi:10.1111/j.1728-4465.2014.00373.x.
- Kabagenyi, A., G. Habaasa, and G. Rutaremwa. 2016. "Low Contraceptive Use among Young Females in Uganda: Does Birth History and Age at Birth Have an Influence? Analysis of 2011 Demographic and Health Survey." *Journal of Contraception Studies* 1 (1): 4.
- Kabagenyi, A., L. Jennings, A. Reid, G. Nalwadda, J. Ntozi, and L. Atuyambe. 2014a. "Barriers to Male Involvement in Contraceptive Uptake and Reproductive Health Services: A Qualitative Study of Men and Women's Perceptions in Two Rural Districts in Uganda." *Reproductive Health* 11 (1): 21. doi:10.1186/1742-4755-11-21.
- Kabagenyi, A., P. Ndugga, S. O. Wandera, and B. Kwagala. 2014b. "Modern Contraceptive Use among Sexually Active Men in Uganda: Does Discussion with a Health Worker Matter?" *BMC Public Health* 14: 286. doi:10.1186/1471-2458-14-286.
- Kabagenyi, A., A. Reid, J. Ntozi, and L. Atuyambe. 2016. "Socio-Cultural Inhibitors to Use of Modern Contraceptive Techniques in Rural Uganda: A Qualitative Study." *Pan African Medical Journal* 25: 78. doi:10.11604/pamj.2016.25.78.6613.
- Kamulegeya, L. H., J. Bwanika, J. Banonya, J. Atuhaire, D. Musinguzi, V. Nakate, and A. Kiragga. 2022. "Feasibility and Acceptability of a Ugandan Telehealth Engagement Platform for Informational Messaging on Modern Contraception: Pilot Cross-Sectional Study." *JMIR Formative Research* 6 (6): e34424. doi:10.2196/34424.
- MoFPED (Ministry of Finance, Planning and Economic Development). 2020. *The National Population Policy*. Kampala, Uganda: MoFPED. <http://npcsec.go.ug/wp-content/uploads/2021/11/The-2020-National-Population-Policy.pdf>.
- MoGLSD (Ministry of Gender Labour and Social Development). 2007. *The Uganda Gender Policy*. Kampala, Uganda: MoGLSD. <https://faolex.fao.org/docs/pdf/uga163564.pdf>.

- MoGLSD (Ministry of Gender, Labour and Social Development). 2016. *Uganda National Youth Policy: Theme: "Unlocking Youth Potential for Sustainable Wealth Creation and Development."* Kampala, Uganda: MoGLSD.
- MoGLSD (Ministry of Gender, Labour and Social Development). 2017. *The National Male Involvement Strategy for the Prevention and Response to Gender-Based Violence in Uganda.* Kampala, Uganda: MoGLSD. https://uganda.unfpa.org/sites/default/files/pub-pdf/15_03_18_%20MALE%20INVOLVEMENT%20STRATEGY%2024%20JULY%202017.pdf.
- MoH (Ministry of Health) 2008. *National School Health Policy.* Kampala, Uganda: MoH. <http://library.health.go.ug/publications/policy-documents/uganda-school-health-policy>.
- MoH (Ministry of Health). 2011. *National Adolescent Health Policy-Strategy 2011–2015.* Kampala, Uganda: MoH.
- MOH (Ministry of Health). 2012. *Adolescent Health Policy Guidelines and Service Standards.* Kampala, Uganda: MoH. <https://www.prb.org/wp-content/uploads/2020/06/Uganda-Adolescent-Health-Policy-and-Service-Standards-2012.pdf>.
- MoH (Ministry of Health). 2014. *Uganda Family Planning Costed Implementation Plan, 2015–2020.* Kampala, Uganda: MoH.
- MoH (Ministry of Health). 2016a. *Investment Case for Reproductive, Maternal, Newborn, Child and Adolescent Health Sharpened Plan for Uganda 2016/17–2019/20.* Kampala, Uganda: MoH.
- MoH (Ministry of Health). 2016b. *Reproductive, Maternal, Newborn, Child and Adolescent Health Sharpened Plan for Uganda 2016/17–2019/20.* Kampala, Uganda: MoH.
- MoH (Ministry of Health). 2019. *Policy Guidelines to Male Involvement in Sexual and Reproductive Health.* Kampala, Uganda: MoH. <http://library.health.go.ug/sites/default/files/resources/Male%20involvement%20policy%20guidelines%20revised%20UPDATED%202019%20Olive.pdf>.
- MoH (Ministry of Health). 2020a. *Annual Health Sector Performance Report, Financial Year 2019/20.* Kampala, Uganda: MoH.
- MoH (Ministry of Health). 2020b. *Ministry of Health Strategic Plan 2020/21–2024/25.* Kampala, Uganda: MoH. <https://www.health.go.ug/cause/ministry-of-health-strategic-plan-2020-21-2024-25/>.
- MoH (Ministry of Health). 2021. *National Family Planning Advocacy, Strategy and Costed Implementation Plan 2020/21–2024/25.* Kampala, Uganda: MoH.
- National Planning Authority. 2020. *Third National Development Plan (NDPIII) 2020/21–2024/25.* Kampala, Uganda: Ministry of Finance, Planning and Economic Development. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/http://www.npa.go.ug/wp-content/uploads/2020/08/NDPIII-Finale_Compressed.pdf.
- Ninsiima, L. R., I. K. Chiumia, and R. Ndejjo. 2021. "Factors Influencing Access to and Utilization of Youth-Friendly Sexual and Reproductive Health Services in Sub-Saharan Africa: A Systematic Review." *Reproductive Health* 18 (1): 1–17. doi:10.1186/s12978-021-01183-y.
- Onukwugha, F., P. Agaba, M. Hayter, and B. Orton. 2022. "Unmarried Adolescents' Experiences of Using Reproductive and Maternal Health Services in Nigeria and Uganda: A Qualitative Study." *Social Sciences* 11 (5): 203. doi:10.3390/socsci11050203.
- Patton, M. Q. 2002. *Qualitative Research and Evaluation Methods.* Thousand Oaks, CA: Sage.
- Republic of Uganda. 2007. *The Penal Code (Amendment) Act.* Kampala, Uganda: Republic of Uganda. [file:///C:/Users/Admin/Downloads/the%20penal%20code%20act%20\(2007\).pdf](file:///C:/Users/Admin/Downloads/the%20penal%20code%20act%20(2007).pdf).
- Republic of Uganda. 2009. *Patients' Charter.* Kampala, Uganda: Republic of Uganda. <https://www.cphl.go.ug/sites/default/files/2019-06/PATIENTS%27%20CHARTER.pdf>.
- Silverman, D. 2001. *Comprehensive Course on . . . How to Moderate Telephone Focus Groups.* London: Market Navigation.
- UBOS (Uganda Bureau of Statistics). 2020. *The 2020 Statistical Abstract.* Kampala, Uganda: UBOS.
- UBOS (Uganda Bureau of Statistics) and ICF. 2017. *Uganda Demographic and Health Survey: Key Indicators Report.* Kampala, Uganda: UBOS and ICF.

- UBOS (Uganda Bureau of Statistics) and ICF. 2018. *Uganda Demographic and Health Survey*. Kampala, Uganda: UBOS and ICF.
- United Nations. 1976. *International Covenant on Economic, Social and Cultural Rights*. New York: United Nations. [chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.ohchr.org/sites/default/files/cescr.pdf](https://www.ohchr.org/sites/default/files/cescr.pdf).
- United Nations. 1981. *Convention on the Elimination of All Forms of Discrimination against Women*. New York. United Nations. [chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.ohchr.org/sites/default/files/Documents/ProfessionalInterest/cedaw.pdf](https://www.ohchr.org/sites/default/files/Documents/ProfessionalInterest/cedaw.pdf).
- United Nations. 2015. *Universal Declaration of Human Rights*. New York: United Nations. [chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.un.org/en/udhrbook/pdf/udhr_booklet_en_web.pdf](https://www.un.org/en/udhrbook/pdf/udhr_booklet_en_web.pdf).
- UNFPA (United Nations Population Fund) 2006. *Human Rights-Based Programming. What it is*. New York: UNFPA. https://www.unfpa.org/sites/default/files/resource-pdf/human_rights.pdf.
- World Health Organization. 2023. *Family planning methods*. <https://www.who.int/data/gho/indicator-metadata-registry/imr-details/3813#:~:text=Modern%20methods%20of%20contraception%20include,cap%20and%20spermicidal%20agents%2C%20lactational>.
- Zimmerman, L. A., D. O. Sarnak, C. Karp, S. N. Wood, C. Moreau, S. P. S. Kibira, and F. Makumbi. 2021. "Family Planning Beliefs and Their Association with Contraceptive Use Dynamics: Results from a Longitudinal Study in Uganda." *Studies in Family Planning* 52 (3): 241–58. doi:10.1111/sifp.12153.



**Health
Workforce**

7 Factors Affecting Health Workers' Ability to Reduce Peripartum and Postnatal Morbidity and Mortality in Uganda

JOLLY BEYEZA-KASHESYA AND OLIVIA NAKISITA

EXECUTIVE SUMMARY

Although the majority of the causes of maternal and newborn mortality and morbidity are preventable and treatable (Say et al. 2014), maternal and neonatal illnesses and deaths remain unacceptably high in Uganda (UBOS and Macro International 2007; UBOS and ICF 2012, 2018), especially during labor, delivery, and the immediate postpartum period (Mbonye et al. 2007; Say et al. 2014). In addition, whereas interventions that help save lives and improve the health of mothers and newborns are known, the quality of care for mothers during pregnancy and childbirth is poor due to the inadequate number of skilled health workers, delays in seeking care, ineffective referral systems, inadequate health equipment and supplies, and unresponsive health personnel (Bhutta et al. 2011; Cavagnero et al. 2008; Ridde, Meessen, and Kouanda 2011). This evidence raises two key questions that merit examination: (a) Why are health workers responsive or unresponsive to the provision of services that help reduce peripartum and postnatal death and morbidity in Uganda? (b) What should be done to enable health workers to deliver quality maternal and newborn health (MNH) services?

Study objectives

The study objectives were the following:

- Identify factors that enable health workers to deliver quality peripartum and postnatal health services in Uganda;
- Identify factors that hinder health workers from delivering quality peripartum and postnatal health services in Uganda; and
- Explore how health workers can be enabled to deliver quality peripartum and postnatal health services in Uganda.

Methodology

This cross-sectional study used a qualitative approach, namely, key informant interviews (KIIs), in-depth interviews (IDIs), and focus group discussions (FGDs), to collect data from MNH policy makers and program managers, health facility workers, and service clients, respectively. Altogether, 82 interviews (31 KIIs, 36 IDIs, and 15 FGDs) were conducted. To mitigate the risk of infection with COVID-19, all interviews were conducted virtually. The study was conducted in one National Referral Hospital (NRH), three Regional Referral Hospitals (RRHs), one General Hospital (GH), eight Health Centers (HCs) IVs, and six HC IIIs, which were purposively selected from six districts of Uganda: Kampala and Mukono, in the Buganda subregion, Mbale, in the Elgon subregion; Kyenjojo, in the Tooro subregion; Lira, in the Lango subregion; and Gulu, in the Acholi subregion. The health facilities were purposively selected to include rural and urban settings, a low and high volume of patients, the diverse types of available health workers, recipients and nonrecipients of results-based financing (RBF), public and private not-for-profit status, and sociocultural or subregional diversities. The study was approved by the National HIV/AIDS Research Committee and the Uganda National Council of Science and Technology (UNCST).

Key findings

The factors that enable health workers to offer quality peripartum and neonatal services included (a) a sufficient number of skilled health workers with a good cadre mix; (b) the availability of essential medicines, supplies and equipment, and clinical handbooks and protocols and guidelines; (c) sufficient salaries to financially sustain workers; (d) the use of RBF to reward quality service; and (e) mentorships and training opportunities. The factors that hinder health workers from offering quality services included (a) inadequate financing for health services; (b) weak leadership; (c) limited supplies and equipment; (d) a poor referral system; (e) lack of provider accommodation; (f) a poor work environment; (g) poor documentation and information systems; (h) inadequate staffing; (i) inadequate service delivery skills associated with limited on-the-job mentoring and coaching opportunities and workforce mix for MNH in health facilities; (j) lack of functional infrastructure, such as operating theaters and ambulances; (k) inadequate community education about MNH services; and (l) clients' lack of transport from home to health facilities.

Recommendations

To improve the quality of peripartum and neonatal health services offered by health workers in Uganda, the Ministry of Health (MoH) in partnership with the Ministry of Local Government and the respective local governments should consider the following recommendations.

Governance and leadership

- Periodically disseminate to health facilities any updated policies, MNH clinical handbooks, guidelines, standard operating procedures (SOPs), and protocols, particularly at the HC level. Coupled with dissemination of these resources, provide sensitization workshops to educate health personnel as well as to community stakeholders.

- Strengthen leadership and governance by providing both preservice and on-the-job training and mentoring to district health officers (DHOs) and health facility managers on how to lead and in management, including in the technical and administrative aspects of health facility management, to help develop skills essential for supervising and motivating people even in difficult circumstances.
- Enhance supportive supervision and provide an open forum for candid discussion of facility challenges, including encouraging the sharing of creative ideas on resolutions.

Financing

- Advocate for increased national budgetary allocations to the health sector and for a larger allocation to RMNCAH services within the MoH budget in alignment with disease burden, and fulfill the national commitments to increase the health budget from 8 percent to 15 percent
- Institute more-efficient resource utilization and accountability practices, especially from the government to service providers and from the service providers to the citizenry, to enhance the sector's absorptive capacity and provision of quality MNH services.
- Explore multiple health financing options, including scaling up performance-based financing (PBF) models, particularly those proposed in the National Health Financing Strategy, to facilitate health workers in delivering MNH services.

Health workforce

- Strengthen the health facility workforce in numbers and in skills by recruiting skilled health workers in maternity units and by engaging senior practitioners in on-the-job mentorships and providing supportive supervision to MNH workers.
- Standardize wages for those with similar qualifications and responsibilities and those offering MNH services as a team, and over time adjust remuneration to improve financial stability, job satisfaction, and quality of service.
- Institutionalize continuing medical education (CME) and mandatory in-school and on-the-job training for health workers in emergency maternal and neonatal service delivery.
- Explore the option to hire health workers with options to extend their employment and become permanent based on performance.

Essential MNH medicine and supplies: pharmaceutical procurement and supply chain management

- Increase investments in and train facility managers in pharmaceutical procurement and supply chain management. Devise ways for health managers to carry out emergency procurements for essential MNH medicines and supplies.
- Explore the use of performance-based pharmaceutical contracts with health facilities benefitting from RBF incentives to mitigate the persistent stock-outs of essential supplies and, if it works well, scale up this intervention to the other health facilities.

Infrastructure

- Provide the necessary medical equipment and supplies to operating theaters and blood banks to ensure the uninterrupted provision of comprehensive emergency obstetric and newborn care (CEmONC) services, particularly at the HC IV level.
- Sustain investments to provide or rehabilitate and equip maternity wards to ensure adequate space and resources for midwives and mothers, including lighting, toilets, and tap water to ensure hygienic care, and integrate antenatal care (ANC), delivery, immunization, postnatal care (PNC), neonatal care, and other relevant services.
- Provide for the construction and rehabilitation of staff accommodations, especially in remote areas, urban communities, and facilities with high patient volumes, considering public-private housing partnerships as an option.

Referral system

- Strengthen the MNH referral and ambulance system, particularly at the HC II, III, and IV levels by streamlining the referral mechanisms from the community to the various facilities, establishing referral coordination desks at HC IVs and higher-level facilities, setting up ambulance systems with requisite information and communication technology (ICT) equipment within districts, training health workers on new emergency medical services (EMS) tools, and educating the community on the referral and ambulance processes.

Data analysis, synthesis, and use

- Provide on-the-job training of health workers in the analysis of monthly service data and identification of issues for immediate action at the source.
- Improve the use of MNH data in the Health Management Information System (HMIS) by developing and providing to all health workers data management guidelines and clinical handbooks, as well as by training facility managers and service workers in data compilation, analysis, and use at the source.

INTRODUCTION

The World Health Organization (WHO) states that a simultaneous strengthening of service delivery, the health workforce, health information systems, access to essential medicines, financing, and leadership and governance would enable health facilities offer better services (WHO 2010). These “building blocks” work in different ways but synergistically contribute to better maternal and newborn outcomes. Hence, identifying and rectifying any conditions that impede performance or the implementation of high-impact interventions related to each building block would not only enhance the productivity of the health workforce (Porter 1985, 2008), but also the quality of services delivered.

Overview of MNH status

Globally, annual rates of maternal mortality have generally declined—from a total of 451,000 in 2000 to 295,000 in 2017, particularly in the high- and middle-income countries (Alkema et al. 2016; Kassebaum et al. 2014; WHO 2019a). However, as in other low-income countries in the Sub-Saharan Africa region,

Uganda has reported disproportionately high rates of maternal and newborn mortality and morbidity, despite a slight decline over the past two decades.

Maternal mortality in Uganda was 505 per 100,000 live births in 2001 and 336 per 100,000 live births in 2016 (UBOS and ORC Macro 2001; UBOS and ICF 2018). The neonatal mortality rate also gradually declined over the same period, falling from 33 per 1,000 live births in 2001 to 27 per 1,000 live births in 2016 (UBOS and ORC Macro 2001; UBOS and ICF 2018). Thus, Uganda failed to attain the Millennium Development Goal of a maternal mortality rate of 131 per 100,000 live births or a neonatal mortality rate of 12 per 1,000 live births by 2015.

Causes of suboptimal performance in MNH services

According to a WHO systematic analysis (Say et al. 2014), the majority of the causes of maternal deaths are preventable or treatable if the interventions known to save lives are implemented promptly. Yet a substantial reduction of maternal and newborn mortality and morbidity continues to elude Uganda (UBOS and ORC Macro 2001; UBOS and ICF 2018); the same holds for other low-resource countries (WHO 2019a). The high maternal and perinatal mortality and morbidity in Uganda is mostly attributable to low access to facilities, to inadequate staffing and skilled health personnel in MNH, and to the generally poor quality of services in health facilities (APROQUAH 2014; Bhutta et al. 2011; Cavagnero et al. 2008; Ridde, Meessen, and Kouanda 2011).

Studies in Uganda have shown that the largest proportion of deaths occurs during the first 48 hours after delivery (Mbonye et al. 2007; UBOS and IFC 2012, 2018). Because the majority of complications leading to the death are clustered around labor, delivery, and the immediate postpartum period (Mbonye et al. 2007; Say et al. 2014), the availability of skilled personnel and efficient emergency obstetric care (EmOC) services in the health facilities (Campbell and Graham 2006; Meda et al. 2008; WHO 2017) are crucial for maintaining quality services that prevent mother and newborn deaths (Bhutta et al. 2009; Bradshaw et al. 2008; Kidanto et al. 2009; Lawn et al. 2009).

However, the level of staffing and skilled health workforce in health facilities has remained low in Uganda (Kruk et al. 2016; Lutwama, Roos, and Dolama 2013; Waiswa et al. 2010), and this contributes not only to poor quality of care for mothers during pregnancy and childbirth, but also to the hesitance of some pregnant women to seek services from health facilities. Other factors contributing to high maternal and perinatal mortality and morbidity include delays in seeking care from skilled health workers; the low responsiveness of health workers, which diminishes the confidence of patients in the services provided; and the ineffective referral system, which not only impedes patients from reaching the health facilities at the opportune time but also limits their chance of survival (Bantebya 2003; WHO 2005).

Studies have further indicated that whereas skilled attendance at birth reduces maternal mortality and morbidity by 80 percent (Homer et al. 2014), especially if potential mothers access quality health care at the right time (WHO 2006), this practice is suboptimal in Uganda, partly due to the negative attitude of potential mothers toward the health care system. This attitude is due to the poor health facility environment and the lack of skilled health workers in them (Tashobya, Ssengooba, and Cruz 2006; Jayanna et al. 2014; Varghese et al. 2016); the existence of health workers without other supportive mechanisms in the facilities may not necessarily improve diagnosis and management of maternal and newborn complications (Varghese et al. 2016).

Other studies have shown that the delivery of poor-quality services during pregnancy and childbirth in Uganda is caused by four overarching problems:

- (1) ***Inadequate financing of the health sector.*** The lack of adequate financing not only limits the amount and quality of various services provided in the health care system, especially those directly linked to MNH owing to their high cost of inputs and the need for a skilled and well-motivated workforce, but also the availability of essential equipment, medicine, and supplies for labor and delivery. The latter hinders health workers from implementing interventions that are known to save lives, such as cesarean sections and kangaroo mother care (Alhassan et al. 2013; Dalili et al. 2015; Wyckoff et al. 2015).
- (2) ***Inadequate level and diversity of health personnel necessary to provide quality MNH services in virtually all health facilities.*** Inadequate staffing means that the few available health workers attend to many more patients than they should and work for long hours. The workers are also paid salaries insufficient to sustain decent accommodation and welfare. To achieve universal health coverage, the WHO recommends approximately 5 skilled health workers for every 1,000 inhabitants (Scheffler et al. 2016). However, the current health provider to population ratio in Uganda is 1 for every 1,000 people. Also, as much as qualified health workers are available, their recruitment is stifled by the prevailing staff establishment policies and norms established in 1999 (MoH 2018; Wemos and ACHEST 2019). Based on these health staffing norms, which are way below the ideal, the overall health-staffing level was 76 percent as of 2019 (UBOS 2019). In addition, the rural-urban differentials in filling the positions of health workers is marked, with 90 percent of the posts for health workers in Kampala filled, as compared with 53 percent of the posts in the rural areas, leaving many lower-level facilities with severe shortages of staff. Furthermore, the decentralization of management of the health care delivery system, which aimed to bring services to the people, which resulted in a category of health workforce employed by the central government and another category of health workforce that is employed by local governments, and each have different salary structures and work benefits (Tashoby and Ogwal 2004). As of 2019, the HC II facilities had the highest staff vacancy rate at 45 percent, followed by HC IIIs at 20 percent and HC IVs at 13 percent. Besides this, there are gender inequities regarding the placement of the health workforce in various positions. Whereas the health workforce in Uganda consists of more women (54 percent) than men (46 percent), there are more female enrolled nurses, at 94 percent, as compared with male enrolled nurses, at 6 percent, and the majority of senior positions are filled by men, with 67 percent of positions at the District Health Office level filled by men and 80 percent of senior medical officers' positions filled by men (WHO 2019b).
- (3) ***Lack of essential skills among most of these health workers.*** This particularly concerns midwives and doctors in lower-level health units and their ability to save lives during labor and delivery and their lack of motivation through either on-the-job mentorships and training opportunities or regular supervision. The latter, in turn, negatively impacts their attitude and professionalism (WHO 2015).
- (4) ***Persistent weaknesses in the governance and leadership of the health sector.*** The persistent weaknesses in the leadership of the health sector, especially at the national and local levels, has led to the enactment of

inappropriate policies and interventions regarding the welfare of health workers, the recruitment of personnel into health management positions who lack the requisite competencies, and the inefficient use of the limited financing for health services (Cavagnero et al. 2008; Sambo, Kirigia, and Ki-Zerbo 2011). The combination of factors presented contributes to the high maternal mortality ratios in Africa (Sambo et al. 2011; Serbanescu et al. 2017).

Objectives of the study

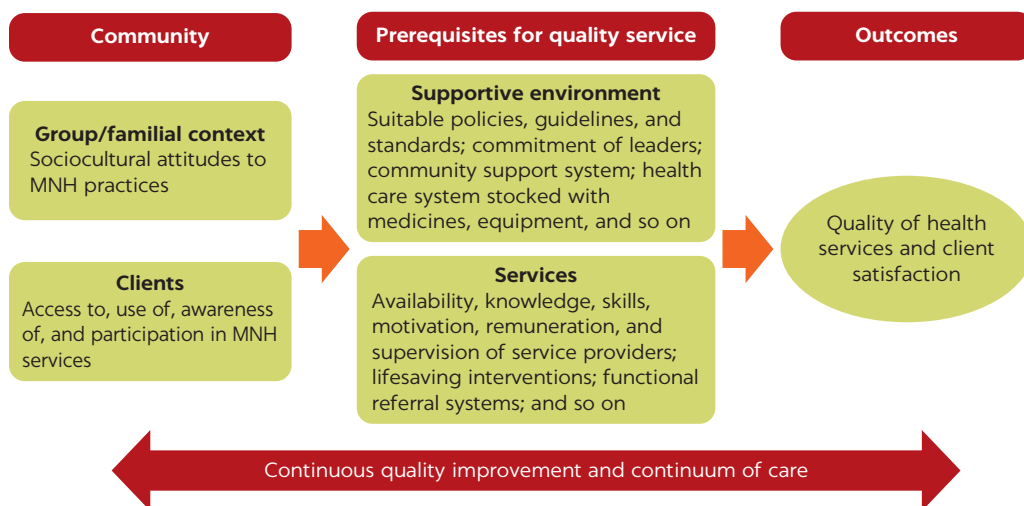
The evidence discussed earlier raises two key questions that merit examination: (a) Why are health workers responsive or unresponsive to the provision of services that help reduce peripartum and postnatal death and morbidity in Uganda? (b) What actions should be taken to enable health workers to deliver quality MNH services? On this basis, this study aimed to establish the factors that enable or hinder health workers in their effort to provide quality peripartum and postnatal services and the actions needed to enable health workers to deliver quality MNH services that reduce mortality and morbidity in Uganda. The specific objectives were the following:

- Identify factors that enable health workers to deliver quality peripartum and postnatal health services in Uganda;
- Identify factors that hinder health workers from delivering quality peripartum and postnatal health services in Uganda; and
- Explore how health workers can be enabled to deliver quality peripartum and postnatal health services in Uganda.

Conceptual framework

This study was guided by the conceptual framework of factors that affect MNH service delivery as shown in figure 7.1, which borrows from the general framework for continuous quality improvement and the continuum of care in

FIGURE 7.1
Conceptual framework of factors that affect MNH service delivery



Source: This figure is original to this publication.
 Note: MNH = maternal and newborn health.

Uganda (Kaplan et al. 2012) and for health sector reform and public sector health worker motivation (Franco, Bennett, and Kanfer 2002). The conceptual framework asserts that improved quality of and client satisfaction with health services is dependent on a conducive policy environment, the quality and motivation of available health service providers, a supportive community and family context, and clients' knowledge of, attitudes toward, and participation in the MNH services.

The specific variables for consideration include the sociocultural conditions in the community and family; clients' awareness of, access to, and participation in MNH services; the existence of suitable policies, guidelines and standards; the commitment of leaders and community support systems for MNH; the availability of health care equipment, medicine, and supplies; the existence of well-skilled, well-paid, and well-motivated service providers; the delivery of lifesaving interventions, such as EmoC; and a functional referral system. These variables combine to increase skilled attendance at birth and reduce the number of maternal and neonatal deaths.

METHODOLOGY

This section describes the design, sites, study population, sampling strategy, data collection methods and tools, data analysis approach, and limitations of the study.

Study design

This cross-sectional study used a qualitative approach, namely, KIIs, IDIs, and FGDs, to collect data simultaneously from MNH policy makers, managers, providers, and clients.

Study sites

The study was conducted in one National Referral Hospital (NRH), three Regional Referral Hospitals, one General Hospital, eight HC IVs, and six HC IIIs selected from six districts of Uganda, namely, Kampala and Mukono, in the Buganda subregion; Mbale, in the Elgon subregion; Kyenjojo, in the Tooro subregion; Lira, in the Lango subregion; and Gulu in the Acholi subregion. Kampala was included because it is the location for the MoH headquarters, for all NRHs, and for most of the national-level stakeholders in MNH. The districts of Mbale, Mukono, and Lira were selected because they had participated or were participating in PBF programs intended to address some of the bottlenecks in MNH and maternal and child health (MCH) service delivery. Kyenjojo district was chosen because it had supply-driven RBF from the Belgium Technical Cooperation, while Gulu district was included because it received RBF from the demand-driven Uganda Voucher Plus Activity, a project funded by the United States Agency for International Development. Health facilities were purposively selected to ensure rural and urban setting, low and high volume of patients, the diverse types of available health workers, recipients and nonrecipients of results-based financing, public and private not-for-profit status, and sociocultural or subregional diversities. Table 7.1 shows the distribution of districts and health facility sites involved in this study.

TABLE 7.1 Distribution of study sites, by region, district, and rural or urban setting

REGION AND DISTRICT	SETTING	HEALTH FACILITIES
Acholi (Gulu)	Urban	Gulu RRH
	Rural	Pabwo HC III, Awach HC IV
Buganda (Kampala)	Urban	Komamboga HC III, Kisenyi HC IV, St. Stephens Mpererwe HC IV, Kawempe NRH
Buganda (Mukono)	Urban	Mukono (COU) HC IV, Mukono HC IV
	Rural	Goma HC III
Elgon (Mbale)	Urban	Mbale RRH
	Rural	Bungokho Mutoto HC III, Busiu HC IV
Lango (Lira)	Urban	Lira RRH
	Rural	Aromo HC III, Ogur HC IV
Tooro (Kyenjojo)	Urban	Kyenjojo General Hospital
	Rural	Bititi HC III, Kyarusozzi HC IV

Source: This table is original to this publication.

Note: HC = Health Center; NRH = National Referral Hospital; RRH = Regional Referral Hospital.

Study population

The study was carried out among MNH policy makers, development partners, and program managers, as well as health facility managers, service providers, and clients seeking maternity services. Participants were purposively selected using a maximum variation strategy to ensure a diversity of views among them (Patton 2002).

National policy makers and development partners for MNH, district health administrators, and health facility managers were individually contacted for interviews on general aspects related to the provision of MNH services. Health service providers working in the selected health facilities who were deemed informative, especially the maternity ward in-charges or leaders, were also selected for in-depth, open-ended questioning according to a semi-structured interview guide. In addition, other MNH service providers (registered nurses and midwives) and clients who were knowledgeable and directly participated in the maternity services were selected for an in-depth discussion to obtain their opinions on several aspects related to the quality of offered services. Table 7.2 shows research participants by MNH agency, role and department, research method, and sample size.

Demographic characteristics of research participants

Of the 67 research participants with whom KIIs and IDIs were conducted, 46.3 percent were men and 53.7 percent were women. All focus group participants were women. The age range of the key informant and in-depth interviewees was 18–64 years, with the majority ages 35–44. All 72 participants recruited for the 15 separate focus group sessions were women ages 18–44, with the majority of them ages 25–34 (43.1 percent), resident in a rural area (67 percent), working as a nurse or midwife (52.2 percent), and educated to the tertiary level. Table 7.3 presents the demographic characteristics of research participants for each data collection method used.

TABLE 7.2 Research participants, by MNH agency, role and department, and research method

AGENCY	ROLE AND DEPARTMENT	RESEARCH METHOD	NO.
MoH	Director of health services	KII	1
	Heads of Reproductive Health and Child and Adolescent Health divisions	KII	1
	Members of MCH Technical Working Group and National Newborn Steering Committee	KII	1
MNH development partners	MNH focal persons for World Bank, UNFPA, UNICEF, USAID, and Save the Children	KII	4
NRH	Director, administrator, child in-charge, and maternity in-charge	KII	1
	Health service providers	IDI	2
	MNH client	FGD	1
Academia and professional associations	Makerere University Departments of Obstetrics and Gynecology, and Pediatrics	KII	2
	Makerere University School of Public Health	KII	-
	Association of Obstetricians and Gynaecologists of Uganda, Uganda Paediatric Association, and Uganda Medical and Dental Practitioners Council	KII	3
3 RRHs	Directors and administrators	KII	5
	Child in-charge, maternity in-charge	IDI	2
	MNH service providers	IDI	3
	MNH clients	FGD	3
District Health Teams	Health officers	KII	4
8 HC IVs (3 rural based, 3 urban based, 1 involved in Voucher Plus RBF program, 1 involved in Enabel RBF program)	Facility in-charges	KII	9
	Maternity in-charges	IDI	5
	MNH service providers	IDI	7
	MNH clients	FGD	6
6 HC IIIs (4 involved in URMCHIP RBF program, 1 involved in Voucher Plus RBF program, 1 involved in Enabel RBF program)	Facility in-charges, maternity in-charges	IDI	11
	MNH service providers	IDI	6
	MNH clients	FGD	5
Totals		KIIs	31
		IDIs	36
		FGDs	15

Source: This table is original to this publication.

Note: FGD = focus group discussion; HC = Health Center; IDI = in-depth discussion; KII = key informant interview; MCH = maternal and child health; MNH = maternal and child health; MoH = Ministry of Health; NRH = National Referral Hospital; RBF = results-based financing; RRHs = Regional Referral Hospitals; UNFPA = United Nations Population Fund; UNICEF = United Nations Children's Fund; USAID = United States Agency for International Development; URMCHIP = Uganda Reproductive, Maternal, and Child Health Services Improvement Project.

Data collection methods, tools, and procedures

All information collected through the literature review, interviews, and FGDs was triangulated and based on answering the three objectives of this study (Patton 2002; Polit and Beck 2004).

Review of relevant literature

To begin, relevant literature published online and MNH program documents posted on the websites of various international and local organizations were obtained and searched for information regarding the provision of MNH services

TABLE 7.3 Demographic characteristics of research participants (*N* = 67)

VARIABLE	KII AND IDI PARTICIPANTS		FGD DISCUSSANTS	
	<i>n</i>	%	<i>n</i>	%
Gender				
Women	36	53.7	All female	100
Men	31	46.3		
Age group				
<18–24 years	0	0	25	38.5
25–34 years	11	16.4	28	43.1
35–44 years	32	47.8	11	16.9
45–54 years	14	20.9	01	1.5
55–64 years	10	14.9		
Setting of residence				
Rural	20	29.9	48	66.7
Urban	47	70.1	24	33.3
Specialty of health worker				
Medical officer or specialist	19	28.3	-	
Registered nurse or midwife	35	52.2		
BSCN or midwife	1	1.5		
Comprehensive nurse or midwife	8	11.9		
Enrolled midwife	3	4.5		
Medical assistant	1	1.6		
Period in service	2–35 years, mean 13.0 years			
Level of education				
Secondary	1	1.5		
Tertiary	46	68.6		
University	20	29.9		

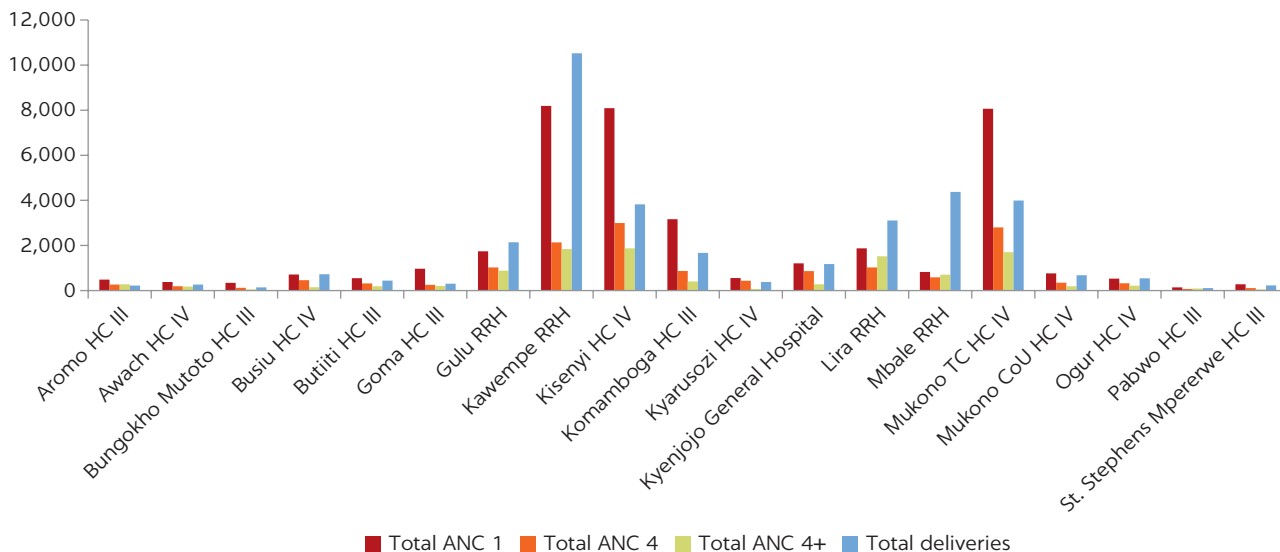
Source: This table is original to this publication.

Note: BSCN = Bachelor of Science in nursing; FGD = focus group discussion; KII = key informant interview; IDI = in-depth interview.

in Uganda and elsewhere. The published and unpublished literature examined are provided in the reference section of this chapter. To further understand the workload of maternity services at the various participating health units, the study examined the HMIS data on ANC and deliveries. Figure 7.2 shows ANC and deliveries for July–December 2019.

KIIs

KIIs were held with MNH policy makers and program managers, development partners, and district health administrators and facility managers. The aim was to obtain information on different aspects that affect the provision of quality care, such as the existing MNH policies and guidelines, equipment and medical supplies, and the health care providers' staffing levels and working environment. Questions on the working environment covered existing training and mentorship opportunities, salary levels and other incentives, and supportive supervision. Other topics included challenges to the delivery of quality MNH services and suggestions for delivery of quality MNH services. The interviews followed procedures stipulated by Kitzinger (2005) and behavior change procedures stipulated by Michie, Atkins, and West (2014).

FIGURE 7.2**Antenatal care visits and deliveries at all study facilities, July–December 2019**

Source: This figure is original to this publication.

Note: HC = Health Center; RRH = Regional Referral Hospital.

IDs

IDIs were conducted with MNH service providers (that is, maternity in-charges, registered nurses, and midwives) who are knowledgeable and directly involved with delivery and neonatal care. The purpose was to obtain specific data on their knowledge, lifesaving skills, and work environment, including remuneration and motivation, available MNH service requirements, the referral system, and service delivery challenges and suggestions for addressing them.

FGDs

FGDs were held with clients of MNH services to obtain in-depth information on their own and their counterparts' experiences, understanding and perceptions of the MNH services provided or received (Dahlgren, Emmelin, and Winkvist 2004; Taylor 2005), the reasons for satisfaction and dissatisfaction with the quality of services, and views on improving their quality.

Research instruments

Semi-structured questionnaires were developed and used to guide the interviews and discussions with the different research participants. They consisted of the KII guide, the IDI guide, and the FGD guide.

The KII guide contained questions about the availability of MCH standards and clinical guidelines handbooks, maternity infrastructure, equipment, and medicine and supplies; community awareness and participation in MNH services; the level of staffing and training of MNH care providers and their competencies, remuneration, and motivation; the MNH supervision and referral system; factors affecting the availability and quality of MNH services; challenges and opportunities for MNH service provision; and suggestions for improving the quality of MNH services, especially in terms of health facility leadership,

governance, and restructuring as well as health service providers' training, remuneration, and motivation.

The IDI guide contained questions about the maternity service provider's views on their lifesaving skills, work environment, remuneration, motivation, MNH service requirements, referral systems, and service delivery challenges and suggestions for addressing them.

The FGD guide posed questions about the clients' experiences, understanding, perceptions, and assessment of the MNH services offered in the health facilities; their specific concerns regarding the MNH service environment and quality of the available services; their reasons for satisfaction and dissatisfaction with the services; and their views on improving the quality of MNH services. The interview and discussion guides were pilot tested among MNH managers and service providers in a district that was not part of the actual study and were revised based on the comments obtained from the pilot test.

Methods and procedures

To prevent the spread of COVID-19, all data for this study were collected virtually in accordance with the national guidelines for conducting research during the pandemic (UNCST 2020). To begin with, the research team was trained in the virtual means of data collection during the pilot testing phase of the research instruments. After training the research team, the investigators obtained from the MoH the names and contacts of MNH policy makers, development partners, program managers, and health officers and focal persons of the districts involved in the study. Each was individually telephoned, informed about the study, and requested to provide a convenient interview date and time. The contacts were called again on the requested date and interviewed by an investigator.

Afterward, DHOs and MNH focal persons were requested to provide names and contacts of managers of the selected health facilities, and each was individually contacted on the appropriate date and time for verbal informed consent and the interview. Then, each health facility manager was requested to provide the names and contacts of the maternity in-charge and service providers. These contacts were separately telephoned, informed about the study, asked for informed consent, and interviewed. At the end of the interview, each individual was thanked and asked to provide the names and contacts of service providers and clients in the maternity clinics who were knowledgeable about MNH, from which groups of six to eight individuals were selected. These contacts were called and informed about the purpose of the study, and those who agreed to participate were invited to separate virtual focus group meetings on an agreed date and time to discuss the research questions.

During each interview, participants were telephoned and asked to find a convenient, quiet, and private place to sit. They were respectfully greeted, again told the purpose and procedure of the study, and asked if they still wanted to participate.

Each FGD session consisted of six to eight participants, as well as a moderator and a notetaker who were conversant in the local language of the participants. Each person participated remotely. Before each session, the moderator (a) telephoned the notetaker and the selected participants to ascertain their availability and provide guidance on how to participate in the discussions using a telephone or other virtual means, (b) briefed them on the study, (c) requested participants to use the allocated numbers or their titles instead of names during the conversations, and (d) asked each participant to consent again verbally. The moderator then began the discussion as the notetaker listened carefully and helped write

and audio-record the proceedings (Allen 2013; Barbour and Morgan 2017; Smith, Sullivan, and Baxter 2009). At the end of each session, participants were allowed to ask questions and thanked for agreeing to participate in the discussions.

Data analysis

All interviews were conducted in English except the FGDs, which were conducted in a local language understood by the selected maternity clients. Data from the FGDs, IDIs, and KIIs were transcribed verbatim, and the FGDs were also translated into English. Inductive and deductive approaches were used to analyze all data.

First, a codebook was prepared using a priori themes determined based on the literature, the conceptual framework, and study objectives. Afterward, new themes were added as they appeared during data analysis. Second, data were coded through the identification of meaningful phrases that were later grouped to form codes. Here, codes were grouped to form categories, and the categories then grouped to form the emerging themes. Third, manifest content analysis was used to identify key themes within the data and to obtain an in-depth interpretation of the text to understand the factors that may enable or hinder health workers' efforts to deliver MNH services. Fourth, recommendations on how to support health workers to deliver MNH services effectively were identified from the interviews (Graneheim and Lundman 2004; Holloway 2008), and quotes representing typical views expressed by the participants were extracted to illuminate the factors that enable or deter health workers to deliver quality services.

Ethical considerations

This study was approved by the National HIV/AIDS Research Committee under Institutional Review Board Reference no. ARC 224 and UNCST Reference no. SS5255. Collection of data followed guidelines approved by the UNCST (2020) for conducting research in the context of the COVID-19 pandemic. All participants gave verbal consent before the interviews, each of which was conducted in a language well understood by the participant.

Study limitations

Because the data for this study were collected using the telephone, some knowledgeable clients without access to a telephone had to be excluded. In addition, this means of data collection not only made it difficult for researchers to observe participants' nonverbal cues to help gauge the veracity of their responses but also for some respondents to provide some information for fear that others may listen in to the conversations, which hindered free and in-depth discussion of some questions and responses. Furthermore, the health policy makers, managers, and workers involved in this study were interviewed when they were busy preparing their end-of-year reports. Therefore, some devoted little time to the interviews, which negatively affected the depth of the information provided. Moreover, given that this study delved into MNH service aspects that are administratively sensitive, some participants felt uncomfortable freely discussing the questions and seemed to have given socially desirable answers. These methodological challenges may have caused the loss of some useful information and influenced the study findings.

This study used exclusively qualitative methods and small, purposely selected samples of key research participants to examine the factors that enable or hinder delivery of quality MNH services by health providers. In view of this, the findings of this study may not be generalizable but does provide important qualitative information on the experiences and opinions of MNH health workers and clients regarding the reasons for the suboptimal provision of quality MNH services and offers suggestions for improvement.

FINDINGS

Findings include the factors enabling and hindering the delivery of quality MNH services.

1. Factors enabling the delivery of quality MNH services

Objective 1 was to identify the factors that enable health workers to carry out quality peripartum and postnatal health services in Uganda. The study identified the following factors, grouped under broad thematic areas.

Governance and leadership

Findings related to governance and leadership included having policies and guidelines for MNH service delivery, as well as effective facility-level leadership.

Existence of policies and guidelines for MNH service delivery. The MoH has developed and disseminated national policies, guidelines, SOPs, and simplified handbooks for clinical management of maternal and neonatal conditions. In general, these resources were more readily available and accessible at the hospital level than at lower levels of care. MNH and MCH health workers in these contexts reported that these resources provided clear guidance on how to identify and manage pregnancy-related conditions as well as complications in newborns. Respondents interviewed at the hospital level made observations similar to that made by this interviewee:

We received some MNH guidelines and handbooks from various partner agencies which support us in the provision of MNH service. One of the partner agencies bought and gave us some copies of a handbook titled “Clinical Guidelines” that outlines all MNH conditions and how they are managed . . . And their technical officers trained us on how to use them to manage specific conditions and complications in the pregnant mothers . . . This book is useful, but the available copies are not enough to cover all health workers in this facility. —IDI with a medical officer

Effective facility-level leadership. A key driver of health worker performance at the facility level was noted to be strong and effective facility-level leadership. In instances in which a facility had skilled leadership, staff were more likely to perform better—in spite of the typical limitations (for example, low financing, high workload, and limited supplies) prevalent in health facilities. Strong leaders managed to instill a culture of discipline and accountability as well as to boost staff morale, as one DHO confirmed:

Aah, as an in-charge, I have tried to create an environment where staff feel free to work and [I] provide them with break tea, drinking water, [and] their allowances, and then they keep working well. —KII with a district health officer

Competent and motivated health workforce

Findings related to the health workforce included training, mentorship, and workplace incentives.

Availability of training and mentorship. Respondents noted that the acquisition of new skills enhanced the quality of services provided. This finding concurs with some other studies in Uganda that found that mentorship enhances the capability and confidence of health workers in handling MNH emergencies (CDC 2014). Two common options identified for training were on-the-job or CME and offsite advanced training to upgrade qualifications. Most referral hospitals had skilled personnel who provided mentorship opportunities and supervision to health workers in lower-level health facilities on MNH service delivery. On-the-job mentorship by skilled personnel within the health facilities helped improve the MNH skills of newly recruited and inexperienced health workers.

Similarly, the provision of scholarships for specialized fields was also an important incentive and driver of both health worker motivation and satisfaction. Development partner funding has been an essential resource for financing and professional development especially in rural areas, as one midwife pointed out:

Implementing partners usually help us in capacity building. They give us updates and mentorships and ask other people to come and support our facility.” —IDI with a midwife

Existence of workplace incentives for health workers through PBF initiatives. At the health facilities with PBF programs, some of the resources allocated through these schemes were used to procure additional supplies and equipment, assess performance against agreed-on indicators and targets (aligned with sectoral and national targets), train health workers, and enhance performance in service delivery areas where the country faces the most significant challenges. These additional resources, although minimal, helped reward providers for measurable improvements, which served to motivate staff and also support better MNH and MCH service delivery at the front lines.

The introduction of RBF with staff getting some incentives, and also the autonomy in getting the RBF for staff to plan for themselves and [to purchase] what they lack in the health facility, plus the supplementation of the additional medicines or supplies that can be purchased with that fund have greatly motivated staff to do their work. —KII with a policy maker

Availability of essential MNH medicine and supplies

The health workers in facilities that had stocks of essential medicine and supplies did not require patients to buy either and were able to provide timely MNH services to patients, as compared with those facilities that were without readily available medicine and supplies, as many maternity health workers suggested in the FGDs. The following comments were typical of their concerns:

It is not possible to ensure delivery of quality MNH services to mothers and newborn babies without a steady supply of essential drugs and supplies . . . The essential medicines and supplies for MNH must be provided regularly to the health facilities and in sufficient quantities so that mothers

who come to deliver are not asked to buy the medicines and supplies before they are attended to. —KII with a policy maker

They are supposed to help us with the medicine. Sometimes they write for you that you go and buy this kind of medicine, and you go to the pharmacy, you find the price of medicine is [high], and you don't have money. —FGD with a client of MNH services

Existence of staff housing and other amenities

Health facilities with amenities that facilitate the delivery of MNH services—such as laboratory, imaging, and anesthesia facilities with trained personnel—were able to provide real-time examination and identification of the causes of risks in clients before the initiation of treatment. In addition, health workers who had living accommodations within the health facility tended to be more flexible, more likely to report to duty on time, and better motivated to carry out their duties.

Involvement in PBF

Health facilities that had participated or were currently participating in PBF schemes—such as the Uganda Reproductive Maternal and Child Health Services Improvement Project, the Uganda Intergovernmental Fiscal Transfers Program, and the Uganda Reproductive Health Voucher Project—faced only infrequent challenges in procuring and maintaining sufficient quantities of essential medical equipment, medicine, and supplies for MNH care, as compared with those not participating. Similarly, health workers and clients in the health facilities participating in RBF tended to be more satisfied with the quality of MNH services offered. These findings point to the effectiveness of the RBF intervention in improving service delivery. The majority of the maternity in-charges, registered nurses, and midwives who were interviewed reported relief from the persistent stockouts of supplies and medicine.

We no longer have shortages like back in the day because of lack of funds. Those days a mother would come without gloves, and you would tell her to go and get gloves . . . She would think that gloves are there and should be given for free. She thinks you are asking for money from her. Because of the RBF fund we stock our things, and such instances no longer happen.”
—IDI with a midwife

2. Factors hindering the delivery of quality MNH services

Inadequate financing

Despite the slight increase in domestic health financing over the past 10 years, funding has consistently been suboptimal and is a major factor hindering health workers from delivering effective MNH services. Insufficient health financing has not only negatively affected the training, staffing levels, diversity, remuneration, and motivation of health workers, but has also hindered the availability of sufficient quantities of the equipment, medicine, and supplies required to manage life-threatening maternal and neonatal complications in labor, delivery, and post-delivery. This issue has also hindered creating effective laboratory, emergency obstetric, and referral services in health facilities, thereby harming the overall quality of MNH services. One respondent noted,

Financing of health services also plays a very key role in enhancing the service provision. So, you may find in a health facility you don't have . . . equipment for examining the mothers; some facilities you even find that they are lacking surgical gloves, whereby someone comes, it's an emergency, the mother has come to deliver, but you are still sending the attendant to go and buy the gloves from a very long distance . . . Where the staff doesn't have gloves to put on, even if it is your relative delivering, . . . you cannot [take the] risk because of fear for your life. —KII with manager of a RRH

Weak governance and leadership

Findings related to weaknesses in governance and leadership included not having updated guidelines and experiencing challenges with facility-level leaders.

Availability of updated guidelines. Although the MoH has put in place national policies, guidelines, and SOPs for delivering MNH services to health facilities, these were last updated in 2016, and the revised handbook for MNH clinical guidelines was not widely disseminated. Most of the MNH health workers involved in this study reported a dearth of simplified SOPs and handbooks that they could consult for clinical diagnosis and the care of various maternal and neonatal conditions. They therefore largely relied on what they had learned in formal training to carry out MNH services.

Facility-level leadership. There are weaknesses in governance and leadership of the health facilities that undermine the effective delivery of quality MNH services, including insufficient supervision and performance appraisal of health managers and health workers, inadequate skills in leadership and management of MNH services among the in-charges of health facilities and maternity wards, and only irregular dialogues or meetings for health workers and clients to discuss and receive feedback on the quality of services. The governance and leadership weaknesses have contributed not only to an “I don't care” attitude and casualness toward work among some health workers, but also to deaths of mothers and newborns due to preventable causes and conditions. This finding concurs with those from several other studies that found that good governance and leadership among health managers is needed from policy making through the implementation and accountability stages of the health care delivery system to ensure availability, sufficiency, equity, and efficiency in the use of the resources required for the delivery of quality services (Cavagnero et al. 2008; Sambo et al. 2011).

Health workforce challenges

Findings related to challenges with the health workforce included staffing shortages, workers' lack of skills and diversity, workers' poor attitude and unprofessional behaviors, and low or incommensurate staff remuneration.

Staffing shortages. Health workers in Uganda are hired based on the human resources recruitment norms of 2001, which specify the cadres, numbers, and qualifications of the workforce required at the various levels of the health care delivery system. The stipulated health staff establishment was informed by the grade and services of the health facilities as well as by the estimated size of the population in the facilities' catchment areas. Although the package of services offered and populations served by the health facilities have increased, the staffing norms have not been updated to reflect the growing population or emergent health programs in the maternity wings, such as HIV/AIDS treatment

(including its subcomponents of prevention of mother-to-child transmission, antiretroviral therapy, and early infant diagnosis [EID]), ANC, PNC, post-abortion care, and family planning. Hence, all sampled health facilities have few health workers who serve a large number of clients seeking routine MNH and other services. This issue has not only increased the health workers' workload, hours on the job, fatigue, and burnout but has also led to diminished productivity. In some of the sampled HC IV facilities, there was no anesthetic officer to carry out emergency cesarean sections, so all affected mothers were referred elsewhere. Also, some health workers reported for duty late, causing a backlog of waiting clients and hurried assessments, which in turn harmed the quality of services delivered. One manager of a sampled health facility pointed out,

We do not have adequate numbers of staff in our health system to deal with all [MCH] concerns during the labor and delivery period. We have only 2 midwives in the health facility and serve at least 100 mothers each day. They work day and night and rarely have a rest or leave. Besides registering all clients and periodically updating the service registers, they provide ANC, PNC, EID care, family planning, immunizations, and other services to clients. This work is too much . . . so they at times break down and fail to report for duty . . . The number of health workers should be increased.
—KII with a health policy maker

This finding confirms earlier studies that found that most health facilities in Uganda had only a few health workers attending to a large number of mothers and newborns. Hence, these workers experience immense fatigue and frustrations, which can manifest through rudeness and an uncaring attitude toward clients (Kruk et al. 2016; Lutwama et al. 2013; Mbaruku et al. 2014; Mubyazi et al. 2012; VSO 2014; Waiswa et al. 2010).

Health worker skills. The research participants noted that although the professional development of health workers through CME, mentorship, and supervision has proved effective in building lifesaving skills, what they learn is not widely practiced in most health facilities. In addition, the majority of health workers providing MNH services in the maternity and pediatric wards are midwives and physicians who have completed their general training recently and have not received any mentorship or extra training in maternal and neonatal clinical care. As such, these workers lack the skills and confidence to effectively perform lifesaving labor, delivery, and newborn interventions, particularly cesarean sections and neonatal and emergency obstetric care—the two most critical MNH care components for reducing maternal and newborn mortality and morbidity (Campbell and Graham 2006; Meda et al. 2008; Souza et al. 2013). This finding mirrors those from other studies of Sub-Saharan Africa countries that found that poor quality of care due to the absence of skilled health personnel during pregnancy and childbirth contributes to the high rate of maternal and neonatal mortalities (Bustreo et al. 2013; Gilmore and Gebreyesus 2012; WHO 2015).

Health worker cadre mix. A general lack of diversity characterizes the health worker cadre mix, particularly at the HC III and IV levels. Most of these health facilities lack the medical specialists, anesthesia personnel, and advanced care nurses needed to manage medical complications, yet they are located close to the communities where a larger load of MNH clients reside. Hence, some mothers and newborns die due to complications they otherwise would have survived (Kidanto et al. 2009; Waiswa et al. 2010; Wall et al. 2010).

If we had a doctor maybe we wouldn't have referred unless, really the mother needs the referral. —IDI with midwife at a HC III

Attitude and professionalism. Whereas most of the clients observed that health workers in the maternity wards periodically checked and discussed their condition, some health workers exhibited a low commitment to work and a nonchalant attitude. Respondents noted that some staff reported late for work, served only a few clients, offered minimal consultative time, responded rudely when asked for emergency assistance, left the maternity wards early, and went to private clinics (for additional work and compensation, referred to as *locum*).

We are required to come for antenatal services at 9 am. Now when you report at 9 am, you can wait till midday without any health worker attending to you. —FGD with a client of MNH services

So, patients say that these “people don't even give a smile.” You are few, you are tired, how do you attend to everybody, and how do you even smile! —IDI with a medical officer

The negative attitudes and behaviors of health workers deter some clients from seeking MNH services. This finding corroborates those of earlier studies that found that perceived mistreatment by health workers discourages mothers from accessing health care services during labor and delivery (Bohren et al. 2014; Freedman and Kruk 2014; Kruk et al. 2014; Sacks and Kinney 2015).

Low and incommensurate remuneration for staff. Respondents noted that while health care positions tend to offer greater stability, roles in government facilities offer considerably lower remuneration. This makes it increasingly difficult for workers to provide for household and family needs and thereby contributes to the practice of working in private facilities. Therefore, some health workers, particularly the senior physicians in public health facilities, provide MNH services in different private health facilities to obtain extra income to address their needs. This practice has not only worsened their concentration and efficiency, but also has undermined the quality of MNH services offered in both health facilities. One MNH specialist noted,

If you are to be at your station in [name of hospital] for 24 hours, and then [your] child is going to [school name], and you cannot pay, it becomes really difficult. So, you end up breaking the professionalism of checking on the patient for the second time in a day the way it was, and you end up sharing the day with a colleague so that you can go to [work] elsewhere . . . But no doctor is interested in driving from [a public hospital] to [private hospital] in those potholes and [traffic] jam, nobody. —IDI with a specialist

Results further indicate that whereas some health workers, especially physicians, nurses, and midwives, have upgraded their initial qualifications, and some have been assigned high positions in the health service structure, the professional bodies, such as the nursing and medical councils, have not intervened to ensure that these workers' salaries are adjusted to be commensurate with that training. For instance, many physicians working as specialists were being remunerated as medical officers. This issue discouraged some from carrying out their work effectively.

Poor availability of essential MNH medicine and supplies

The health facilities, especially HC IIs, IIIs, and IVs, experience persistent shortages of the equipment, medicine, and supplies necessary for proper MNH

care, and the mothers are, in most cases, too poor to buy the missing commodities themselves. This shortage has hindered health workers from carrying out lifesaving interventions in labor and delivery and has led to preventable maternal and newborn deaths. Participants in KIIs and IDIs noted that clients are often requested to buy the unavailable medicine and supplies from private pharmacies and provide them to health workers during labor and delivery. However, some clients cannot afford these and either opt out or report to health facilities without them, which leads to death. One respondent stated,

We do not have everything needed to help my clients give birth safely . . . Sometimes there are no gloves, cannulas, catheters, syringes, sutures, and medicines to stop bleeding in the facility. In such instances, we tell the clients to buy and bring the missing supplies before they are assisted . . . What else can I do in such circumstances? —KII with a manager of an RRH

Other FGD participants had experienced a similar situation, including one who stated,

The main problem we face here is lack of essential medicines and supplies for labor and delivery . . . Sometimes the health workers write for each of us the requirements for labor and delivery and advise us to go to the pharmacy and buy them. But some of us fail to buy all of them due to lack of money . . . So we are assisted through labor and delivery without some of the requirements . . . Some of us survive and others die. —FGD with a client of MNH services

In addition, respondents noted instances where health workers could not conduct a proper diagnosis of complications, emergency cesarean section deliveries, and obstetric care due to a lack of essential laboratory and theater equipment and supplies, such as blood count machines, ultrasound and other imaging equipment, oxygen cylinders, and anesthetic medicine. This issue has led to preventable deaths of mothers and newborns in various health facilities. One health worker in charge of maternity in a health facility pointed out,

Sometimes, we lack essential theater equipment, anesthetic drugs, and other supplies that we use to assist mothers in labor and delivery. So, they are requested to buy and bring them to the facility . . . The women who do not bring the required items sometimes encounter prolonged labor, and we cannot carry out a [cesarean section] without those items. So, some of them unfortunately die together with their babies, which is very disheartening to us. —IDI with a specialist of MNH services

In addition, one policy maker stated,

Of course, telling a mother go and buy a cannula, go and buy a catheter, go and buy syringes, go and buy gloves; sometimes there are no sutures in theatres, you tell the mother [to buy them]; sometimes sundries and drugs are a problem because of running out of stock due to [large] numbers [of women seeking MNH services from health facilities] —KII with a policy maker

This last assertion was further corroborated by interviews with a medical officer in a health facility maternity ward, who observed,

Medical drugs and supplies often run out in this facility, and whenever it occurs, the clients are requested to buy the missing supplies. But many

clients [cannot] afford the supplies and equipment because they are so poor . . . There is a need to train facility managers in supply chain management, provide sufficient funding, and ensure timely procurement and supply for MNH medicines, supplies, and laboratory equipment, including X-ray services, to enable quick investigation of MNH conditions and delivery of quality services. —IDI with a medical officer

Beyond the respondents' feedback, this finding confirms earlier studies in Uganda that found that newborns usually die due to sepsis or pneumonia, birth asphyxia, or prematurity because health facilities do not have the necessary capacity for newborn care (Kidanto et al. 2009; Waiswa et al. 2010; Wall et al. 2010).

Poor working conditions and environment

Findings related to poor working conditions and environment included difficult conditions of service and housing constraints.

Conditions of service. Most of the sampled health facilities did not have sufficient space and amenities to facilitate effective delivery of the various MNH services. Therefore, designated corners were created in the maternity wards of some health facilities where clients seeking various MNH services, such as ANC, PNC, post-abortion care, family planning, and immunization, are attended to either collectively or sequentially. This problem has not only restricted the space and time of care for women in PNC, but has also interfered with the privacy of clients in labor. In addition, some women are discharged prematurely to create space for those with severe MNH complications.

Some health facilities have no tap water or clean toilets to ensure proper hygiene and prevent infections. Several managers and health workers interviewed in an HC IV offered observations about the state of existing health facilities that are consistent with those of one key informant, who stated,

Most government health units in this area are too dilapidated and unhygienic to ensure proper care . . . The roofs leak, [the] water and electricity supply [are] irregular, toilets are full and flooded, beds are broken, floors are cracked . . . These conditions discourage mothers and newborns from accessing quality and safe care. —KII with the in-charge of an HC IV

Housing constraints. Most of the health facilities have a limited number of staff houses, some of which are either dilapidated or too small for a family of more than two people. For example, some HC IV and HC III facilities in rural areas have two to four staff houses earmarked for the medical officer, midwife, anesthetic officer, and any other essential staff. On the other hand, the majority of the HC IV and HC III facilities in urban areas do not have staff quarters, making it difficult for health providers to access the facilities, especially during peak rush hour. The cost of rent in suburbs can also be exorbitant, further hampering the work of medical personnel who have to seek accommodation far away from the health unit. The lack of accommodations at facilities or nearby has hindered some health workers from effectively providing emergency peripartum and neonatal services. This finding underscores Martimianaki's and Maniate's (2009) observation that safe and clean housing for health workers is fundamental to the delivery of quality care.

Weak referral system

The referral of clients with MNH complications is unsystematic. Referral starts and ends at different levels of the health system, which includes the

family or community, the health facilities referring and referred to, and the health workers attending to clients. The decision for referral is influenced by the socioeconomic circumstances of clients and family members as well attendance by competent health workers. The study reaffirmed that most MNH referrals occur when complications are severe; the clients often arrive at the point of referral either when the receiving health facility does not have the required space, equipment, or medicine or when skilled staff members are not readily available to provide emergency care. In addition, most of the sampled health facilities (particularly at the HC levels) lacked a systematic internal referral arrangement and a well-maintained ambulance system to ensure quick transport of clients to the next referral point. One health worker in one HC IV maternity ward pointed out,

Some mothers are referred and arrive at the health center when they are bleeding profusely . . . Sometimes there is no medicine to stop it . . . so the mother is referred to another facility level, and if such medicine and blood is not there, she is referred to another facility, and dies on the way or upon arrival . . . The MoH needs to strengthen the referral and ambulance system in all health facilities. —IDI with a midwife

These findings are corroborated by Rwashana et al. (2014), who found that mothers with severe complications often arrive at a referral hospital for emergency care and sometimes die due to difficulty in transport or the lack of ambulances at the lower HCs.

Poor data documentation, analysis, and use at facilities

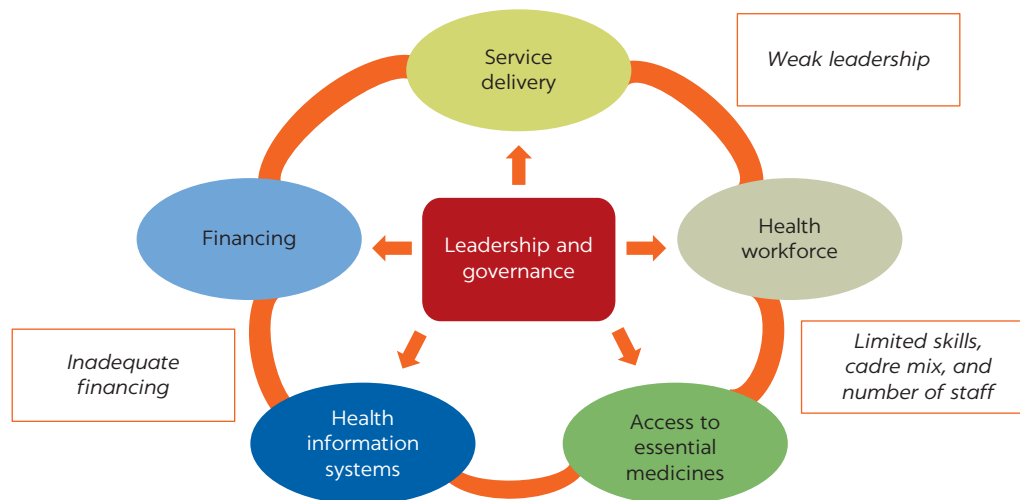
This study found that all the sampled health facilities generate MNH data on a daily basis, but this information is not well documented, locally analyzed, or used to inform day-to-day planning, prioritization, financing, implementation, or management of decisions related to MNH in these facilities. For instance, the majority of the facilities could not instantly extract and provide information on MNH cases, such as the daily number of clients served, admitted, or assisted to deliver by various methods, complications by type, or which babies died and whether during labor or delivery or immediately after delivery. This issue has negatively affected the timely formulation, planning, financing, and implementation of interventions to address common MNH challenges. In addition, nearly all MNH service providers interviewed mentioned a lack of analysis, discussion, and use of facility data to inform and improve their clinical care practices. These gaps in information and data use have also limited the effectiveness of health workers in carrying out peripartum and neonatal services.

RECOMMENDATIONS

Objective 3 of this study was to explore how health workers can be enabled to deliver quality peripartum and postnatal health services in Uganda. The effectiveness and efficiency of a value-based health care system is determined by the strengths and or weaknesses along the supply chain (Porter 1985, 2008). Overall, this study found that governance, leadership, and management at the different levels of Uganda's health system affects the functionality of all other elements in the WHO building blocks for strengthening health systems and, ultimately, the quality of MNH services shown in figure 7.3. Therefore, the MoH needs to focus

FIGURE 7.3

Diagram of WHO's six health care system building blocks showing the interconnectedness of critical points of major weaknesses affecting maternal and newborn health in Uganda



Source: WHO 2010.

on those leadership and management aspects that critically impede the performance of health providers, namely, weak governance and leadership; inadequate financing; and limited skills, cadre mix, and number of staff at all health system levels, especially in rural and high-volume facilities.

The proposed recommendations provide some options for the MoH's consideration in future efforts to improve the delivery of MNH services.

1. Governance and leadership

- Periodically disseminate to health facilities any updated policies, MNH clinical handbooks, guidelines, SOPs, and protocols, particularly at the HC level. Coupled with the dissemination of these resources, provide sensitization workshops—including using virtual media—to educate health personnel, as well as community stakeholders, such as cultural and church leaders, and male peers.
- Strengthen the leadership and governance of the health care delivery system by providing both preservice and on-the-job leadership and management training and mentoring to DHOs and health facility managers—including training and mentoring in the management of people as well as in the technical and administrative aspects of health facility management—to develop the skills essential for supervising and motivating people, even in difficult circumstances.
- Enhance supportive supervision and provide an open forum for candid discussion about facility challenges, including encouraging the sharing of creative ideas on resolutions.

2. Financing

- Advocate for increased national budgetary allocations to the health sector and a larger allocation to RMNCAH services within the MoH budget in

alignment with disease burden and national commitments to increase the health budget to 15 percent.

- Institute more-efficient resource utilization and accountability practices, especially from the government to services providers and from the service providers to the citizenry, to enhance the health sector's absorptive capacity and the provision of quality MNH services.
- Explore multiple health financing options, including scaling up of PBF models, particularly those proposed in the National Health Financing Strategy, to assist health workers to deliver MNH services.

3. Health workforce

- Strengthen the health workforce in numbers and in skills by recruiting skilled health workers in maternity units and by engaging senior practitioners and experts in MNH to provide on-the-job mentorships and supportive supervision to MNH workers.
- Standardize wages for those with similar qualifications and responsibilities and those offering MNH services as a team. In the long term, adjust the remuneration of health personnel to improve financial stability, enhance job satisfaction, and improve quality of service.
- Institutionalize CME and mandatory in-school and on-the-job training in emergency MNH service delivery for health workers, starting with those on probation in HCs.
- Explore the option to hire health workers—through term appointments or as contractors—with the option to extend their employment and become permanent based on performance.

4. Essential MNH medicine and supplies: pharmaceutical procurement and supply chain management

- Increase investments in pharmaceutical procurement and supply chain management, train facility managers in both, and devise ways in which health managers can carry out emergency procurements for essential MNH equipment, medicine, and supplies in cases of imminent stock-outs and delivery delays.
- Explore the use of performance-based pharmaceutical contracts with health facilities benefitting from PBF incentives to mitigate the persistent stock-out of essential supplies, and, if it works well, scale up this intervention to the other health facilities.

5. Infrastructure

- Provide the necessary medical equipment and supplies to operating theaters and blood banks to ensure uninterrupted provision of CEmONC services, particularly at the HC IV level.
- Sustain investments to provide and rehabilitate maternity wards to ensure adequate space for midwives and mothers, installing stable lighting, water-borne toilets, and tap water to ensure proper and hygienic care during labor and delivery as well as integrating ANC, delivery, immunization, PNC, neonatal care, and other relevant services either within or near maternity wards.

- As part of health infrastructure investments, provide for the construction and rehabilitation of staff accommodations, especially in remote areas, urban communities, and facilities with high patient volumes. Within this context, the MoH may consider public-private partnerships (or engaging vendors) that provide high-quality, affordable multifamily housing, drawing on modern technologies and construction innovations.

6. Referral system

- Strengthen the MNH referral and ambulance system, particularly at the HC II, III, and IV levels, by (a) streamlining referral mechanisms from the community to the various facilities, (b) establishing referral coordination desks at HC IVs and higher-level facilities, (c) setting up ambulance systems with requisite ICT equipment and well-equipped ambulances within districts, (d) training health workers on new EMS tools, and (e) educating the community on the referral and ambulance processes.

7. Data analysis, synthesis, and use

- Provide on-the-job training of health workers in the analysis of monthly service data and identification of issues for immediate action. In addition, disseminate guidelines for data analysis and use.
- Improve the use of MNH data in the HMIS by developing and providing simple health facility data management guidelines and clinical handbooks to all health workers and by training health facility managers and service workers in data compilation, analysis, and use at the source.

REFERENCES

- Alhassan, R. K., N. Spieker, P. van Ostenberg, et al. 2013. "Association between Health Worker Motivation and Healthcare Quality Efforts in Ghana." *Human Resources for Health* 11 (37). doi.org/10.1186/1478-4491-11-37.
- Alkema, L., D. Chou, D. Hogan, S. Zhang, A. B. Moller, A. Gemmill, et al. 2016. "Global, Regional, and National Levels and Trends in Maternal Mortality between 1990 and 2015, with Scenario-Based Projections to 2030: A Systematic Analysis by the UN Maternal Mortality Estimation Inter-Agency Group." *Lancet* 387 (10017): 462–74. doi:10.1016/S0140-6736(15)00838-7.
- Allen, M.D. 2013. "Telephone Focus Groups: Strengths, Challenges, and Strategies for Success." *Qualitative Social Research* 13 (4): 571–83. doi:10.1177/1473325013499060.
- APROQUAH (Advocates for Professionalism and Quality in Health). 2014. "Reclaiming Professionalism and Quality in Health Care in Uganda." Presentation at the APROQUAH Stakeholders' Workshop, Kampala. August 22–23, 2013.
- Bantebya-Kyomuhendo, G. 2003. "Low Use of Rural Maternity Services in Uganda: Impact of Women's Status, Traditional Beliefs, and Limited Resources." *Reproductive Health Matters* 11 (21): 16–26. doi:10.1016/s0968-8080(03)02176-1.
- Barbour, R. S., and D. L. Morgan, eds. 2017. *A New Era in Focus Group Research Challenges, Innovation, and Practice*. London: Palgrave Macmillan.
- Bhutta, Z. A., G. L. Darmstadt, R. A. Haws, et al. 2009. "Delivering Interventions to Reduce the Global Burden of Stillbirths: Improving Service Supply and Community Demand." *BMC Pregnancy Childbirth* 9 (1): S7. doi.org/10.1186/1471-2393-9-S1-S7.
- Bhutta, Z. A., S. Sajid, C. Simon, et al. 2011. "Improvement of Perinatal and Newborn Care in Rural Pakistan through Community-Based Strategies: A Cluster-Randomised Effectiveness Trial." *Lancet* 377 (9763): 403–12. doi:10.1016/S0140-6736(10)62274-X.

- Bradshaw, D., M. Chopra, K. Kerber, et al. 2008. "Every Death Counts: Use of Mortality Audit Data for Decision Making to Save the Lives of Mothers, Babies, and Children in South Africa." *Lancet* 371 (362): 1294–304. doi:10.1016/S0140-6736(08)60564-4.
- Bohren, M. A., E. C. Hunter, H. M. Munthe-Kaas, et al. 2014. "Facilitators and Barriers to Facility-Based Delivery in Low- and Middle-Income Countries: A Qualitative Evidence Synthesis." *Reproductive Health* 11 (1). doi:10.1186/1742-4755-11-71.
- Bustreo, F., L. Say, M. Koblinsky, et al. 2013. "Ending Preventable Maternal Deaths: The Time Is Now." *Lancet Global Health* 1 (4): E176–77. doi:10.1016/S2214-109X(13)70059-7.
- Campbell, O., and W. Graham. 2006. "Strategies for Reducing Maternal Mortality: Getting on with What Works." *Lancet* 368 (9543): 1284–99. doi:10.1016/S0140-6736(06)69381-1.
- CDC. 2014. "Saving Mothers, Giving Life: Monitoring and Evaluation Overview," Phase 1 Report. Atlanta: Centers for Disease Control and Prevention, US Department of Health and Human Services.
- Cavagnero, E., B. Daelmans, N. Gupta, et al. 2008. "Assessment of the Health System and Policy Environment as a Critical Complement to Tracking Intervention Coverage for Maternal, Newborn, and Child Health." *Lancet* 371 (9620): 1284–93. doi:10.1016/S0140-6736(08)60563-2.
- Dahlgren, L., Emmelin, M., and Winkvist, A.M. 2004. *Qualitative Methodology for International Public Health*. Umeå: Epidemiology and Public Health Sciences, Department of Public Health and Clinical Medicine, Umeå University.
- Dalili, H., F. Nili, M. Sheikh, et al. 2015. "Comparison of the Four Proposed Apgar Scoring Systems in the Assessment of Birth Asphyxia and Adverse Early Neurologic Outcomes." *PloS One* 10 (3): doi:10.1371/journal.pone.0122116.
- Franco, L. M., S. Bennett, and R. Kanfer. 2002. "Health Sector Reform and Public Sector Health Worker Motivation: A Conceptual Framework." *Social Science & Medicine* 54 (8): 1255–66. doi:10.1016/S0277-9536(01)00094-6.
- Freedman, L. P., and M. E. Kruk. 2014. "Disrespect and Abuse of Women in Childbirth: Challenging the Global Quality and Accountability Agendas." *Lancet* 384 (9948): e42–44. doi:10.1016/S0140-6736(14)60859-X.
- Franco, L. M., S. Bennett, and R. Kanfer. 2002. "Health Sector Reform and Public Sector Health Worker Motivation: A Conceptual Framework." *Social Science Medicine* 54 (8): 1255–66.
- Gilmore, K., and T. A. Camhe Gebreyesus. 2012. "What Will It Take to Eliminate Preventable Maternal Deaths?" *Lancet* 386 (9837): 87–88. doi:10.1016/S0140-6736(12)60982-9.
- Graneheim, U. H., and B. Lundman. 2004. "Qualitative Content Analysis in Nursing Research: Concepts, Procedures and Measures to Achieve Trustworthiness." *Nurse Education Today* 24 (2): 105–12. doi:10.1016/j.nedt.2003.10.001.
- Holloway, I. 2008, ed. *A-Z of Qualitative Research in Health Care*. 2nd ed. Hoboken, NJ: Wiley-Blackwell Publishing.
- Homer, C. S. E., I. K. Friberg, M. A. Bastos Dias, et al. 2014. "The Projected Effect of Scaling Up Midwifery." *Lancet Series/Midwifery* 384 (9948): 1146–57. doi:10.1016/S0140-6736(14)60790-X.
- Jayanna, K., Mony, B. M. Ramesh, et al. 2014. "Assessment of Facility Readiness and Provider Preparedness for Dealing with Postpartum Haemorrhage and Pre-Eclampsia/Eclampsia in Public and Private Health Facilities of Northern Karnataka, India: A Cross-Sectional Study." *BMC Pregnancy Childbirth* 14. doi:10.1186/1471-2393-14-304.
- Kaplan, H. C., L. P. Provost, C. M. Froehle, et al. 2012. "The Model for Understanding Success in Quality (MUSIQ): Building a Theory of Context in Health care Quality Improvement." *BMJ Quality & Safety* 21 (1): 13–20. doi:10.1136/bmjqs-2011-000010.
- Kassebaum, N. J., A. Bertozzi-Villa, M. S. Coggeshall, et al. 2014. "Global, Regional, and National Levels and Causes of Maternal Mortality during 1990–2013: A Systematic Analysis for the Global Burden of Disease Study 2013." *Lancet* 384 (9947): 980–1004. doi:10.1016/S0140-6736(14)60696-6.
- Kidanto, H., I. Mogren, J. Van-Roosmalen, et al. 2009. "Introduction of a Qualitative Perinatal Audit at Muhimbili National Hospital, Dar es Salaam, Tanzania." *BMC Pregnancy and Childbirth* 9. doi:10.1186/1471-2393-9-45.

- Kitzinger, J. 2005. "Focus Group Research: Using Group Dynamics to Explore Perceptions, Experiences and Understandings." In: *Qualitative Research in Health Care*, edited by I. Holloway, 56–70. Maidenhead, UK: Open University Press.
- Kruk, M. E., S. Kujawski, G. Mbaruku, K. Ramsey, W. Moyo, and L. P. Freedman. 2014. "Disrespectful and Abusive Treatment during Facility Delivery in Tanzania: A Facility and Community Survey." *Health Policy and Planning* 33 (1): e26–33. doi: 10.1093/heapol/czu079.
- Kruk, M. E., D. Vail, K. Austin-Evelyn, et al. 2016. "Evaluation of a Maternal Health Program in Uganda and Zambia Finds Mixed Results on Quality of Care and Satisfaction." *Health Affairs* 35 (3): 510–19. doi:10.1377/hlthaff.2015.0902.
- Lawn, J. E., M. Kinney, A. C. Lee, et al. 2009. "Reducing Intrapartum-Related Deaths and Disability: Can the Health System Deliver?" *International Journal of Gynecology Obstetrics* 107 (S1): S123–40, S140–42. doi:10.1016/j.ijgo.2009.07.021.
- Lutwama, G. W., Roos, J. H., and Dolamo B. L. 2013. "Assessing the Implementation of Performance Management of Health Care Workers in Uganda." *BMC Health Services Research* 13. doi: 10.1186/1472-6963-13-355.
- Martimianakis, M. A., and J. M. Maniate. 2009. "Sociological Interpretations of Professionalism." *Medical Education* 43 (9): 829–37. doi:10.1111/j.1365-2923.2009.03408.x.
- Mbaruku, G. M., E. Larson, A. Kimwari, and M. E. Kruk. 2014. "What Elements of the Work Environment Are Most Responsible for Health Worker Dissatisfaction in Rural Primary Care Clinics in Tanzania?" *Human Resources Health* 12 (2014). doi:10.1186/1478-4491-12-38.
- Mbonye, A. K., J. B. Asimwe, J. Kabarangira, et al. 2007. "Emergency Obstetric Care as the Priority Intervention to Reduce Maternal Mortality in Uganda." *International Journal of Gynecology Obstetrics* 96: 220–25. doi:10.1016/j.ijgo.2006.12.017.
- Meda, N., S. Hounton, V. De-Brouwere, et al. 2008. "From Evaluating a Skilled Care Initiative in Rural Burkina Faso to Policy Implications for Safe Motherhood in Africa." *Tropical Medicine International Health* 13 (S1): 68–72. doi:10.1111/j.1365-3156.2008.02089.x.
- Michie, S., L. Atkins, and R. West. 2014. *The Behavior Change Wheel: A Guide to Designing Interventions*. Sutton, UK: Silverback Publishing. www.behaviourchangewheel.com.
- MoH (Ministry of Health). 2018. *Mid-Term Review Report for the Health Sector Development Plan 2015/16–2019/20*. Kampala: MoH. <http://library.health.go.ug/monitoring-and-evaluation/annual-quarterly-performance-reports/mid-term-review-report-health-sector>.
- Mubyazi, G. M., P. Bloch, J. Byskov, P. Magnussen, I. C. Bygberg, and K. S. Hansen. 2012. "Supply-related Drivers of Staff Motivation for Providing Intermittent Preventive Treatment of Malaria during Pregnancy in Tanzania: Evidence from Two Rural Districts." *Malaria Journal* 11. doi:10.1186/1475-2875-11-48.
- Patton, M. Q. 2002. *Qualitative Research and Evaluation Methods*, 3rd ed. Thousand Oaks, CA: Sage Publications Inc.
- Polit, D. F., and C. T. Beck. 2004. "Sampling in Qualitative Research." In *Nursing Research: Principles and Methods*, 7th ed. Philadelphia: Lippincott Williams and Wilkins.
- Porter, M. E. 1985. *Competitive Advantage: Creating and Sustaining Superior Performance*. New York: Free Press.
- Porter, M. E. 2008. "Value-Based Health Care Delivery." *Annals of Surgery* 248 (4): 503–9. doi:10.1097/SLA.0b013e31818a43af.
- Ridde, V., B. Meessen, and S. Kouanda. 2011. "Selective Free Health Care in Sub-Saharan Africa: An Opportunity for Strengthening Health Systems?" *Sante Publique* 23 (1): 61–67.
- Rwashana, A. S., S. Nakubulwa, M. Nakakeeto-Kijjambu, et al. 2014. "Advancing the Application of Systems Thinking in Health: Understanding the Dynamics of Neonatal Mortality in Uganda." *Health Research Policy and Systems* 12. doi:10.1186/1478-4505-12-36.
- Sacks, E., and M. V. Kinney. 2015. "Respectful Maternal and Newborn Care: Building a Common Agenda." *Reproductive Health* 12. doi:10.1186/s12978-015-0042-7.
- Sambo, L., J. Kirigia, and G. Ki-Zerbo. 2011. "Perceptions and Viewpoints on Proceedings of the Fifteenth Assembly of Heads of State and Government of the African Union Debate on Maternal, Newborn and Child Health and Development, 25–27 July 2010, Kampala, Uganda." *BMC Proceedings* 5 (S5). doi:10.1186/1753-6561-5-S5-S1.

- Say, L., D. Chou, A. Gemmill, et al. 2014. "Global Causes of Maternal Death: A WHO Systematic Analysis." *Lancet Global Health* 2 (6): e323–33. doi:10.1016/S2214-109X(14)70227-X.
- Scheffler, R., G. Cometto, K. Tulenko, T. Bruckner, J. Liu, E. L. Keuffel, et al. 2016. "Health Workforce Requirements for Universal Health Coverage and the Sustainable Development Goals." Background paper no. 1 to the Global Strategy on Human Resources for Health: Workforce 2030." Human Resources for Health Observer Series no. 17. World Health Organization, Geneva. <http://apps.who.int/iris/bitstream/10665/250330/1/9789241511407-eng.pdf?ua=1>.
- Serbanescu, F., H. I. Goldberg, I. Danel, et al. 2017. "Rapid Reduction of Maternal Mortality in Uganda and Zambia through the Saving Mothers, Giving Life Initiative: Results of Year 1 Evaluation." *BMC Pregnancy and Childbirth* 17. doi:10.1186/s12884-017-1222-y.
- Smith, J. M., S. J. Sullivan, and G. D. Baxter. 2009. "Telephone Focus Groups in Physiotherapy Research: Potential Uses and Recommendations." *Physiotherapy Theory Practice* 25 (4): 241–56. doi:10.1080/09593980902782496.
- Souza, J. P., A. M. Gulmezoglu, J. Vogel, et al. 2013. "Moving Beyond Essential Interventions for Reduction of Maternal Mortality (the WHO Multicountry Survey on Maternal and Newborn Health): A Cross-sectional Study." *Lancet* 381 (9879): 1747–55. doi:10.1016/S0140-6736(13)60686-8.
- Tashobya, C. K., and P. O. Ogwal. 2004. "Primary Health Care and Health Sector Reforms in Uganda." *Health Policy and Development* 2 (1). <http://www.bioline.org.br/pdf?hp04006>.
- Tashobya, C. K., F. Sengooba, and O. V. Cruz, eds. 2006. *Health Systems Reforms in Uganda: Processes and Outputs*. Kampala: Institute of Public Health, Makerere University; London: Health Systems Development Programme, London School of Hygiene & Tropical Medicine; Kampala: Ministry of Health.
- Taylor, C. M. 2005. "Interviewing." In *Qualitative Research in Health care*, edited by I. Holloway, 39–55. Maidenhead, UK: Open University Press.
- UBOS (Uganda Bureau of Statistics), and ORC Macro. 2001. *Uganda Demographic and Health Survey 2000–2001*. Kampala: UBOS. Calverton, Md.: ORC Macro. <https://www.dhsprogram.com/pubs/pdf/FR128/FR128.pdf>.
- UBOS (Uganda Bureau of Statistics) and Macro International. 2007. *Uganda Demographic and Health Survey 2006*. Kampala: UBOS; Calverton, MD: Macro International. <https://dhsprogram.com/pubs/pdf/FR194/FR194.pdf>.
- UBOS (Uganda Bureau of Statistics). 2012. *Uganda Demographic and Health Survey 2011*. Kampala: UBOS; Rockville, MD: IFC. <https://dhsprogram.com/publications/publication-fr264-dhs-final-reports.cfm>.
- UBOS (Uganda Bureau of Statistics). 2018. *Uganda Demographic and Health Survey 2016: Key Indicators Report*. Kampala: UBOS; Rockville, MD: ICF.
- UBOS (Uganda Bureau of Statistics). 2019. Explore Statistics: Population & Censuses. Population Projections 2018 (accessed March 10, 2019). Database. <https://www.ubos.org/explore-statistics/20/>.
- UNCST (Uganda National Council for Science and Technology). 2020. *Uganda National Guidelines for Conduct of Research During Coronavirus Disease 2019 (COVID-19) Pandemic*. Kampala: UNCST. <https://www.unhro.org.ug/assets/images/resources/covidnationalguidelines.pdf>
- Varghese, B., K. Jayanna, C. Blaze, et al. 2016. "Limited Effectiveness of a Skills and Drills Intervention to Improve Emergency Obstetric and Newborn Care in Karnataka, India: A Proof-of-Concept Study." *Global Health: Science and Practice* 4 (4): 582–93. doi:10.9745/GHSP-D-16-00143.
- VSO (Volunteer Service Overseas). 2014. *Our Side of the Story: Uganda Health Workers Speak Up*. London: VSO. http://www.vsointernational.org/Images/ugandan-healthworkers-speak_tcm76-30142.pdf.
- Waiswa, P., K. Kallander, S. Peterson, G. Tomson, and G. W. Pariyo. 2010. "Using the Three Delays Model to Understand Why Newborn Babies Die in Eastern Uganda." *Tropical Medicine International Health* 15: 964–72. doi:10.1111/j.1365-3156.2010.02557.x.
- Wall, S. N., A. C. Lee, W. Carlo, et al. 2010. "Reducing Intrapartum-Related Neonatal Deaths in Low- and Middle-Income Countries—What Works?" *Seminars in Perinatology* 34 (6): 395–407. doi:10.1053/j.semperi.2010.09.009.

- Wemos and ACHEST. 2019. "Uganda's Human Resources for Health: Paradoxes and Dilemmas" Advocacy brief. Wemos, Amsterdam; ACHEST, Kampala. October 2019.
- WHO (World Health Organization). 2005. "Strategic Directions for Accelerating the Reduction of Maternal Mortality in the Eastern Mediterranean Region: A Regional Framework." WHO, Regional Office for the Eastern Mediterranean, Cairo. <https://apps.who.int/iris/handle/10665/116454>.
- WHO (World Health Organization). 2006. *Factsheet on skilled attendants at birth—2006 updates*. World Health Organization, Department of Reproductive Health and Research. [http://www.who.int/reproductive health/global_monitoring/skilled_attendant_at_birth2006.pdf](http://www.who.int/reproductive%20health/global_monitoring/skilled_attendant_at_birth2006.pdf).
- WHO (World Health Organization). 2010. *Monitoring the Building Blocks of Health Systems: A Handbook of Indicators and Their Measurement Strategies*. Geneva: WHO. <https://apps.who.int/iris/handle/10665/258734>.
- WHO (World Health Organization). 2015. *WHO Global Strategy on People-Centered and Integrated Health Services: Interim Report*. Geneva: WHO https://apps.who.int/iris/bitstream/handle/10665/155002/WHO_HIS_SDS_2015.6_eng.pdf.
- WHO (World Health Organization). 2017. *Managing Complications in Pregnancy and Childbirth: A Guide for Midwives and Doctors*. 2nd ed. Geneva: WHO. <https://apps.who.int/iris/handle/10665/255760>.
- WHO (World Health Organization). 2019a. *Trends in Maternal Mortality 2000 to 2017: Estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division*. Geneva. <https://apps.who.int/iris/handle/10665/327595>.
- WHO (World Health Organization). 2019b. *Delivered by Women, Led by Men: A Gender and Equity Analysis of the Global Health and Social Workforce*. Human Resources for Health Observer Series no. 24. Geneva: WHO. <https://apps.who.int/iris/handle/10665/311322>.
- WHO, UNFPA, and UNICEF (World Health Organization, United Nations Population Fund, and the United Nations Children's Fund). 2017. *Managing Complications in Pregnancy and Childbirth: A Guide for Midwives and Doctors*. 2nd ed. Geneva: WHO. <https://apps.who.int/iris/handle/10665/255760>.
- Wyckoff, M. H., K. Aziz, M. B. Escobedo, et al. 2015. "Part 13: Neonatal Resuscitation: American Heart Association Guidelines Update for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care." *Circulation* 132 (S2): S543–60. <https://doi.org/10.1161/CIR.0000000000000267>.



Financing



Situation Analysis of Results-Based Financing for RMNCAH Services in Uganda, 2014–21

CHRISPUS MAYORA, ALOYSIUS SSENKYONJO, AND ELIZABETH EKIRAPA-KIRACHO

EXECUTIVE SUMMARY

Several results-based financing (RBF) programs have been implemented in Uganda since 2003, and research has shown that they can improve the provision, quality, and use of targeted services (Zziwa et al. 2015). However, available research does not clarify how RBF influences reproductive, maternal, newborn, child, and adolescent health (RMNCAH) service delivery and outcomes, nor how it can be institutionalized in the country. Therefore, this study aimed to examine the implementation processes, experiences, and underlying factors of different RBF initiatives in RMNCAH to provide lessons for their institutionalization in existing performance management and public finance reform programs in Uganda.

Study objectives

The study's objectives were to

- Identify and describe the most recent (2015–20) donor-financed and national RBF programs in Uganda, mainly for RMNCAH, with respect to design, implementation, target population, and service packages;
- Examine the extent to which RBF design and implementation arrangements are consistent with the National Results Based Financing Framework (NRBFF);
- Assess the perceived extent and mechanisms of RBF influence on delivery and use of RMNCAH services;
- Explore the factors that facilitate or constrain RBF implementation; and
- Identify key lessons learned in the implementation of RBF initiatives to inform their scale-up and institutionalization in existing performance management and public finance improvement programs.

Methodology

This multiple case study design used a mixed-methods data collection approach of reviewing published and unpublished literature, synthesizing quantitative data from various project evaluations, and conducting 38 key informant interviews (KIIs) with national- and subnational-level RBF stakeholders, such as health

facility managers, district health officers (DHOs), district RBF focal persons, Ministry of Health (MoH) officials, and RMNCAH project implementers. The research districts were Kamuli, Kasese, Lira, Mukono, Nebbi, and Ntungamo.

Key findings

Key findings included those related to institutional designs and alignment with the NRBFF; the effects on service use and delivery, as well as underlying mechanisms; and facilitating and constraining factors.

Institutional designs and alignment with the NRBFF

The study identified seven RBF programs that either focused on RMNCAH or provided some services related to RMNCAH. The programs were both demand and supply driven, with three being demand driven, two being supply driven, and two being both.

Although the programs largely aligned with the RBF framework principles, most skewed toward the supply driven, which did not require prequalification of service beneficiaries to access the benefits packages. For the demand-driven schemes, deliberate methods of beneficiary inclusion were adopted using poverty targeting and other tools, although challenges were encountered in reaching the actual beneficiaries. All programs underwent varying arrangements to prepare service providers, which included provider assessments, accreditation and contracting, training and capacity building, and the provision of start-up funding and equipment.

Effects on service use and delivery and underlying mechanisms

In all programs, RBF was associated with increased use of incentivized services due to health system and governance improvements at the facility, district, regional, and national levels. Facility-level organizational changes included enhancement of management capacity, of the culture for data generation and use, of the financial base, and of the availability of medicine and supplies. Behavioral changes included greater motivation, responsiveness to clients, and teamwork. Upstream institutional changes included improvements in RBF support, such as program alignment with ongoing financing policy reforms, and the setting up of an RBF Unit in the MoH to appoint focal persons at various levels of the health care delivery system in order to expedite the formulation and to review and monitor the implementation of RBF plans and budgets, including the verification of expenditures and the provision of additional financing based on performance. The use of Village Health Teams (VHTs) for community mobilization to create demand in the demand- and supply-driven programs helped strengthen the link between health facilities and community health systems.

Facilitating and constraining factors

The main RBF implementation factors were enhancing organizational capacity, emphasizing stakeholder engagement, using existing structures and tools, and adopting a flexible approach that allowed learning by doing. At the facility level, good leadership skills and increased autonomy enhanced better decision-making, teamwork, and timely service delivery.

The main barriers to implementation included health system inadequacies, such as insufficient human resources numbers and skills—especially for leadership and financial management. Supply chain constraints occasioned by untimely

delivery of orders, and sometimes by lack of key commodities by the supplier, undermined facility performance. One project also faced substantial, yet uncommunicated, delays in RBF payments to districts and health facilities, creating anxiety and implementation interruptions and harming performance at these levels.

Key recommendations

To address these findings, responses are needed at the governance, capacity-building, and programming levels. The MoH should consider the following actions.

Governance

- The MoH, in collaboration with implementing partners, should support efforts to strengthen the capacity of District Health Management Teams (DHMTs), hospital boards, and Health Unit Management Committees (HUMCs) to effectively perform their stewardship roles and ensure value for money.
- The RBF Unit should streamline communication across all RBF implementing units, including local governments, health facilities, and other implementers, to prevent unnecessary anxieties that may undermine performance.
- The MoH should work with the Ministry of Finance, Planning and Economic Development (MoFPED) to align the RBF agenda with public finance management reforms.
- The MoH, in coordination with other stakeholders, should engage the relevant ministries, such as the Ministries of Public Service and Local Government, to ensure incorporation of RBF structures and roles into mainstream civil service and government systems.
- The MoH should undertake a process to review the contractual arrangements between the RBF Unit and service providers to ensure reasonable autonomy for service providers, particularly regarding financial and managerial decision-making.

Capacity building and adaptive learning

- The MoH should manage the RBF institutionalization process in a phased manner, considering the capacity and resource requirements of the implementation teams.
- The MoH, through the RBF Unit, should adopt a learn-by-doing approach in the implementation of RBF to enable timely feedback and corrective actions.
- The MoH should work with local governments to (a) strengthen the capacity of facility managers and their RBF focal persons in customer care, leadership, and management and (b) undertake periodic needs assessments to identify competence gaps and ensure customized capacity enhancement strategies for facility managers and providers.

Program design and support

- The MoH should engage and work with the Joint Medical Stores and National Medical Stores to streamline and improve the efficiency of the medicine and commodities supply chains by supporting facilities and districts to properly forecast and aggregate orders for cost-effective deliveries of supplies.
- The MoH, through its RBF Unit and in collaboration with implementing partners, should support regional teams, districts, and facilities to

adopt the use of digital technology and platforms to expedite the requisitioning, approval, and disbursement processes of RBF funds to beneficiaries.

- The MoH, through the RBF Unit, should review the RBF implementation and evaluation guidelines to clearly articulate and incorporate quality-of-care measurement needs in the calculation of reimbursed indicators.
- The RBF Unit should support health facilities and service providers to conduct facility capacity assessments and provide them with the resources needed to address capacity gaps.
- The MoH should work with the MoFPED and districts to (a) strengthen the integrated financial management system (IFMS) and the district approval processes to enable speedy verification and disbursement of funds for implementation of activities and (b) develop a joint routine supervision and verification system for RBF to reduce the burden on the DHMT and improve their supervision capacity.
- The MoH, in collaboration with implementing partners, should support the ongoing efforts of linking RBF processes with District Health Information Software version 2 (DHIS2) reporting and verification and the IFMS, not only to minimize delays in payment but also to ensure adequate tracking of disbursements to health service providers.

INTRODUCTION

RMNCAH conditions contribute significantly to the burden of disease in Uganda, with an estimated 60 percent of years of life lost (MoH 2016a). Despite documented improvements, maternal, newborn, and child health outcomes are still suboptimal, with a maternal mortality rate of 336 per 100,000 live births, a newborn mortality rate of 27 per 1,000 live births, and an infant mortality rate of 43 per 1,000 live births (UBOS and ICF 2018).

Until recently, Uganda's health financing landscape was dominated by the use of input-based funding methods, which do not provide an incentive for improving efficiency and quality and for which financing is not necessarily based on accruing outcomes. Innovative financing methods, such as RBF, were therefore proposed and piloted in the country to address these challenges. In 2015, the MoH developed the 10-year Health Financing Strategy 2015/16–2024/25 (MoH 2016a). The goal of the strategy is “to facilitate the attainment of Universal Health Coverage through enabling the effective/efficient delivery of and access to the essential package of health services while reducing exposure to financial risk, by 2025” (MoH 2016a, 24). Hence, the RMNCAH Sharpened Plan for 2016/17–2019/20 and resultant programs, such as the Uganda Reproductive, Maternal, and Child Health Services Improvement Project (URMCHIP), prioritized RBF as a mechanism for ensuring efficiency and quality and for accelerating and improving RMNCAH service delivery outcomes (MoH 2016b).

Globally, RBF has been applauded as a health financing reform tool that has the potential to ensure the achievement of desired health targets, including fostering greater use and efficient and higher quality service delivery (Borghini et al. 2006; Eldridge and Palmer 2009; Lagarde, Palmer, and Cochrane Effective Practice and Organisation of Care Group 2010; Meessen, Soucat, and Sekabaraga 2011). Uganda's Health Financing Strategy proposes these four actions:

1. Scaling up RBF in public health facilities to enhance efficiency;
2. Developing the institutional capacity of providers and the MoH on RBF to support the transition toward output-based provider payment modes;
3. Promoting RBF as a mode of output-based provider payment and rolling it out systematically and progressively to cover the entire country; and
4. Aligning the RBF reform in the health sector with the broader national financing system reforms.

RBF programs in Uganda

Uganda has a history of supply- and demand-driven RBF programs, with varying institutional arrangements (Ssenooba et al. 2015). The supply-driven programs that were studied include the World Bank Performance-based Contracting Study 2003–05 (World Bank and CIDA 2006), the Cordaid pilot (2009–15), and the NUHealth Project (2011–15). Another program, Strengthening Decentralisation for Sustainability, managed by the Ministry of Local Government (MoLG), provided districts with performance-based grants to deliver social services, including health.

Three demand-driven voucher programs were implemented in Uganda between 2006 and 2011: (a) the Reproductive Health Voucher project supported by the World Bank (2006–11); (b) the Safe Deliveries Project (2009–11); and (c) the Saving Mothers, Giving Life (SMGL) initiative. All these programs were funded by donor agencies that also performed fund-holding functions, except on a few occasions when these tasks were done by their delegated agencies. The projects focused on maternal and child health (MCH) service packages, giving little attention to noncommunicable diseases (Ssenooba et al. 2015; Ssenyonjo et al. 2021).

These earlier programs resulted in the scale-up and institutionalization of RBF in the national health system through the URMCHIP and the Enhancing Health in Acholi (EHA) subregion project covering all the districts in Uganda. As the country explores options for institutionalizing RBF in the health delivery system, understanding the mechanisms through which RBF influences system performance, service delivery, and access to and use of services would help in designing feasible RBF programs that can achieve optimal results. In addition, to effectively implement the URMCHIP program through an RBF approach and ensure optimum results, it is essential to draw lessons and experiences over an extended period of implementing RBF in Uganda.

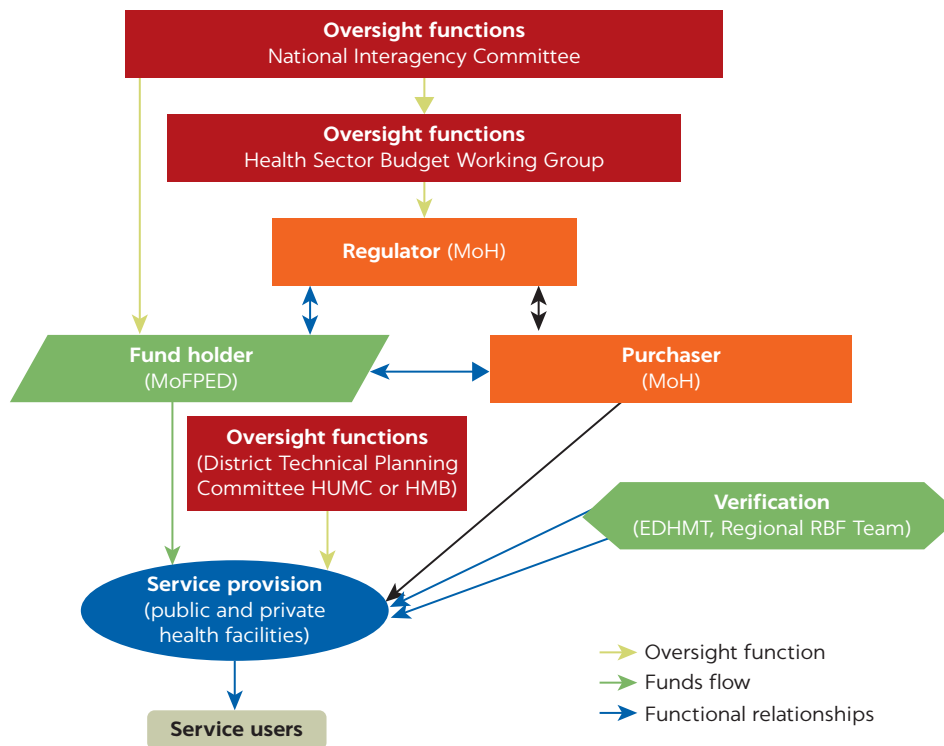
National Results Based Financing Framework

In 2017, with support from partners, the MoH developed the NRBFF to guide the implementation of RBF programs (MoH 2017) and a strategy for mainstreaming RBF into the primary health care (PHC) grants distributed under the Uganda Intergovernmental Fiscal Transfers (UgIFT) Program (MoFPED 2023). The RBF framework aims to reduce morbidity and mortality by improving Ugandans' access to an affordable package of essential health care services on the basis of equal rights and opportunities. Its specific objectives are as follows:

- Enhance the use, efficiency, and quality of health services delivered while improving equitable access to these services; and
- Increase the strategic purchasing of cost-effective services to contribute to significant reductions in morbidity and mortality.

The NRBFF stipulated five core functions of the RBF model for the health sector, as illustrated in figure 8.1.

FIGURE 8.1
Institutional arrangement of Uganda's national results-based financing programs



Source: Modified from the Ministry of Health 2017.

Note: EDHMT = Expanded District Health Management Team; HMB = Health Management Board; HUMC = Health Unit Management Committee; MoFPED = Ministry of Finance, Planning and Economic Development; MoH = Ministry of Health; RBF = results-based financing.

Core functions and actors of the RBF programs

The *oversight or supervision* function of the RBF program is a shared responsibility among the National Interagency Committee and the Health Sector and Budget Working Group, the national steering committee at the MoH, the District Technical Planning Committee, and the Hospital Management Board or the HUMC. The *fund holder* is the MoFPED, which is responsible for gathering funds from various sources and effecting payment as requested by the MoH. The MoH serves as the *regulator* and *purchaser* of the various health services functions, purchasing a package of selected services from the public and private facilities that are enrolled in the program. *Service provision* is the responsibility of the public, private not-for-profit (PNFP), and private for-profit (PFP) facilities selected for RBF, while the District Health Office is incentivized to coordinate the provision of specific health services.

The *verification* of the quantity and quality of services is conducted internally on a quarterly basis by the Expanded District Health Management Team (EDHMT) for health facilities and the regional RBF team for the DHMT. Health facility invoices undergo counter-verification by the Regional RBF Team, and penalties are imposed in cases of falsifying records, misreporting data, and other activities contrary to the signed performance contract. Verification also occurs externally on a biannual basis by an independent agency (MoH 2017).

Concerning the *use of funding*, all RBF funds are in addition to the amount a health facility receives from other sources and must be used and accounted for in accordance with the government’s financial regulations as stipulated in the Public Finance and Management Act (2015). A minimum of 60 percent of RBF funds is intended for service delivery and operations costs, while the remaining 40 percent is for costs related to incentives for health workers and support staff. These are awarded according to individual performance scores (MoH 2017). The *RBF contracting process* consists of seven steps: (a) selection of districts, (b) sensitization of stakeholders, (c) signing of district performance contracts, (d) prequalification assessment of health facilities, (e) selection of health facilities, (f) development of facility performance improvement plans, and (g) signing of health facility performance contracts (MoFPED 2023).

Study rationale

Uganda’s health financing landscape has, until recently, been dominated by input-based funding methods, which do not create incentives for improving efficiency and quality. To rectify this situation, several RBF programs have been implemented in Uganda since 2003, and research results have shown that they can improve health workers’ productivity, the quality and quantity of services they provide, and the use of targeted services (Sennyonjo et al. 2021; Ssenooba et al. 2015). These outcomes have resulted in the scale-up of RBF in the national health system through various programs, particularly the URMCHIP and EHA. However, available data in Uganda do not show how RBF influences RMNCAH service delivery and outcomes nor how it can be institutionalized in the country.

The government of Uganda, through the MoH, is developing a strategy for mainstreaming RBF into PHC grants under the UgIFT Program (MoFPED 2023) and embarking on efforts to institutionalize RBF. Understanding the mechanisms through which RBF influences system performance, service delivery, and access to and use of services would help in designing feasible RBF programs that could achieve optimal results. Additionally, to ensure optimum results from implementing the URMCHIP program through an RBF approach, it is essential to draw lessons from the long experience of implementing RBF in Uganda.

Objectives of the study

This study examined the implementation processes, experiences, and underlying factors of different RBF initiatives in RMNCAH to provide lessons for their institutionalization in existing performance management and public finance reform programs in Uganda. The specific objectives were as follows:

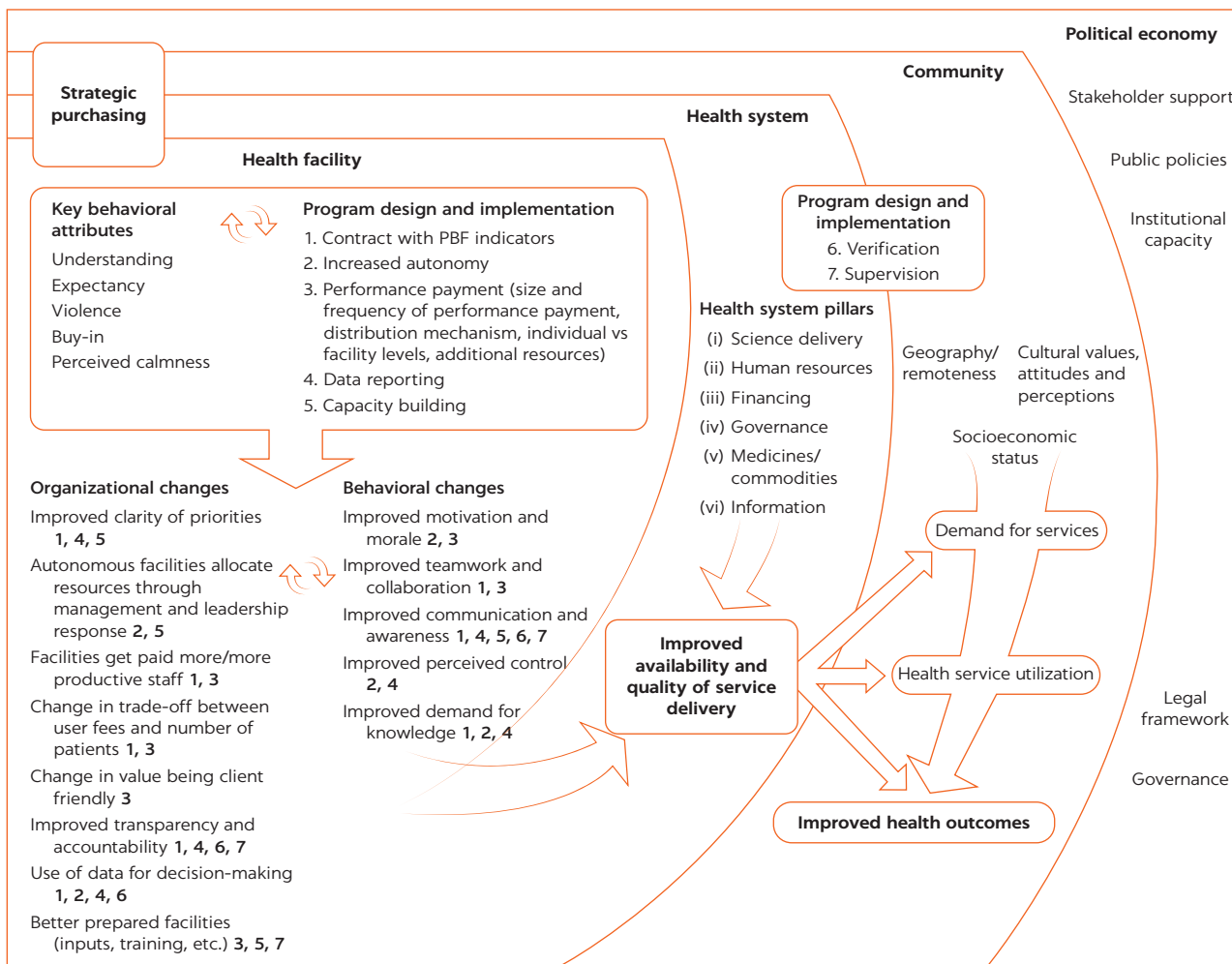
- Identify and describe attributes of the most recent (2015–20) donor-financed and national RBF programs in Uganda, mainly in RMNCAH, regarding design, implementation framework, target population, and service packages.
- Examine how RBF design and implementation arrangements are consistent with the NRBF for Uganda.
- Assess the perceived influence of RBF on the delivery and utilization of RMNCAH services as well as on the mechanisms of influence.
- Explore the factors facilitating and constraining the implementation of RBF in Uganda.

- Identify key lessons learned in the implementation of RBF to inform the scale-up and institutionalization in existing performance management and public finance improvement programs in Uganda.

Conceptual framework

This study used the Performance-Based Financing Conceptual Framework (figure 8.2) to examine the design and operational characteristics, factors facilitating and constraining implementation, and the lessons learned about the main pillars of the health care delivery system and public or stakeholders’ perceived RBF outcomes laid out in the research objectives (Hassan et al. 2013). This framework asserts that behavioral, organizational, and contextual factors determine success and failure in RBF programs. These factors are influenced by the prevailing circumstances in the health system, community, and political economy. The framework is rooted in agency theory (Kim and Mahoney 2005), which argues that the health care market comprises two major agents—the purchaser, namely the principal, and the agent, which executes defined functions on behalf

FIGURE 8.2
Performance-Based Financing Conceptual Framework



Source: Hassan et al. 2013.
Note: RBF = results-based financing.

of the purchaser (Milgrom and Roberts 1992; Mooney and Ryan 1993)—and that their relationship is contractual.

Analytical framework

For this study, three key concepts and several variables were observed to understand the RBF implementation mechanisms, processes, factors, effects, and lessons learned:

1. *Key RBF design features.* The observed variables include management contracts with performance-based financing indicators, autonomy, performance payments, data reporting, capacity building, supervision, and verification. This helped answer Study Objective 1.
2. *Alignment with the NRBBF.* The outer layer of the NRBBF emphasizes the role of the legal and policy context in shaping RBF design and implementation. The design and implementation features of the selected RBF programs were assessed against those prescribed in the NRBBF. This helped answer Study Objective 2.
3. *Mechanisms of influence of RBF on delivery and use of RMNCAH services.* The conceptual framework highlights complex interactions among several factors through which RBF leads to intermediate health systems performance, such as improved delivery and use of health services, and long-term targets, such as improved health outcomes. These factors were observed from the perspective of health facility mechanisms, health system changes, community dynamics, the national political economy, and institutionalization. This helped answer Study Objectives 3 and 4.

METHODOLOGY

This section discusses the study design, sites, and population; sampling strategy and criteria; data collection methods, tools, and procedures; data management and analysis; and study limitations.

Study design

This multiple case study design used a mixed-methods data collection approach. This work involved reviewing published and unpublished literature, synthesizing quantitative data for various project evaluations, and conducting 38 KIIs with key national- and subnational-level RBF stakeholders, such as health facility managers, DHOs, district RBF focal persons, MoH officials, and RMNCAH project implementers.

The study focused on three RBF programs that supported activities related to RMNCAH during 2015–20 to respond to the latter four study objectives (UVPA was included to respond to Objective 1 only.)

Enabel: PNFP/Institutional Capacity Building II Supply-Driven Project

The Enabel PNFP/Institutional Capacity Building (ICBII) Supply-Driven Project, supported by the Belgian Technical Cooperation, was implemented from 2014 to 2018 in 17 districts of the Rwenzori and West Nile regions. This project was selected because it supported both public and private facilities in two distinct geographical regions and stood to generate diverse RBF experiences through the involvement of both public and PNFP providers.

Uganda Reproductive Health Voucher Project II

Supported by Sweden and the International Development Association (IDA) through the World Bank Global Partnership on Output-Based Aid, the Uganda Reproductive Health Voucher Project II (URHVP-II) was implemented from 2015 to 2019 by the MoH in partnership with Marie Stopes Uganda serving as the voucher management agent (VMA). It used a mix of supply- and demand-driven implementation approaches. This RBF program covered 25 districts located in the Eastern and Southwestern regions and involved 201 service providers in public, PFP, and PNF facilities, as well as 456 community-based distributors, particularly VHTs. It was believed that this project would provide valuable data on RBF experiences from a variety of providers to inform scale-up and institutionalization of RBF across them.

URMCHIP

The URMCHIP, which is supported by the World Bank, Sweden, and the Global Financing Facility and executed by the MoH, is the biggest government attempt to implement a full-scale, supply-driven RBF project in the public health care delivery system beyond donor-funded pilot arrangements. This project started with 28 districts and expanded to 131 of the 135 districts (4 districts had not constituted the mandatory structures for facilitating the implementation of RBF in their districts) and 1,275 of the 3,133 government-owned health facilities (MoH 2018). One better performing district, Mukono, and one moderately performing district, Lira, were selected from the first cohort of 28 districts.

Study sites

The research districts were the Lira district in the Mid-north subregion, the Mukono district in the Burganda subregion, and the Ntungamo district in the Southwestern subregion.

Study population

Research participants comprised key actors involved in RBF program implementation at the national, regional, district, and health facility levels. Table 8.1 presents

TABLE 8.1 Key informants from among the various types and levels of the RBF programs (*N* = 38)

	PNFP/ICBII	URHVP-II	URMCHIP
HC IIIs	3	4	3
HC IVs	1	3	2
Hospitals	2	2	2
District-level officials/DHTs	3	2	4
Project implementers	n.a.	2	–
RBF units	n.a.	n.a.	4
Others/policy makers	n.a.	n.a.	1
Total	9	13	16

Source: This table is original to this publication.

Note: DHTs = District Health Teams; HC = Health Center; KIIs = key informant interviews; PNFP/ICBII = Private Not-for-Profit/Institutional Capacity Building II; n.a. = not applicable; RBF = results-based financing; URHVP-II = Uganda Reproductive Health Voucher Project II; URMCHIP = Uganda Reproductive, Maternal, Child Health Services Improvement Project; – no key informant was selected from that program.

the types and number of research participants selected from the various RBF programs, health facilities, and management and governance levels for KIIs.

Sampling strategy and criteria of research programs, districts, and participants

Purposive sampling was used to select the four RBF programs, based on the funding source (government versus bilateral development agencies), intervention focus (RMNCAH versus other services), implementation approach (demand driven, supply driven, or mixed), implementation period (during 2014–20), and types of implementing partners involved (government versus nongovernment health facilities).

The district sites were selected according to regional locality, implementation period, and RBF performance, while all research participants (key informants) were purposively selected from different levels of RBF implementation based on their implementation roles.

Data collection methods, tools, and procedures

This section discusses research methods, instruments, and the procedure data collection.

Research methods

The study used qualitative methods, such as reviews of relevant literature, KIIs, and consultations with stakeholders, as well as a quantitative method—synthesis of quantitative data from available reports—to collect data related to the research objectives. The literature review involved extensive review of published and unpublished literature that included project implementation manuals, key government and policy documents, evaluation and implementation completion reports for specific programs, and online articles related to RBF, all of which are listed in the reference section of this chapter. KIIs were conducted with health workers, District Health Teams (DHTs), implementers, funders, and officials in the MoH directly involved in the implementation of RBF programs to obtain information about the factors that enable or hinder effective implementation. The specific methods used to obtain data for each research objective are presented in table 8.2.

Instruments

A *data abstraction form* was developed and used to record relevant data from the available literature. The form recorded information related to the design features of each RBF program, that is, its alignment with the set criteria in the NRBF and other implementation frameworks; its target populations, benefits, monitoring and evaluation arrangements, and verification processes; its influence on the delivery and use of incentivized services; and the feasibility of its national scale-up and institutionalization in the health system.

Interview schedules were developed based on the concepts and variables specified in the conceptual and analytical framework for this study and used to guide the interviews with the different key informants. The interview schedules contained unstructured questions about the RBF implementation processes, including contract management, autonomy, performance payments, data reporting, capacity building, supervision, and verification. The schedules also contained structured questions on the RBF policy and facility setting, service use, community engagement, and political factors influencing the delivery and use of incentivized services.

TABLE 8.2 Objectives and data collection methods

OBJECTIVE	METHODS	DATA SOURCES	ANALYTICAL PLAN
1. Identify and describe attributes of recent (2015–20) donor-financed and national RBF programs in RMNCAH in Uganda regarding the design, implementation, target population, and service packages	Document review; KIs via telephone and Zoom	Documents on RBF programs; architects of RBF programs; MoH officials	Thematic analysis
2. Examine the extent to which RBF design and implementation arrangements are consistent with the NRBF for Uganda	KIs via telephone and Zoom	Documents on RBF programs; architects of RBF programs; MoH officials	Thematic analysis
3. Assess the perceived extent and mechanisms of RBF influence on delivery and use of RMNCAH services	Document review; KIs via telephone and Zoom	Documents on RBF programs; architects and implementers of RBF programs; MoH officials; health workers	Abstraction of quantitative data; thematic analysis of qualitative data
4. Explore the factors that facilitate and constrain RBF implementation in Uganda	Review of literature; KIs via telephone and Zoom	Key RBF documents; published literature; actors in RBF programs; health workers	Qualitative data analyzed for thematic content
5. Identify key lessons learned in the implementation of RBF initiatives to inform their scale-up and institutionalization in existing performance management and public finance improvement programs in Uganda	Document review; KIs via telephone and Zoom	Key actors in RBF programs; relevant reports and documents	Qualitative data analyzed for thematic content

Source: This table is original to this publication.

Note: KIs = key informant interviews; NRBF = National Results-Based Financing Framework; RBF = results-based financing; RMNCAH = reproductive, maternal, newborn, child, and adolescent health.

Data collection procedure

Data for this study were collected from November 2020 to April 2021, when government restrictions on travel and public gatherings were in place to prevent the spread of COVID-19. Hence, all data were collected virtually. Published and unpublished documents related to RBF were obtained online and via email from the MoH, development partners, and other stakeholders. These documents were extensively reviewed, and the data were summarized in a matrix in accordance with the study themes.

RBF managers in the MoH, development agencies, districts, and various levels of the selected health care delivery system were identified; notified about the purpose, objectives, and scope of the study; and scheduled for an interview. Each participant was contacted on the scheduled date at the agreed-upon time and interviewed one-on-one by telephone or Zoom by the designated researcher.

For every interview session, the designated researcher initiated the telephone or Zoom call; explained the objectives, purpose, and ethical aspects of the study; obtained verbal consent to participate in and be recorded; and conducted a one-on-one interview in English for 45–60 minutes. At the end of each session, the research participant was thanked, requested to ask any questions related to the study (and had any query answered) and compensated for the time and any inconvenience incurred from the study. Then the researchers audio-recorded, hand transcribed, computer typed, reviewed, proofread, and cleaned the data.

Data management and analysis

Data obtained from key informants were analyzed qualitatively, while data abstracted from existing literature and information systems were analyzed quantitatively in accordance with the analytical framework.

Qualitative data analysis

The typed transcripts were shared among the researchers to review according to the theorized and emerging themes (Braun and Clarke 2006). The researchers jointly developed, discussed, and decided on the codes and subcodes, which were refined following a “sharing the project bundle” process stipulated by Atlas.ti software. Afterward, the transcripts were exported to the software, scrutinized for content or themes and patterns, coded, and analyzed following a concurrent data reduction, display, interpretation, and conclusion-drawing and verification process (Braun and Clarke 2006; Miles and Huberman 1994; Yin 1994).

Quantitative data analysis

The selected indicators for reported changes in service use obtained from project performance and audit and other reports for the PNFP/ICBII, URHVP-II, and URMCHIP were synthesized to reveal the perceived influences of RBF on the use and delivery of incentivized services. The data abstraction form was used to extract and record relevant information in a logical way. Afterward, descriptive statistics and charts were used to present trends in service outputs, use, and quality changes, among others.

Finally, a cross-case synthesis of the three RBF programs was written, buttressed with descriptive statistics and verbatim quotes of participants, and amalgamated.

Study limitations

Owing to travel restrictions occasioned by the COVID-19 pandemic, physical interface and interactions with research participants were not possible, thus hindering physical verification of hard records and in-depth inquiry into some RBF aspects through district stakeholder dialogues. Additionally, although researchers were able to ensure data integrity through a triangulation of interview data with literature review data, the stated research constraints may have interfered with the findings of this study.

Furthermore, whereas some RBF programs involved in this study, such as URVP-II, relied mostly on community members to implement the interventions, they were not included in the research participants because of the excessive focus on exploring the supply-side experiences in RBF. Yet their participation would have provided more perspectives on the quality of services supported through the RBF arrangements. The omission of these stakeholders may have affected the depth of the findings from this study. Therefore, a need remains for research on the impact of RBF on service provision and quality from community and service users’ perspectives.

KEY FINDINGS

This section presents the findings according to the research objectives, which are listed in table 8.2.

1. Key design attributes and extent of implementation of RBF programs related to RMNCAH

Objective 1 of this study was to identify and describe the attributes of the 2015–20 donor-financed and national RBF programs related to RMNCAH, with

particular emphasis on the design features, geographical coverage, implementers and implementation arrangements, ownership of the targeted facilities, package of services, process of payment, and use of funds. Between 2014 and 2020, the MoH implemented seven RBF programs related to RMNCAH, with support from development partners. There were three demand-driven RBF programs, namely, EHA, Mothers and Children First: 1,000 Days, and Living Goods; two supply-driven programs, namely, PNFP/ICBII and URMCHIP; and two hybrid voucher programs, namely, the Uganda Voucher Plus Activity (UVPA) and URHVP-II. For the purposes of this study, four of the RBF programs were selected based on geographical coverage, at the time being ongoing or recently completed, and their having readily available documentation. These were examined according to 11 key design characteristics, which are identified in table 8.3 and described later.

TABLE 8.3 Design attributes of the four selected RBF programs in Uganda

ATTRIBUTE	PNFP/ICBII	URHVP-II	URMCHIP	UVPA
Approach	Supply driven	Hybrid voucher	Supply driven	Hybrid voucher
Implementation period	2014–18	2015–19	2016–21	2016–20
Funding source	Belgian government, through Enabel	Sweden, through World Bank	GFF, Sweden, World Bank	United States, through USAID
Fund holding agency	Enabel	MSU	MoFPED	Abt Associates
Geographical coverage	17 districts in Rwenzori and West Nile regions	25 districts in Eastern and South-Western regions	Initially 28 districts, expanded to 131 in 2020	35 districts in Eastern and Northern regions
Target beneficiaries	All residents	Poor pregnant women	Directly targets women and children younger than 5 years; indirectly targets all service users	Poor pregnant women
Beneficiary identification	District performance reviews and stakeholder consultations	Household poverty grading tool adapted from the Grameen Foundation	District performance reviews and stakeholder consultations	Household poverty grading tool adapted from the Grameen Foundation
Benefit package	MCH plus other basic services	Narrow MCH package	Primarily MCH services	MCH plus a few general services
Purchasers	Enabel, through the RBF Unit	MoH, through MSU	MoH, through the RBF Unit	Abt Associates
Service providers	Public and PNFP providers	Public, PNFP, and PFP providers; community voucher distributors	Public and PNFP providers	PFP and PNFP facilities; no public facilities
Verification and supervisory entity	DHMT project team	Independent verification and evaluation agency: BDO	EDHMT, DHMT project team and independent verification by BDO East African Advisory Services Limited	Independent verification and evaluation agency: BDO

Source: This table is original to this publication.

Note: DHMT = District Health Management Team; GFF = Global Financing Facility; MCH = maternal and child health; MoFPED = Ministry of Finance, Planning and Economic Development; MoH = Ministry of Health; MSU = Marie Stopes Uganda; PFP = private for-profit; PNFP = private not-for-profit; PNFP/ICBII = Private Not-for-Profit/Institutional Capacity Building II; RBF = results-based financing; URHVP-II = Uganda Reproductive Health Voucher Project II; URMCHIP = Uganda Reproductive, Maternal, and Child Health Services Improvement Project; USAID = United States Agency for International Development; UVPA = Uganda Voucher Plus Activity.

Beneficiary targeting and identification

The URMCHIP and PNFP/ICBII RBF programs were supply oriented and targeted service providers and beneficiaries, while the URHVP-II and UVPA programs were both demand and supply oriented and used a poverty-grading tool to identify target beneficiaries. Although the two programs reached the targeted beneficiaries, and almost 81 percent of beneficiary respondents were correctly identified (Jordanwood et al. 2021), both encountered several notable challenges:

- Irregularities in identifying target beneficiaries and distributing the vouchers (ISER 2020);
- Political influence exerted on the voucher distributors from community leaders (Jordanwood et al. 2021);
- Scarcity of vouchers and lack of transport facilitation for the VHTs; and
- Inadequate monitoring of the supply and distribution of vouchers, which created an artificial deficit and a “black market” for the vouchers, culminating in the VHTs selling them at double the price.

System preparation for program implementation

Although the extent of preparation varied across the programs, they all ensured that the facilities had the capacity required to deliver the envisaged services before implementation. This capacity was built mainly through stakeholder engagement, training, capacity building, and provision of initial funding. The training and capacity-building processes of the PNFP/ICBII program were reported to have been more comprehensive than were those in the other programs.

Implementation arrangements

For URMCHIP, the MoH set up the dedicated RBF Unit to oversee all RBF roll-outs and implementation, support supervision, claims verification and payment processing, and reporting. However, for URHVP-II, the MoH contracted with a voucher management agency, Marie Stopes Uganda, to ensure comprehensive implementation of the benefits package, and it contracted with a verification and evaluation agency, BDO, to verify and audit functions. In the PNFP/ICBII program, the funder was the Belgian government and the fund holder and implementer was Enabel, the Belgian Development Agency, which oversaw all pre-implementation, implementation, and post-implementation activities and processes with a project implementation unit in the MoH, which ensured continued technical links and provided assistance during implementation. Of the four programs studied, the URMCHIP and PNFP/ICBII developed the best implementation arrangements for institutionalizing RBF in Uganda.

Service providers

Whereas the PNFP/ICBII and URMCHIP programs involved PNFP and public facilities and service providers, the URHVP-II program engaged public, PNFP, and PFP health facilities and service providers, while the UVPA involved only PNFP and PFP health facilities and service providers. However, 82 percent of beneficiaries under URHVP-II obtained services from private providers (Jordanwood et al. 2021).

Benefits package

Whereas comprehensiveness of the benefits package varied across the programs, the packages of all the programs included the key services that form the

continuum of care for pregnant women, namely, four antenatal care visits, a delivery assisted by skilled health workers, postnatal care, postpartum family planning, referrals to higher-level facilities for emergency care, immunization, and outpatient and nutrition services. The UVPA had additional services in the package, including managing such illnesses and complications as malaria, urinary tract infections, diabetes, and hypertension. In the URMCHIP and PNFP/ICBII programs, additional services in the package included support to the EDHMT to facilitate supervisory functions and to the DHT to undertake verification processes and support supervision. The provision of and access to family planning services in faith-based PNFP facilities were constrained by their religious values.

Claims processing and payments

All sampled RBF programs had established procedures for processing payments for performance, which entailed direct disbursement of the payments to the facility accounts of the service provider. However, there were delays in clearing payment, especially under URMCHIP, owing to (a) poor communication between the RBF Unit and field teams; (b) a tendency for districts to wait and consolidate claims for most of their health facilities before submission to the RBF Unit; and (c) instances of submission of incorrect health facility account numbers and withholding funds linked to poor accountability. These issues tended to delay payments and demoralize service providers, negatively affecting their productivity. One health facility manager remarked,

There has been delayed disbursement of funds; this raises doubt to us as health facilities as to whether we shall be served well under this URMCHIP project, or some of this money will probably be eaten. You can see April–June funding hasn’t come to us . . . we have even qualified to get some other money for July–September. Verification was done, but money hasn’t come. We are now ending the October–December quarter. All this money hasn’t come, which undermines motivation.

In the case of URHVP-II, there were deviations between the claimed and received amounts, a backlog of unresolved claims, and delays in the approval of payment claims by the voucher management agency. These problems led to poor disbursement performance, as reflected in the end-of-project report, which observed that only 60 percent of the claims were paid in a timely manner. One health facility manager said,

When you submit claims of UGX 5M, less than this amount would be paid in bits . . . some forms would be rejected for one reason or another, probably poor filling, errors, and things they are querying that aren’t possible. Sometimes we would fill in things that are probably not to the expectation, and the forms are queried, so those ones would be put on halt. So, somebody who submitted UGX 5M would end up getting UGX 3M or UGX 2M depending on the number of forms that passed the test.

Use of RBF funds

All programs provided guidelines on how RBF funds should be shared to ensure a healthy investment balance across the system inputs and to engender a participatory approach to decision-making and transparency in sharing the staff incentive (personal allowances). Most facilities also created procurement committees that included community representatives within HUMCs to oversee the investments in systems strengthening. However, the guidelines for the sampled

programs varied, particularly regarding sharing of the funds reimbursed for staff motivation and systems strengthening across all programs.

Whereas the URMCHIP RBF guidelines stipulated investing a maximum of 40 percent for staff incentives and a minimum of 60 percent for health systems, the PNFP/ICBII guidelines specified an investment of 30 percent in incentives and 70 percent in health systems. The URHVP guidelines stipulated that 30–40 percent of RBF reimbursement should go to staff motivation, 30–40 percent to the purchase of medicine and supplies to supplement the National Medical Stores quantities, and 20 percent to supplementing PHC funds to maintain facility standards. However, some facilities and DHMTs did not comply with the guidelines regarding the use of funds and declaration of results, which undermined value for money (MoH 2019).

2. Alignment of RBF program design and implementation with the NRBFF

Objective 2 of this study was to examine the extent to which the design and implementation arrangements of three case study programs are consistent with the NRBFF for Uganda. This work involved assessing alignment with the RBF principles and the design elements of the RBF framework (MoH 2017).

Extent of alignment with the NRBFF

The NRBFF (MoH 2017) specifies several principles regarding the design and implementation of RBF programs. Table 8.4 presents results of the extent to which the three sampled programs aligned with the NRBFF benchmarks for design and implementation.

TABLE 8.4 Extent of RBF program alignment with the NRBFF

BENCHMARKS	URMCHIP	PNFP/ICBII	URHVP-II
RBF principles			
Separation of functions	Roles separated fully as per the NRBFF	Separation of functions	Roles separated, but government partially played a role of fund holding and delegated operational disbursement to VMA
Provider autonomy	Implemented autonomy except for HRH management action in civil service	Implemented autonomy except for HRH management action in civil service	Flexibility in use of funds reported
Public-private partnership	Public and PNFP only	Public and PNFP only	Operated in public, PNFP, and PFP facilities
Transparency in use of funds	Accountability actions mandated	Accountability actions mandated	Accountability actions mandated
Complementarity in funding	RBF funds were additional to other financing streams at the district and facility levels	RBF funds were additional to other financing streams at the district and facility levels	RBF funds were additional to other financing streams at the district and facility levels
Simplicity in design	Complex design but simpler indicators for hospitals as compared with PNFP/ICBII; countrywide coverage; paper based; uses existing systems for verification and payments; selects a sample of facilities for counter-verification	Design generally simpler than URMCHIP's; two regions (Rwenzori and West Nile) but more indicators than URMCHIP; less workload for DHMT and RBF Unit for verification and payment processing; no MoFPED involvement in payment process; sampling of facilities for counter-verification	Generally simpler design than other two programs (with more direct linkage between VMA and providers, fewer indicators, no DHMT roles, IVEA conducted by external agency); complexity primarily in identifying poor women for targeting

continued

TABLE 8.4, continued

BENCHMARKS	URMCHIP	PNFP/ICBII	URHVP-II
Selection and contracting for RBF			
Expression of interest to participate in RBF	Not done; all targeted districts and facilities enrolled following initial assessment	Done	Not done
Prequalification assessment	Done	Done	Done
Eligibility criteria specified	Guidelines specified criteria for qualification	Guidelines specified criteria for qualification	Guidelines specified criteria for qualification
Service package			
Alignment with UMHCP package	Narrower package, focusing on RMNCAH	Broader package, inclusive of RMNCAH	Selected RMNCAH services
Differentiated packages per levels in the health care system	Hospitals focused mainly on maternal and neonatal referrals, lower-level units provided the broader RMNCAH package	More comprehensive package for the higher-level facilities	Services (for example, cesarean sections) according to facility level per MoH standards
Payment process			
Specified deadlines	Specified schedules for payment processes	Specified schedules for payment processes	Specified schedules for payment processes
Specified claims-processing procedures	Roles and interactions of facility in-charges, district and regional focal persons, and secretariat articulated	Roles and interactions of facility in-charges, district and regional focal persons, and secretariat articulated	Roles and interactions of facility in-charges, regional focal persons, verifiers, and VMA articulated
EDHMT facilitation			
Role for EDHMT specified and incentivized	EDHMT roles specified and incentivized	EDHMT roles specified and incentivized	Silent on district roles in voucher administration
Verification process			
Internal verification precedes external verification	Facility-level assessment generated quantitative data submitted to district, region, and secretariat	Facility-level assessment generated quantitative data submitted to district, region, and secretariat	Facility-level assessment generated quantitative data submitted to regional family planning and VMA
Quantity and quality assessments in payments	Included both quality and quantity in payment	Included both quality and quantity in payment	Included both quality and quantity in payment
Counter-verifications	Specified duty of the RBF Unit but infrequent	Regularly done by the RBF Unit and Enabel staff	Independent verifier and evaluator, BDO, as part of program design
Quality considerations			
Quality assessment tools developed	Developed and captured structural measures of quality	Developed and captured structural measures of quality	Quality built into the design and regularly assessed

Source: This table is original to this publication.

Note: DHMT = District Health Management Team; EDHMT = Expanded District Health Management Team; HRH = human resources for health; IVEA = Independent Verification and Evaluation Agency; MoFPED = Ministry of Finance, Planning and Economic Development; MoH = Ministry of Health; NRBFF = National Results-Based Financing Framework; PFP = private for-profit; PNFP = private not-for-profit; PNFP/ICBII = Private Not-for-Profit/Institutional Capacity Building II; RBF = results-based financing; RMNCAH = reproductive, maternal, newborn, child, and adolescent health; UNMHCP = Uganda National Minimum Health Care Package; URMCHIP = Uganda Reproductive, Maternal, and Child Health Services Improvement Project; VMA = voucher management agency.

Extent of alignment with stipulated RBF principles

The extent of alignment of the three sampled programs with the respective NRBF principle was assessed using a 1-to-5-point scale, whereby a score of 1 was assigned for very low, 2 for low, 3 for moderate, 4 for high, and 5 for very high alignment with a specific RBF principle. As shown in table 8.4 and summarized in table 8.5, the results indicate that the three programs are generally well aligned with the stipulated RBF principles.

3. Perceived influence of RBF on the delivery and use of RMNCAH services

Objective 3 of the study was to assess the perceived extent and nature of RBF influence on the delivery and use of RMNCAH services.

Influence on service use

The results presented in table 8.6 indicate improvement in the use of services incentivized during the implementation of the three sampled RBF programs as compared with the period before RBF. This result agrees with findings in project performance and evaluation reports for the three programs (Enabel 2019; Jordanwood et al. 2021) and with interview data, in which almost all DHOs pointed out that RBF had produced positive effects on service use. Several DHOs, when asked about the perceived effects of RBF on the use of services, gave a response similar to that of one health officer, who said,

I have observed considerable improvement in the performance indicators for RBF, more so the [MCH] and other related health indicators, because whenever there is improvement in [MCH], indicators for other diseases, like the communicable diseases, end up improving . . . We have also observed improved antenatal attendance and a reduction in prenatal deaths and maternal mortality.

Influence on RMNCAH service delivery systems

The three RBF programs elicited organizational changes within the health system building blocks. The two supply-driven RBF programs, the URMCHIP and PNFP/ICBII, addressed several management challenges, such as poor strategic planning, inactive governance structures, inadequate transparency, and

TABLE 8.5 Alignment of programs with the RBF principles

EVALUATION CRITERIA	URMCHIP	URHVP-II	PNFP/ICBII
Separation of functions	5	3	4
Provider autonomy	3	4	3
Public-private partnership	3	5	3
Transparency in use of funds	4	3	5
Complementarity in funding	5	5	5
Simplicity in design	2	3	3
Total score (of 30)	22	23	23
Performance	73.3%	76.7%	76.7%

Source: This table is original to this publication.

Note: A scale of 1 to 5 was adopted to measure the alignment of program criteria with the RBF principles: 1 = very low; 2 = low; 3 = moderate; 4 = high; and 5 = very high. PNFP/ICBII = Private Not-for-Profit/Institutional Capacity Building II; URHVP-II = Uganda Reproductive Health Voucher Project II; URMCHIP = Uganda Reproductive, Maternal, and Child Health Services Improvement Project.

TABLE 8.6 RBP-incentivized changes in use of service indicators for study programs

SCHEME	CHANGES
URMCHIP	<ul style="list-style-type: none"> The project recorded an increase in ANC1 (first trimester) by 51%, ANC4 by 36%, deliveries by 3%, IPT2 by 9%, long-term family planning by 43%, short-term family planning by 55%, and full immunization at age 1 by 15% (comparing July–December 2019 and July–December 2020). There was, however, a noticeable decline in OPD <5 by 13% and in PNC attendances by 30% (comparing July–December 2019 and July–December 2020). RBF Unit program data (2018 and 2019) for the first cohort of 28 districts showed increased trends in the use of targeted services, for example, a 269% increase in ANC1 (first trimester) in Mukono district between April 2018 and June 2019 and an increase of 160% for fully immunized children at age 1 in Oyam district for the same period, among other indicators (MoH 2021).
PNFP/ICBII	<ul style="list-style-type: none"> Following a three-tier methodology for measuring impacts, RBF facilities observed a 12% higher use of services as compared with non-RBF facilities. The annual growth rate in service use and overall performance was higher in the PNFP facilities as compared with the public facilities. The biggest positive impact in service use was observed for MCH-related indicators, such as immunization and family planning. There was marked improvement in the performance of most of the CEmONC signal functions at HC IVs, which perhaps was related to the improved functionality facilitated by the RBF resources (Enabel 2019).
URHVP-II	<ul style="list-style-type: none"> The number of women attending at least one ANC visit under the project grew from 34% (midline evaluation) to 86%, with a project target of 90%. A total of 80 percent of women who attend ANC were tested for HIV, with a project target of 90%. Up to 231,002 vouchers were distributed, and 77% of these were redeemed for deliveries. There was a notable increase in deliveries attended by skilled health personnel. This result was inferred at the end of the project from a cumulative total of 178,413 vouchers for deliveries that were redeemed, and 16.5% of these were cesarean sections, as compared with the midline figure of 43,042 deliveries attended by skilled personnel. There was an observed increase in mothers who received family planning services, from 4% to 42% by the end of June 2019. Only 9.5% of mothers were referred from lower-level health facilities (BEmONC) to higher-level (CEmONC) facilities, signifying substantial capacity improvements at lower-level facilities. A total of 44 maternal deaths were, however, witnessed during the project period, with 5 at BEmONC and 39 at CEmONC facilities (Vaillancourt 2020).

Source: This table is original to this publication.

Note: ANC = antenatal care; ANC1 = first antenatal care visit; ANC4 = fourth antenatal care visit; BEmONC = basic emergency obstetric and newborn care; CEmONC = comprehensive emergency obstetric and newborn care; HC = Health Center; IPT2 = intermittent preventive treatment for malaria; MCH = maternal and child health; OPD = outpatient department visit; PNC = postnatal care; PNFP = private not-for-profit; PNFP/ICBII = Private Not-for-Profit/Institutional Capacity Building II; RBF = results-based financing; URHVP-II = Uganda Reproductive Health Voucher Project II; URMCHIP = Uganda Reproductive, Maternal, and Child Health Services Improvement Project.

limited use of evidence in decision-making. In particular, the PNFP/ICBII required business plans, and this promoted participatory strategic planning at the facilities. HUMCs were facilitated to guide planning, resource use, and foster accountability through financial guidelines and controls on the use of RBF funds.

For the two other RBF programs, URHVP-II and UVPA, additional structures, such as procurement committees were set up to streamline the health facility procurement processes and develop consensus on facility priorities. In addition, the RBF funds made it possible to hold regular staff and management meetings to address emergent issues. These meetings also improved decision-making at the facility level (Enabel 2019). RBF support to the DHMTs enabled them to conduct regular supervision visits to health facilities, which enhanced prompt identification and implementation of actions necessary for improved performance.

Strengthened the culture for data generation and use. The health facilities were prompted to regularly analyze their data to identify performance gaps and devise actions for preventing the loss of RBF money. Whereas the improved data systems helped promote evidence-based planning at the health facility level, the development and use of separate reporting tools for each program increased the workload of data managers.

RBF funds boosted income to the facilities and was then used to acquire infrastructure, staff, and medicine. Additionally, the recruitment and training of accountants, provision of tools and equipment, such as computers, to support documentation, and establishment of financial controls and audits in the quarterly quality assessments improved financial management of the health facilities.

Reduced access costs. The RBF funds subsidized the cost of services, especially for the PNFP providers, which made the services accessible for clients who could not normally afford them (Jordanwood et al. 2021). In addition, key informants in PNFP health facilities recognized the critical role RBF played in subsidizing services and attracting additional clients, as the manager for one HC IV said:

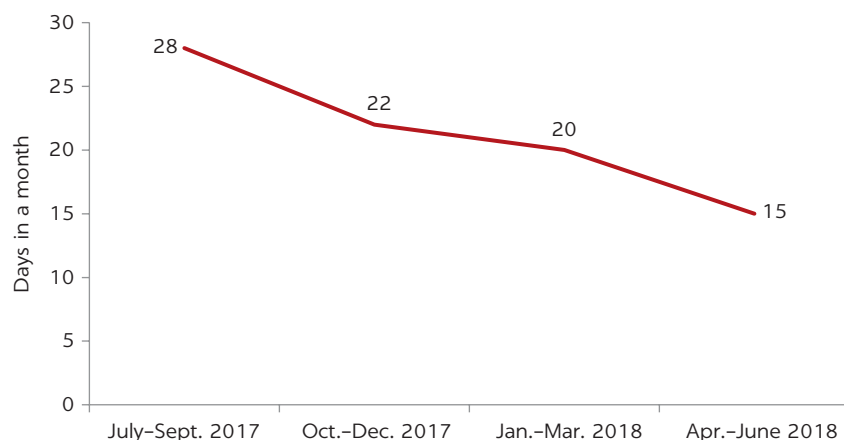
RBF funds were actually used to subsidize our costs; like, if we were charging UGX 30,000 for malaria treatment, we had to reduce it to around UGX 10,000, and the other balance would be covered by the money we get from RBF. So, this made the patients come, because the cost was affordable to them.

Improved availability of medicine and supplies. The stock-out days for essential medicine and supplies consistently dropped in the period of July 2017 to June 2018, which was attributed to the improvement in timeliness in the purchase and supply of medicine using RBF (Figure 8.3). It was widely reported that RBF resulted in stable funding for medicine and supplies and reduced stock-outs of medicine, which attracted clients to the RBF facilities, as one HC IV manager pointed out:

With this money, we made sure that drugs are available, especially the essential medicines; and so that one led to increased turn-up of patients at the facility.

Further, public facilities saw an expansion in their freedom to make decisions around medicine procurement. They could procure medicine and supplies from the Joint Medical Stores to complement the National Medical Store supplies.

FIGURE 8.3
Days of stock-outs of essential medicine at Rukunyu HC IV, FY 2017/18



Source: Enabel 2019.
Note: HC = Health Center.

Several key informants in health facilities supported by the URMCHIP and PNFP/ICBII RBF projects suggested that the MoH should allow the purchase of supplies from local pharmacies under URMCHIP. However, some informants also pointed out that procurement of the inputs from the local market would jeopardize the quality of the medicine and other supplies dispensed in the health facilities. Furthermore, RBF funds enabled the recruitment of pharmacists and dispensers at facilities, and these health personnel helped improve the forecasting, procurement, and disbursement of medicine, the use of stock cards to track the use of medicine, and the rational use of medicine, particularly in the health facilities capitalized by the PNFP/ICBII program.

Improved health facility infrastructure. Some RBF projects, particularly URMCHIP and PNFP/ICBII, provided funding for the improvement of health facility infrastructure, such as renovating maternity wards; constructing pit latrines, entrances, and waiting shelters; painting buildings, and purchasing furniture. This work helped improve cleanliness and patient spaces in the health facilities, which encouraged clients to seek care services from the facilities. One health facility manager commented,

Our performance was very poor, but all this was because of the sorry state in which our maternity block was. It would leak, ceiling boards were falling off, and bats were all over the place, so the mothers would not risk coming here for deliveries . . . When RBF came, to qualify, we had to do a lot of work. We had to fix the roof using cotton to avoid the leakages and ensure that the ceiling boards were fixed. And God helped us. We qualified. So, we shall live to remember RBF for us here.

Enhanced linkages between health facilities and the community and demand for services. Virtually all the key informants reported that RBF programs not only facilitated community health workers or VHTs to link service users with the health facilities, but they also supported community dialogues and the display of educational materials, which helped boost demand for services and performance of the health facilities. This result was more pronounced in the URHVP-II program, which emphasized community involvement in RBF processes (Jordanwood et al. 2021).

Influence on human resources for health

All programs provided bonuses to midwives and other health workers, including gatekeepers and cleaners, involved in the provision of RMNCAH services in the facilities. Additionally, some RBF funding was invested in recruitment to cover staffing gaps in health facilities, at the start of the projects using seed funds and during implementation using RBF payments. Because of the additional funds provided to recruit and motivate health workers at facilities, there was not only a reduction in absenteeism and workload but also improvement in teamwork and productivity among the workers.

However, the recruited personnel were engaged on a temporary basis and were laid off once the RBF projects ended, which resulted in a decline in performance and sustainability of the achievements, particularly in health facilities supported through the PNFP/ICBII scheme, as one health facility manager of the scheme pointed out:

The critical cadres of staff in provision of RMNCAH services are midwives, radiographers, and anaesthetic officers, but these are not there in

some health facilities. Most of the HC IVs lacked anaesthetic officers . . .

We, therefore, had to recruit an anaesthetic officer, radiographer, and four midwives under PNFP/ICBII . . . This helped to improve service delivery.

Furthermore, all programs had in-built initiatives for expanding the capacity of health facility managers and workers in the management and delivery of RMNCAH services. For instance, the PNFP/ICBII and URMCHIP supported on-the-job training opportunities for health facility managers, maternity ward in-charges, and other critical personnel, such as data managers and accountants, at the beginning of the RBF programs. The URMCHIP project also provided diploma, bachelor's, and postgraduate bursaries for some critical health staff to improve the quantity of the health workers skilled in RMNCAH services.

Influence on the governance and management structures of the health system

At the national level, the establishment of the NRBFF, national RBF governance structures, and the RBF Unit under the MoH helped to jump-start the institutionalization of RBF. Respondents indicated that these structures were instrumental not only in implementing the URMCHIP and PNFP/ICBII projects but also in scaling up URMCHIP RBF activities to 135 as of March 2021. Although the performance of these programs has been constrained by various challenges, such as inadequate staffing, heavy workloads, delays in funds processing, and irregular counter-verification of payments, there is stakeholder consensus that RBF is a worthwhile approach for ensuring efficiency in health service delivery. Hence, there is ongoing discussion under the UgIFT Program to institutionalize lessons learned from these RBF programs as part of the system of public financing for districts and health facilities.

The URMCHIP and PNFP/ICBII RBF projects supported DHMTs to perform their routine roles of planning, reporting, resource mobilization, and supervision of RMNCAH activities. District and facility RBF focal persons were also appointed by DHOs and assigned to oversee and document their service outputs of all RBF activities in the health facilities, which helped improve the quality and timeliness of reporting by the health facilities. However, the URHVP-II program had limited engagement with DHMTs, because the verification processes were conducted by an independent VMA (Marie Stopes Uganda) and an external verifier (BDO). All sampled RBF programs supported a coordination mechanism for RBF in regional hospitals to link the MoH with the district RBF teams and support the respective district teams in the implementation of RBF activities. Regional coordinators facilitated cross-learning opportunities among districts in the region.

4. Factors facilitating and constraining RBF implementation

Objective 4 of this study was to explore the factors facilitating and constraining implementation of RBF in Uganda. This objective was assessed on the basis of various RBF design principles and implementation approaches.

Facilitating factors

Findings related to facilitating factors for RBF implementation included having a flexible approach, making deliberate investments in organizational and institutional capacity building, having supportive contractual arrangements, having

continued stakeholder engagement in the process, and aligning with existing government systems and reform agenda.

Flexible implementation approach. The three RBF programs involved in this study adopted a flexible implementation approach, which enabled modifications in the implementation processes whenever the need arose. The flexibility allowed the schemes to adopt implementation strategies that suited various contexts and realities, which helped improve the effectiveness of strategies. For instance, the URHVP-II program eventually linked all vouchers to facilities to reduce the illicit sale of vouchers that had cropped up. The PNFP/ICBII project introduced study tours to enhance learning, and to reduce delays, URMCHIP stopped the practice of waiting for the consolidation of all claims to be submitted to the district by the respective health facilities before processing them for payment.

Deliberate investments in organizational and institutional capacity building. All sampled programs supported health personnel training and other capacity-building activities to strengthen institutional capacity for RBF. For instance, the PNFP/ICBII program introduced the digital verification system, which helped reduce delays in the approval of activities and payment claims.

Supportive contractual arrangements. The presence of implementation guidelines for RBF helped clarify the roles of the various stakeholders in the implementation and management of RBF processes at the national, district, and facility levels. This enhanced autonomy in decision-making at various levels. In addition, there was a formal signing of contracts between the districts and project implementers in the URMCHIP program and between health facilities and the project implementers in the PNFP/ICBII and URHVPII programs. Formal contracts not only helped clarify the roles of the implementers at the national, district, and facility levels but also increased autonomy, which enabled each participant to effectively perform its implementation obligations, especially regarding resource use to address emerging local needs.

Continued stakeholder engagement in RBF processes. Although the RBF agenda was largely promoted by development partners, there was local buy-in and support at the national and subnational levels due to the anticipated benefits. At the district level, political and technical leaders were engaged and assigned specific roles in the RBF programs. In districts where these district leaders were actively involved, implementation of RBF activities was generally better. The PNFP/ICBII project was reported to have engaged stakeholders extensively, and this resulted in ownership and consistent support to the service providers before and during implementation of RBF activities.

Alignment with existing government systems and reform agendas. The PNFP/ICBII and URMCHIP projects were largely implemented through government structures, which minimized administrative costs and created opportunities for sustaining them beyond donor funding. These lessons have catalyzed a national policy dialogue on the institutionalization of RBF processes, health system financing, and the adoption of RBF approaches in other public sectors and programs, such as national health insurance.

Constraining factors

Findings related to constraining factors for RBF implementation included capacity inadequacies in the health system, delays in processing claims and payments, service provider competition, withdrawal of private health service providers from participation due to low pay, inadequate funding for RBF programs, and supplier-induced demand for specific RMNCAH services.

Capacity inadequacies in the health system. Despite the continued investment in health system strengthening, the existing system faces challenges of limited space and dilapidated infrastructure, inefficient supply chains, and inadequate numbers and staffing levels of human resources. These challenges have undermined plans for various RBF programs in the country, leading to less-than-optimal outcomes.

Delays in processing claims and payment. The URMCHIP experienced delays in payment throughout its implementation due to shortcomings at the district level, such as incomplete documentation and errors in bank accounts, while the URHVP-II and PNFP/ICBII projects encountered such challenges as discrepancies between the claimed and paid amount in the payment process, especially at the start of the project (Jordanwell 2021). Although the processing of claims improved with time, the timely payment rate in the URHVP-II and PNFP/ICBII projects stagnated at 60 percent. The delays in URMCHIP were partly attributed to the accumulation of claims from all facilities in the district before payments were disbursed. As one DHO said,

Even if a facility does their self-assessment very fast and submits the claims before the other health facilities, the MoH does not send the funds until the other facilities have submitted theirs because they want all claims to be submitted together and paid at once. So, these are some of the causes for delays ... but this practice requires changing because some in-charges take their time to submit the forms and inconvenience those that prepare and submit their forms quickly.

Service provider competition. Some key informants reported that inclusion of private and public facilities in some RBF programs created unnecessary competition, while others observed that involvement of public and private providers helped create meaningful competition and exposed inefficiencies in other health facilities. This involvement helped improve services, as observed by one manager in a private health facility:

The migration of service users is from the worst to the best facility regardless of whether the facility is owned by the government or private organization. Because in any community where there is a public facility offering better service than the private, there is a migration to the public facility.

Withdrawal of private health service providers from participation due to low pay. There are instances in which some private service providers that qualified to participate in the UVPA program later declined because the negotiated service fees were lower than their standard fees, which would compromise their cost recovery (Jordanwood et al. 2021).

Inadequate funding for RBF programs. Virtually all funders of the sampled programs pointed out that the available funding could not support many types of health facilities and service providers, especially in the private health system. The inability to include several private facilities in the RBF programs hindered expansion of some RMNCAH services in populations served by those facilities.

Supplier-induced demand for specific RMNCAH services. Because the voucher program allowed mothers to decide which service providers to use, there were reported instances in which some pregnant women were induced to utilize some services, such as cesarean sections, from private health providers, when those services were not necessary, to increase financial benefits from the program. This practice could have contributed to the increase in the proportion of deliveries

by cesarean section from 16 percent to 22 percent between July 2018 and September 2019 (Jordanwood et al. 2021), because elements of demand inducement were observed in some places. As a respondent from the Ntungamo district stated,

One time I contacted one of the VHTs. I told him, you man, you are going to face it, somebody told me that you sold the voucher to her at UGX 20,000. You know Ugandans. He refused [to admit it], but it was true. They started making business. And another thing. For us in government facilities, they used to give us few vouchers, but for the private, anytime one wanted to pick the vouchers, they would pick [them up] from Marie Stopes. And you know everything has advantages and disadvantages. The advantage with government is that we used to monitor mothers so that we get money, but in private [facilities], since their C-section was UGX 400,000, they used to do many C-sections because this was assured money.

CONCLUSION

This study found that the RBF programs provided the opportunity for districts and health facilities to receive direct funding, which was used primarily to strengthen their capacity to deliver quality RMNCAH and other services. Capacity-strengthening interventions were done through multiple methods that included start-up funding for infrastructure development, training, and skills transfer during verification and supervision.

The facilities and districts put in place measures to ensure that the facilities could deliver the specified targets. Under the URMCHIP and PNFP/ICBII RBF programs, key activities were outlined in performance improvement plans. Where performance was suboptimal, deliberate effort was made to enhance performance by improving the ambience of the maternity ward, addressing the welfare of the health workers, engaging VHTs to identify and refer would-be mothers, and changing the leadership of some health facilities.

Use of the RBF funds from PNFP/ICBII and URMCHIP was generally in line with the guidance issued by the implementers and the performance improvement plans developed by the health facilities. The funding tended to benefit all health workers in a health facility, and the workers often participated in decision-making about the use of funds. Although some cases of the misuse of funds were reported, especially in the URMCHIP, the auditors provided accounting and resource management support to the districts that helped resolve concerns. The transparent and participatory approaches to allocation and use of RBF also helped reduce misuse and conflicts. However, citizen engagement in accountability was inadequate in all programs; this can be enhanced by involvement of HUMCs in health facility RBF processes to ensure adequate integration of community needs and information sharing with the citizenry (Bua, Paina, and Ekirapa-Kiracho 2015).

Despite the strong supervision of RBF management mechanisms at various levels, the programs faced several challenges during their implementation. Concerning human resources, some health facilities had inadequate numbers of health workers, and some health facility managers and workers had inadequate skills, especially in leadership and financial management, and some had workload-related pressures due to low staffing levels. These challenges are similar to those reported in earlier studies related to RBF (Bua et al. 2015).

The PNFP/ICBII and voucher programs initially worked with private pharmacies but encountered many challenges that led to misuse of funds. Hence, these programs eventually worked with the Joint Medical Stores to ensure systematic and timely provision of the required medicine and supplies. However, there were instances when the Joint Medical Stores did not fulfil the orders placed by the supported health facilities due to poor order aggregation and forecasting by the facilities. Misuse of funds and poor order aggregation and forecasting can be minimized by strengthening the procurement committees at the health facilities, strengthening district oversight and accountability, and imposing sanctions on health facilities that engage in malpractices.

One of the other major challenges faced by the RBF programs, particularly URMCHIP, was delay in payments due to holdups in disbursement of funds for verification. This challenge can be addressed by supporting migration to digital-based verification and payment systems, such as Open Data Kit technologies, to enable electronic data capture and verification, and providing computers and printers to all health facilities to enhance the quick preparation and submission of payment claims.

Uganda has had several RBF pilots, most of which have yielded positive outcomes and lessons important for informing RBF institutionalization in government financial management systems. Because institutionalization and scale-up require alignment with existing structures and systems (Ekirapa-Kiracho et al. 2021), the ongoing discussions in the UgIFT Program on the institutionalization of RBF in government fiscal transfers to districts and health facilities as part of PHC grants provide an immediate opportunity for this to happen.

Of the sampled RBF programs, URMCHIP was the most aligned with the NRBF, partly because, unlike the other programs, it was developed after the adoption of the framework, was government led, and used existing governance and management system structures established by the government to implement all RBF activities. However, the use of government bureaucratic procedures not only led to delays in implementation of RBF activities and verifications, but also resulted in inadequate supervision, thereby harming the quality of services delivered.

RECOMMENDATIONS

To address the RBF challenges observed in this study, responses from MoH are necessary at the governance, capacity-building, and programming levels.

Governance

- The MoH, in collaboration with implementing partners, should strengthen the capacity of DHMTs, hospital boards, and HUMCs to effectively perform their stewardship roles and ensure value for money as well as to strengthen social accountability and citizen engagement.
- The MoH RBF Unit should streamline communication channels with the RBF implementing units in local governments, health facilities, and other relevant entities to prevent conflicts and misinformation among the RBF stakeholders. It also should allocate adequate funding to the health sector governance structures to enable them to conduct regular oversight and

stakeholder meetings to discuss RBF concerns at the community, district, regional, and national levels.

- The MoH, in collaboration with MoFPED, should align the RBF agenda with the public finance management reforms stipulated in the program-based budgeting policy.
- The MoH, in coordination with other stakeholders, should engage the MoFPED to ensure adoption of best practices in ongoing public finance reforms, such as program-based budgeting and the UgIFT Program.
- The MoH should work with the Ministry and the MoLG to incorporate RBF structures and personnel, such as the RBF Unit and regional focal persons, into the civil service systems and revise the staffing levels and norms of health workers to reduce their workloads and ensure provision of quality services.
- The MoH, through the RBF Unit, should review the contractual arrangements between the RBF Unit and service providers to ensure the reasonable autonomy of service providers, particularly regarding financial and managerial decision-making.

Capacity building and adaptive learning

- The MoH should manage the RBF institutionalization process in a phased manner, considering the capacity and resource requirements of implementation teams.
- The MoH, through the RBF Unit, should adopt a learn-by-doing approach in the implementation of RBF to enable timely feedback loops and corrective action to the program.
- The MoH should work with local governments to (a) strengthen the capacity of facility managers and their RBF focal persons in customer care, leadership, and financial management, including the implementation of voucher projects in accordance with the RBF principles specified in the NRBF, and (b) undertake periodic needs assessments to identify competence gaps and ensure customized capacity enhancement strategies for facility managers and providers.

Program design and support

- The MoH should work with the Joint Medical Stores and National Medical Stores to streamline the supply of medicine and commodities by supporting districts to properly forecast and aggregate orders for the cost-effective delivery of supplies.
- The MoH RBF Unit, in collaboration with implementing partners, should (a) support regional teams, districts, and facilities to adopt the use of digital technology and platforms to expedite the requisitioning, approval, and disbursement processes of RBF funds to beneficiaries; (b) review RBF implementation and evaluation guidelines to clearly articulate and incorporate quality-of-care measurement needs in the calculation of reimbursement indicators; and (c) support health facilities and service providers to conduct facility capacity assessments and provide any resources needed to adequately address the identified capacity gaps.
- The MoH should work with the MoFPED and districts to (a) strengthen the IFMS and the district approval processes to enable speedy verification and disbursement of funds for implementation of activities and (b) develop a joint

routine supervision and verification system for RBF to reduce the burden on the DHMT and improve their supervision capacity.

- The MoH, in collaboration with implementing partners, should support the ongoing efforts of linking RBF processes with DHIS2 reporting and verification and with the IFMS to not only minimize delays in payment, but also to ensure adequate tracking of disbursements to health service providers.

Areas for further research

There is a need for further research into (a) the RBF payment processes of the URMCHIP to better understand the reasons for delays in RBF payments; (b) ways to align RBF mechanisms with existing government systems for the MoFPED and MoLG; (c) best practices of RBF programs regarding community involvement; and (d) the impact of RBF on service provision and quality from the perspectives of the community and service users.

REFERENCES

- Borghi, J., T. Ensor, A. Somanathan, et al. 2006. "Mobilising Financial Resources for Maternal Health." *Lancet* 368 (9545): 1457–65. doi:10.1016/S0140-6736(06)69383-5.
- Bua, J., L. Paina, and E. Ekirapa-Kiracho. 2015. "Lessons Learnt during the Process of Setup and Implementation of the Voucher Scheme in Eastern Uganda: A Mixed Methods Study." *Implementation Science* 10 (1): 1–8. doi:10.1186/s13012-015-0292-3.
- Ekirapa-Kiracho, E., et al. 2021. "Designing for Scale and Taking Scale to Account: Lessons from a Community Score Card Project in Uganda." *International Journal for Equity in Health* 20 (31). doi:10.1186/s12939-020-01367-1.
- Eldridge, C. and N. Palmer. 2009. "Performance-Based Payment: Some Reflections on the Discourse, Evidence and Unanswered Questions." *Health Policy and Planning* 24 (3): 160–66. doi:10.1093/heapol/czp002.
- Enabel. 2019. *Capitalisation of Enabel ICB II & PNFP Health Projects in Uganda*. Report developed by the RBF project implementation team supported by the team from Makerere University School of Public Health. Kampala, Uganda.
- Hassan, R., C. Varmeer, E. Rothenbuhler, M. Vledder, and S. Mabuchi. (2013). *Results-based Financing Programs in the Health Sector: Conceptual Framework and Methodological Options for Programme Design and Evaluation*. Washington, DC: World Bank.
- ISER (Initiative for Social and Economic Rights). 2020. *Failing to Reach the Poorest? Assessment of the World Bank Funded Uganda Reproductive Voucher Health Project*. Kampala: ISER. <https://iser-uganda.org/publication/failing-to-reach-the-poorest-assessment-of-the-world-bank-funded-uganda-reproductive-health-voucher-project-report/>.
- Jordanwood, T., A. Nakyanzi, E. Tumukurate, E. Tabusibwa, J. Mwaka, A. Pattnaik, S. Straubinger, F. Moi, and S. Byakika. 2021. *Reproductive Health Voucher Schemes in Uganda: How They Worked and Lessons for the Future*. Kampala: ThinkWell and Ministry of Health. <https://thinkwell.global/wp-content/uploads/2021/02/Uganda-Voucher-Study-05Feb21-final.pdf>.
- Kim, J. and J. T. Mahoney. 2005. "Property Rights Theory, Transaction Costs Theory, and Agency Theory: An Organizational Economics Approach to Strategic Management." *Managerial and Decision Economics* 26 (4): 223–42. doi:10.1002/mde.1218.
- Lagarde, M., A. Haines, and N. Palmer. 2009. "The Impact of Conditional Cash Transfers on Health Outcomes and Use of Health Services in Low and Middle Income Countries." *Cochrane Database of Systematic Reviews*, 4. doi:10.1002/14651858.CD008137.
- Meessen, B., A. Soucat, and C. Sekabaraga. 2011. "Performance-Based Financing: Just a Donor Fad or a Catalyst Towards Comprehensive Health-Care Reform?" *Bulletin of the World Health Organization* 89 (2): 153–56. doi:10.2471/BLT.10.077339.

- Miles, M. B., and A. M. Huberman. 1994. *Qualitative Data Analysis: An Expanded Sourcebook*. 2nd ed. Thousand Oaks, CA: Sage Publications.
- Milgrom, P. R., and J. D. Roberts. 1992. *Economics, Organization and Management*. London: Pearson Publishing.
- MoFPED (Ministry of Finance, Planning and Economic Development). 2023. Uganda Intergovernmental Fiscal Transfer Programme, Kampala. <https://ugift.finance.go.ug/about-us/#:~:text=The%20Uganda%20Intergovernmental%20Fiscal%20Transfers,for%20health%20and%20education%20services> (accessed June 1, 2023).
- MoH (Ministry of Health). 2016a. *Health Financing Strategy 2015/16–2024/25*. Kampala: MoH. <http://library.health.go.ug/health-system-financing/health-financing-accounting/health-financing-strategy-201516-202425>.
- MoH (Ministry of Health). 2016b. *Investment Case for Reproductive, Maternal, Newborn, Child, and Adolescent Health. Sharpened Plan for Uganda 2016/17–2019/20*. Kampala: MoH. https://www.globalfinancingfacility.org/sites/gff_new/files/Uganda-Investment-Case.pdf.
- MoH (Ministry of Health). 2017. *National Results-based Financing Framework*. Kampala: MoH.
- MoH (Ministry of Health). 2018. *Midterm Review Report for the Health Sector Development Plan 2015/16–2019/2020*. Kampala: MoH. <http://library.health.go.ug/monitoring-and-evaluation/annual-quarterly-performance-reports/mid-term-review-report-health-sector>.
- MoH (Ministry of Health). 2019. *Results Based Financing Implementation Manual*. Uganda Reproductive Maternal and Child Health Services Improvement Project. Kampala: MoH.
- MoH (Ministry of Health), Health Systems 20/20, and Makerere University School of Public Health. 2012. *Uganda Health System Assessment 2011*. Kampala: MoH; Bethesda, MD: Health Systems 20/20, Abt Associates Inc. <https://health.go.ug/docs/hsa.pdf>.
- Mooney, G., and M. Ryan. 1993. “Agency in Health Care: Getting Beyond First Principles.” *Journal of Health Economics* 12 (2): 125–35. doi:10.1016/0167-6296(93)90023-8
- SMGL (Saving Mothers Giving Lives). 2013. *Making Pregnancy and Childbirth Safer in Uganda and Zambia*. Annual Report. <https://www.healthynewbornnetwork.org/hnn-content/uploads/SMGL-Annual-Report-2013.pdf>.
- Ssenogooba, F., B. McPake, and N. Palmer. 2012. “Why Performance-Based Contracting Failed in Uganda—An ‘Open-Box’ Evaluation of a Complex Health System Intervention.” *Social Science & Medicine* 75 (2): 377–83. doi:10.1016/j.socscimed.2012.02.050.
- Ssenogooba, F., E. Ekirapa-Kiracho, T. Musila, and A. Ssenyonjo. (2015). *Learning from Multiple Results-Based Financing Schemes: An Analysis of the Policy Process for Scale-up in Uganda (2003–2015)*. Geneva: Alliance for Health Policy and Systems Research and WHO.
- Ssenyonjo, A., E. Ekirapa-Kiracho, T. Musila, and A. Ssenyonjo. 2021. “Fitting Health Financing Reforms to Context: Examining the Evolution of Results-Based Financing Models and the Slow National Scale-Up in Uganda (2003–2015).” *Global Health Action* 14 (1). doi:10.1080/16549716.2021.1919393.
- UBOS (Uganda Bureau of Statistics) and ICF. 2018. *Uganda Demographic and Health Survey 2016*. Kampala: UBOS; Rockville, MD: ICF. <https://dhsprogram.com/pubs/pdf/FR333/FR333.pdf>
- Vaillancourt, D. A. 2020. “Implementation Completion and Results Report for the Uganda Reproductive Health Voucher Project (P144102) in Uganda.” World Bank, Washington, DC. <https://documents1.worldbank.org/curated/en/594211621561305279/pdf/Uganda-UG-Reproductive-Health-Voucher-Project.pdf>.
- World Bank and CIDA (Canadian International Development Agency). 2006. *Performance Based Contracting Study in Uganda. World Bank/Canadian International Development Agency/MoH Project. End of Project Report—Policy Component*. Washington, DC: World Bank
- Yin, R. 1994. *Case Study Research: Design and Methods*. 2nd ed. Thousand Oaks, CA: Sage Publications.
- Zziwa, G. B., R. A. DDM Onzima, P. Govule, J. F. Mugisha, and R. Ayiko. 2015. “The Effects of Performance-Based Financing on the Health Centers of Jinja Diocese, Uganda.” *International Journal of Public Health Research* 3 (4): 162–67. <http://www.openscienceonline.com/journal/ijphr>.

IV Health information systems

9 Assessing the Quality of Birth and Death Registration and the Vital Statistics System in Uganda

SIMON KASASA AND JOSEPH AKUZE

EXECUTIVE SUMMARY

Globally, there is increasing demand for high-quality civil registration and vital statistics (CRVS) data because of their role in facilitating the effective design and implementation of public health and social and economic development programs. The World Health Organization (WHO) notes that a well-functioning CRVS system registers all births and deaths; issues birth and death certificates; and compiles and disseminates vital statistics, including cause-of-death information. It may also record marriages and divorces.¹

For many developing countries, CRVS capacity is weak. The WHO further states that annually “the births of tens of millions of children” are not registered; in fact, an estimated two-thirds of deaths are *never* registered and thus are not counted in the vital statistics system.² For countries such as Uganda, where reproductive, maternal, newborn, child, and adolescent health (RMNCAH) remain the primary cause of mortality and morbidity, reliable data on births and causes of death are especially vital inputs to inform decision-making and the targeting of interventions.

Civil registration services in Uganda fall under the mandate of the National Identification and Registration Authority (NIRA) and are regulated by the Registration of Persons Act (ROPA) of 2015. The Uganda Bureau of Statistics (UBOS) is mandated to generate and disseminate vital statistics. Currently, only 32 percent of births and 24 percent of deaths are registered in Uganda. In view of these low rates of registration, there is a need to better understand the current status of as well as the enablers and barriers to an effective CRVS system in Uganda.

Study objectives

This study aimed to achieve the following:

- Establish the current performance (coverage, completeness, timeliness, and accuracy) of civil registration in Uganda;

- Assess the status of the national vital statistics systems;
- Document factors that impact the performance of the civil registration system in Uganda;
- Document lessons learned in implementing the civil registration system in Uganda; and
- Establish existing opportunities and capacities in terms of linkages and technologies that are currently utilized in civil registration in the country.

Methodology

The study utilized a cross-sectional design and mixed methods for data collection, including desk review, stakeholder engagement, key informant interviews (KIIs), in-depth interviews (IDIs), focus group discussions (FGDs), and analysis of data from the District Health Information Software version 2 (DHIS2) and NIRA's Mobile Vital Records System (MVRS). The study instruments were adapted from previous studies as well as from WHO-recommended tools and reports and were translated into five languages. Interviews were conducted between November 2020 and March 2021 via telephone due to COVID-19 travel restrictions in the country. Interviewers targeted birth and death registration (BDR) managers and users at the national level and in four districts: Masaka, in the Central region; Tororo, in the Eastern region; Lira, in the Northern region; and Kabale, in the Western region.

The study participants at the national level included registration focal officials at relevant ministries, departments, and agencies (MDAs) and development partners supporting BDR, while subnational participants included civil registration focal persons in the districts, local council leaders, and community members. A total of 53 KIIs (24 at the national level and 29 at the subnational level), 12 IDIs, and 8 FGDs were conducted for this study.

Key findings

- The registration rate for births of children ages 0–5 is 32 percent, while the registration for deaths of children in the same age group is 24 percent (UBOS 2016). Birth registration for children ages 0–5 is generally poor across the country, but it is lowest in the Bugisu region, at 11 percent, and highest in the Kigezi region, at 57 percent. Routine data from the MVRS indicate that the rates are even much lower, with the current national birth registration rate at 19 percent, while death registration is less than 1 percent (0.24 percent).
- The proportion of notified births and deaths that are registered shows a steady incline. There was a sevenfold increase in absolute numbers of annual deaths notified (from 538 to 3,604) and a 16-fold increase in deaths registered in 2019 versus those in 2020 (from 82 to 1,323). These figures suggest an overall improvement in the death registration services. Data reveal that the proportion of male death registrations (71 percent) is greater than that of female registrations (27 percent), suggesting that there may be a need to further sensitize families about the registration of all deaths.
- Civil Registration Offices (CROs) are located in 112 districts of the 135 (77 percent) and in the 5 divisions of Kampala; however, only 70 districts (52 percent) in the entire country can certify births. This issue is further compounded by human resources gaps and inadequate office equipment.

- The quality of the data generated by the CRVS system in Uganda is still suboptimal: A review of completed forms shows missing data in required fields for BDR, inaccurate information on causes of death, and delays in reporting of vital events, with less than 1 percent of births and deaths notified within the time designated by ROPA 2015, further increasing the likelihood of errors.
- UBOS is currently generating some vital birth statistics based on the total number of births notified and registered by gender. However, no death indicators are produced, and there is limited collaboration between NIRA and UBOS in this process. Furthermore, although MVRS has facilitated data capture and transfer, the data systems within NIRA—MVRS and the Civil Registration Information Management System (CRIMS)—and collaborating agencies are not interoperable, thereby creating undue administrative burdens and inefficiencies.
- NIRA's mandate and availability of partner support and CRVS partners have increased the proportion of notifications registered. However, inadequate infrastructure, high costs for processing certificates, and limited knowledge about the benefits of these services have reduced the demand.

Recommendations

Based on the findings, the following recommendations are suggested for implementation at the policy and program levels by NIRA in partnership with relevant agencies.

Policy

- Advocate for a review and revision of ROPA 2015, and clarify roles of the different stakeholders to enhance coordination of BDR interventions. Local governments should be encouraged to introduce bylaws for additional support.
- Revise fees and penalties currently being charged for registration, as well as certificate replacement, authentication, and verification, to remove cost barriers to civil registration and birth and death certification.
- Develop a plan with UBOS to generate the required information on time. The plan should clarify UBOS's role in data management, analysis, and dissemination of BDR results. It should also allow for sharing of de-identified NIRA data with UBOS and other relevant entities interested in further analysis of the data (such as academic and research institutions) to generate and disseminate requisite vital statistics in accordance with the prescribed regulations.
- Review the minimum requirements at the different civil registration stages, starting from notification and registration up to certification. This work may call for benchmarking from other countries, such as Namibia, that have reduced requirements.

Coordination of stakeholders

- Strengthen coordination with the Ministry of Health (MoH) and Ministry of Local Government (MoLG) to further decentralize civil registration services down to health facility and subcounty levels, and also explore the option of empowering community leaders and Village Health Teams (VHTs) to record and notify NIRA offices of births and deaths in the community.

- Because more than 70 percent of birth notifications take place at health facilities, set up satellite BDR offices in health facilities—especially high-volume facilities—as a means of increasing vital registration centers and coordination of civil registration activities.
- Explore the option of integrating low-cost or cost-free vital events registration periods with other services that create demand for BDR one-stop centers, as is done in the Philippines and Tanzania.
- Institute monetary and nonmonetary incentives for the staff involved in the registration processes, and work with the MoH to provide vital registration services during child immunization and other public health days to extend civil registration services, especially newborn notification and registration, to the community.

Capacity building

- Develop a capacity-building program that includes the continuous training of registration officials and of health workers on the International Classification of Diseases (ICD; WHO n.d.) reporting to improve data quality.
- Allocate resources to set up a functional distribution system to ensure that all district offices are fully equipped.
- Conduct an assessment of the current organizational structure, and advocate for additional resources for staffing. Engage the Ministry of Public Service (MoPS) in the recruitment of more staff to fill human resources gaps at CROs, focusing on people with skills essential for UBOS analyses. Further, prioritize performance monitoring and management of CRO staff.

Community engagement

- Develop a communication strategy that encourages vital registration and the objectives and process of acquiring a certificate. In addition to communication channels, such as the media and places of worship, consider educating mothers at antenatal care (ANC) and postnatal care (PNC) clinics about the importance of registration. The strategy should include engaging cultural and religious leaders in community sensitization about the BDR processes and benefits and in the actual notifications of birth and death, as they play a vital role in rites related to both.
- Benchmark against the MoH's models for increasing immunization coverage, which have worked well.

Generation of civil registration statistics

- Collaborate with UBOS to ensure that all vital events in the country are registered on time and that relevant statistical products for vital events are generated and disseminated to stakeholders.
- Develop terms of reference for the CRVS National Task Force, formally request collaborating agencies to nominate members for the CRVS Technical Working Group, and lobby other government MDAs responsible for CRVS to include this service in their budgeting process to reduce any funding gaps.
- Document guidelines and implement the designed mechanisms for linking and interfacing the Health Management Information System and DHIS2 with NIRA databases to stimulate notification and MVRS, and explore other integrated and interoperable digital solutions that enable automation of

notification and registration processes to ease access for the population with internet service or mobile telephones.

- Put in place mechanisms to make all CRVS systems within NIRA and relevant databases outside NIRA interoperable.

INTRODUCTION

This section discusses the global context of CRVS systems, the history of BDR in Uganda, and the study's rationale.

Global context of CRVS systems

Civil registration is the continuous, permanent, compulsory, and universal recording within the civil registry of the occurrence and characteristics of vital events as per a country's legal requirements (UNICEF 2013; see other definitions in table 9A.1 in annex 9A). Its importance is reflected in indicator 17.19.2 of Sustainable Development Goal 17, "Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development," which is the proportion of countries that have achieved 100 percent birth registration and 80 percent death registration (Fisker, Rodrigues, and Helleringer 2019; UN 2017). A fully functional CRVS system includes all procedures, processes, and structures for continuous registration, documentation, archiving, and certification of vital events as well as timely analysis and dissemination of vital statistics in a country (Maduekwe, Banjo, and Sangodapo 2017).

Globally, there is an increasing demand for high-quality data generated from CRVS systems to facilitate the delivery of public health services and socioeconomic development programs (WHO 2013b) as well as to formulate evidence-based policy and engage in national planning (AbouZahr et al. 2015). However, in low- and middle-income countries characterized by high fertility rates among women and high mortality rates among children younger than age 5, most CRVS systems are currently not fully functional and are characterized by gaps in data quality (Makinde et al. 2016; WHO 2014; Williams 2014; World Bank and WHO 2014). In Africa, a handful of countries have maintained a near-complete CRVS system, including Botswana, Mauritius, Sao Tome and Principe, Seychelles, South Africa, and Tunisia. For other countries, there remain challenges in meeting the goal of universal registration, although there are variations in levels of achievement.³

History of BDR in Uganda

Registration of births and deaths in Uganda was introduced in 1904, when it was deemed mandatory for the non-African population but optional for the African population. By 1930, the registration of births and deaths had been adopted—for all (African and non-African)—in most areas of the country. An attempt to improve the system was made by enacting the Birth and Death Registration Act 28 of 1973, which required the registration of births within 3 months of delivery and the registration of deaths within 1 month of demise. Registration in Uganda took place at the subcounty (gombolola) level, and the individuals responsible were registrars and clerks (gombolola clerk, town clerk, and hospital superintendents or administrators). However, the systems collapsed in the following decade, which was characterized by political turmoil.

Over the years, several institutions have led the BDR process. In 1994, the UBOS spearheaded the revival of the BDR system prescribed by the Birth and Registration Act of 1973 through the issuance of “short” birth or death certificates (also called notification records), which were then used by the Registrar General’s Office at the Ministry of Justice and Constitutional Affairs (MJCA) for issuing actual, or “long,” birth or death certificates. Parents or declarants could also apply for the long certificates directly (Ogojoi et al. 2002).

In 1998, the Uganda Registration Services Bureau (URSB) was created to carry out civil registrations (marriages and divorces), business registrations, patents and intellectual property registrations, and any other registrations required by law. In 2001, URSB, in collaboration with UNICEF, introduced efforts to revitalize the BDR. This renewed effort introduced a community-based BDR approach for children ages 0–8 in 2 pilot districts. The initiative also developed and deployed a MVRS to register births in Mulago National Referral Hospital and in 6 subcounties (UNICEF 2000). Building on the initial results, the initiative was later scaled up to 29 subcounties in 8 districts (Ogojoi et al. 2002). By 2014, 135 government and mission hospitals had been linked to this system.

Birth, death, and adoption registration in Uganda is now conducted by NIRA and governed by ROPA 2015.⁴ Vital statistics are under the mandate of UBOS (MoH 2016). NIRA’s core responsibilities include registering births, deaths, and adoptions and developing a national identification (NID) register for citizens and legal residents (NIRA 2015a). An NID and registration process started with national registration and issuance of national identity cards to all Ugandans ages 17 years or older. In 2017, NIRA launched a mass registration campaign of children ages 5–16 in primary and secondary schools across the country. This campaign aimed to develop a database of this age group missing in the registry data bank (NIRA 2017).

Following the government of Uganda’s (GoU) efforts and initiatives over the past decade, several development partners have supported the strengthening of CRVS in the country. The World Bank–supported the Uganda Reproductive, Maternal and Child Health Services Improvement Project (URMCHIP), which began in 2016 with one of its key objectives being to strengthen the institutional capacity of the CRVS system and scale up BDR services (World Bank 2016). In addition to World Bank financing (provided by the Global Financing Facility), other partners, among them Plan International and UNICEF, have been significant investors, contributing both financing and technical assistance to the national endeavor. Development partner support has helped the GoU implement several interventions, including conducting a national baseline survey on CRVS and identification registration (NIRA 2018).

Study rationale

BDR in Uganda stands at 32 percent of births and 24 percent of deaths (UBOS 2016), indicating that CRVS systems are largely underperforming. The low registration rates affect RMNCAH policies and resource mobilization, including infrastructural development, because quality, timely data generated by the CRVS systems are lacking. In the past four decades, various institutions have been mandated to register events; however, the registration processes established through these institutions have been inconsistent. There is limited evidence and knowledge on the coverage of, performance of, barriers to, and enablers to BDR. Further research is needed to understand the status of services, barriers, and

drivers of demand for BDR. Research evidence can help revamp BDR interventions, exploit new opportunities, and build capacity to improve the CRVS system in the country.

METHODOLOGY

This section discusses the study’s objectives, conceptual framework, design, instruments used, sites examined, and participants, as well as data collection procedures, data management and analysis, ethical considerations and assurance, and study limitations.

Objectives of the study

This study aimed to document the current state of the CRVS system in Uganda and generate evidence that will positively influence interventions, targeting legal, administrative, and statistical systems (input, process, and outcome) at various levels. The specific objectives were to achieve the following:

- Establish the current performance (coverage, completeness, timeliness, and accuracy) of BDR in Uganda;
- Assess the status of the national vital statistics systems, indicators regularly generated, and the extent of data use by government agencies and partners;
- Document factors (enablers and barriers) that impact the performance of the BDR systems in Uganda;
- Document lessons learned in implementing BDR systems in Uganda based on ROPA 2015 and others; and
- Establish existing opportunities and capacities in terms of linkages and technologies currently utilized in BDR in the country.

Conceptual framework

The study utilized the conceptual framework developed by Cobos Muñoz, AbouZahr, and de Savigny (2018) as an iterative and dynamic archetype of a well-functioning CRVS system rather than simply spelling out various constructs or “static” characteristics. The conceptual framework establishes that the performance of CRVS components is influenced by the legal and administrative frameworks that empower various institutions to register individual births and deaths (vital events), compile BDR data, and manage the data to generate information for use in planning. It is also influenced by the resources (human, technical, and infrastructure) deployed to enable the system to function. The conceptual framework is further informed by the three aspects of the CRVS system assessed by the study:

- Quality assurance mechanisms inherent in the legal, administrative, and technical elements that operationalize the BDR system;
- Management of data on registration of births and deaths—the notification, validation, registration, storage and archiving, certification compilation, quality control, generation, and dissemination of vital statistics; and
- Barriers and enablers for the systems’ functionality and how these influence the various processes of BDR.

Therefore, evaluating and understanding the CRVS system is crucial for improving BDR (Mikkelsen et al. 2018).

Study design

The BDR study utilized a cross-sectional design with both qualitative and quantitative methods of data collection, including desk review, stakeholders' engagement, KIIs, IDIs, FGDs, and data extraction from the DHIS2 and NIRA registries, especially the MVRS. Table 9.1 outlines the methods and sources used to address each research question.

Study instruments

Study instruments included data extraction checklists as well as guides for KIIs, FGDs, and IDIs. The checklists were developed based on NIRA's BDR forms. The questions in the KIIs and in the FGD and IDI guides were adapted to Uganda's context from previous studies and from WHO-recommended tools and reports (WHO 2010a, 2010b, 2013a). All study instruments were developed in English. Based on the sampled districts, the FGD and IDI guides were translated into five local languages—Ateso, Japadhola, Leblango, Luganda, and Rukiga.

Study sites

Based on the 2010 district boundaries, one district with a municipality was randomly selected from each of the country's four regions to ensure rural and urban variations in the study: Masaka, in the Central region; Tororo, in the Eastern region; Lira, in the Northern region; and Kabale, in the Western region.

TABLE 9.1 Study data collection methods and sources, as well as study population level, by research question

RESEARCH QUESTION	DATA COLLECTION METHODS AND SOURCES	LEVELS
What is the current quality of the BDR system in Uganda?	<i>Existing data:</i> NIRA, DHIS2 Review source data and documents KIIs	National and subnational
What is the current status of the national vital statistics system?	<i>Key Informants:</i> NIRA, UBOS, URSB, and other government agencies that use data, namely, MoH, NPA, and district leaders	National and subnational
What factors influence the BDR system in Uganda?	<i>Key Informants:</i> BDR officials and representatives at the Justice Law and Order Sector, MoH, NIRA, UBOS, UNICEF, URSB, and World Bank <i>KIIs/FGDs/IDIs:</i> BDR focal persons, community leaders, health workers, and community members (men and women), for example, women of reproductive age, married men <i>Literature review:</i> health facility records, policy documents, handbooks and manuals, other research documents	National and organizational District and community
What lessons has NIRA learned in implementing ROPA 2015?	<i>Key Informants:</i> NIRA, district NIRA officers and community development officers, and URSB FGDs with the community Examination of registers, storage, filing, statistical reports, and archiving	National and subnational
How can the existing technologies and linkages be improved to promote BDR in the country?	<i>Key Informants:</i> BDR officials and representatives at the MJCA Registrar General's Office, MoH, NIRA, NITA-U, UBOS, UNICEF, URSB, and the World Bank <i>KIIs/FGDs/IDIs:</i> Birth and death focal persons, district leaders	National and organizational District

Source: This table is original to this publication.

Note: BDR = birth and death registration; DHIS2 = District Health Information Software Version 2.1; FGDs = focus group discussions; IDIs = in-depth interviews; KIIs = key informant interviews; MJCA = Ministry of Justice and Constitutional Affairs; MoH = Ministry of Health; NIRA = National Identification and Registration Authority; NITA-U = National Information Technology Authority-Uganda; NPA = National Planning Authority; UBOS = Uganda Bureau of Statistics; UNICEF = United Nations Children's Fund; URSB = Uganda Registration Services Bureau.

One rural and one urban subcounty within each district were purposively selected with support from the NIRA district office.

Study population

At the national level, the study participants included civil registration officials at the MoH, National Information Technology Authority–Uganda (NITA-U), NIRA headquarters, UBOS, and URSB as well as representatives from the Global Financing Facility, Plan International, the United Nations Economic Commission for Africa, and the World Bank. At the subnational level, participants included representation from the Iganga-Mayuge Demographic Health Surveillance Systems Project, BDR focal persons, community members—local council leaders, VHT members—and men and women of reproductive age. The team conducted FGDs at the community level with male and female political, religious, traditional, and other community leaders, selected with guidance from local leaders.

A total of 53 KIIs (24 at the national level and 29 at the regional level), 12 IDIs, and 8 FGDs (composed of 6 to 9 members) were conducted. Information on the study participants are shown in table 9.2.

Data collection procedures

Eight research assistants, led by the two investigators, participated in the data collection. The research assistants underwent a three-day training to master the protocol and research ethics before the data collection. All study tools, methods, and competencies were pilot tested in Mpigi district, and appropriate changes

TABLE 9.2 Study participants, by interview level and data collection method

INTERVIEW LEVEL	DATA COLLECTION METHOD	INTERVIEWEES	MEN	WOMEN	TOTAL
Central	KIIs	NIRA national-level officers	7	5	12
		NIRA district-level officers	3	1	4
		Other national-level representatives	5	3	8
District	KIIs	Chief administrative officers	3	1	4
		District planners	3	1	4
		District biostatistician	2	2	4
		District health officers	2	0	2
		District revenue officers	2	1	3
		District community development officers	1	2	3
		Subcounty chiefs	2	3	5
		Town clerks	2	0	2
		Hospital directors and in-charges	2	0	2
Community	FGDs	Community leaders with representation from the following groups: parish chiefs, women, VHTs, local council chairs, and religious leaders	42	30	72
	IDIs	Community members owning either a birth or death certificate	6	6	12

Source: This table is original to this publication.

Note: FGDs = focus group discussions; IDIs = in-depth interviews; KIIs = key informant interviews; NIRA = National Identification and Registration Authority; VHTs = Village Health Teams.

were made to the study instruments before data collection commenced between November 2020 and March 2021.

NIRA headquarters introduced the research team to the other respective respondents at the national level. At the district level, a letter signed by the dean of Makerere University School of Public Health (MakSPH), a partner in the implementation of the operations research program funding this study, was sent to the chief administrative officers through the district NIRA offices seeking permission to conduct the study. Interviews were scheduled after authorization was received. The research teams also gave schedule details for FGDs and IDIs to subcounty chiefs to ensure effective participant recruitment. Most meetings were conducted virtually or by telephone to avoid COVID-19 transmission.

The investigators extracted data from DHIS2 after authorization from the MoH. Data from NIRA were downloaded and then de-identified by authorized staff to maintain confidentiality.

Data management and analysis

Qualitative data from the FGDs, KIIs, and IDIs were stored on computers and in hard-copy form as paper notes. Transcription and translation were simultaneously done for interviews conducted in local languages. The transcribed data were then coded according to identified themes and subthemes for which consensus was reached during weekly virtual analysis meetings with guidance from the investigators. Data analysis was conducted in AtlasTI Version 7.0, from which query reports and primary documents tables were produced for report writing. Typical quotes related to a particular subtheme are used in this chapter to support the findings.

All quantitative data were managed and analyzed using Stata version 16.1 and RStudio version 1.4.1106. Univariate, bivariate, and stratified analyses were conducted, and DHIS2 and NIRA data were compared by year to establish whether the two datasets followed a similar pattern. Results are presented in tables, graphs, and maps. Both qualitative and quantitative data, where applicable, were validated to ensure convergence. Triangulation methods were also applied to the data through stratified analysis.

Ethical considerations and assurance

The research team obtained institutional ethical clearance from the National HIV/AIDS Research Committee (Reference no. ARC 220) and registration from the Uganda National Council for Science and Technology (Reference no. HS629ES). The team received supporting documents for this study from the World Bank as well as special permission from the permanent secretary of the MoH and the executive director of NIRA to access their databases while following their standard data-sharing procedures. Through the MakSPH Dean's Office, the team sought permission from chief administrative officers to access the sampled interviewees. All interviews were audio-recorded with participant consent.

Study limitations

Qualitative data were collected using telephone interviews; hence, it was not possible to probe participants' nonverbal cues. Furthermore, the research team

could not conduct field visits to validate BDR processes at the NIRA offices regarding data capture, storage, and transfer because of the COVID-19 restrictions.

All quantitative data were from the MVRS and DHIS2, which primarily gather data from health facilities. Thus, the BDR data analyzed were not representative of the population-level BDR because, for example, about 25 percent of the births in the country still occurred outside facilities. The gap between UBOS projections and actual events reported in DHIS2 illustrates this missing component.

The research team was unable to access the required NIRA databases such as CRIMS because of the institution's stringent data-sharing procedures, which made it difficult to report on certification of the civil registration information. Therefore, the results do not include any analysis of certification data. In addition, other vital events, namely, marriages, divorces, and adoptions, were not considered in the work, which makes the CRVS system incomplete.

An attempt was made to compute the accuracy of civil registration data using the Vital Statistics Performance Index (VSPI), a composite index used to measure the quality and robustness of a nation's death registration data (Phillips, Adair, and Lopez 2018). The VSPI consists of six components, each of which is scored individually, empirically weighted, and multiplied: (a) completeness of death reporting, (b) quality of death reporting, (c) level of cause-specific detail, (d) internal consistency, (e) quality of age and sex reporting, and (f) data availability and timeliness. However, the study did not measure the VSPI due to the absence of some key vital attributes, such as ICD codes.

FINDINGS

This section discusses the quality of the BDR system in Uganda, the status of the national vital statistics systems, the factors influencing the BDR system, lessons learned while implementing ROPA 2015, and existing opportunities and capacities for linkages and technologies for BDR.

1. Quality of the BDR system in Uganda

This section discusses coverage and demographic differentials; the geographic distribution of BDR services; and the completeness, accuracy, and timeliness of BDR data.

Coverage and demographic differentials

This section discusses birth notification and registration and death registration.

Birth notification and registration. In Uganda, *birth notification* is the issuance by an appropriate authority—such as a subcounty chief—of a form confirming that a birth has occurred within their respective areas of jurisdiction. An issued birth notification record can be used as evidence when reporting to the CRO. Notification records do not have the legal status of a birth certificate. *Birth registration*, by contrast, is the formal registration of an event at a CRO. Details of the event are entered into the official Civil Register by the registrar. Registration is an essential step to obtaining a birth certificate.

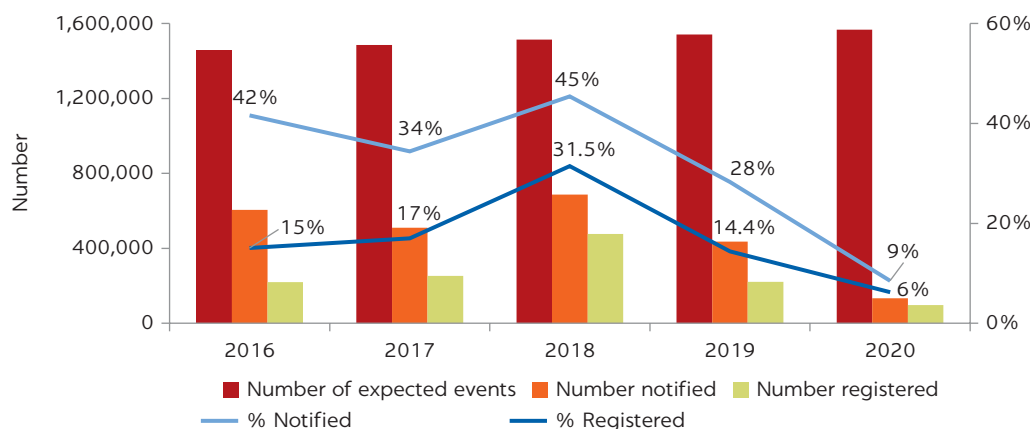
Registration records are archived, thus enabling copies of certificates to be obtained when needed.

The latest population-based survey indicated that about 1 in every 3 (32 percent) children ages 5 years or younger is registered in Uganda (UBOS 2016), with higher registration rates in urban areas (38 percent) than in rural areas (29 percent). This coverage is suboptimal and below the regional average of 38 percent births registered in East and Southern Africa (UNICEF 2013).

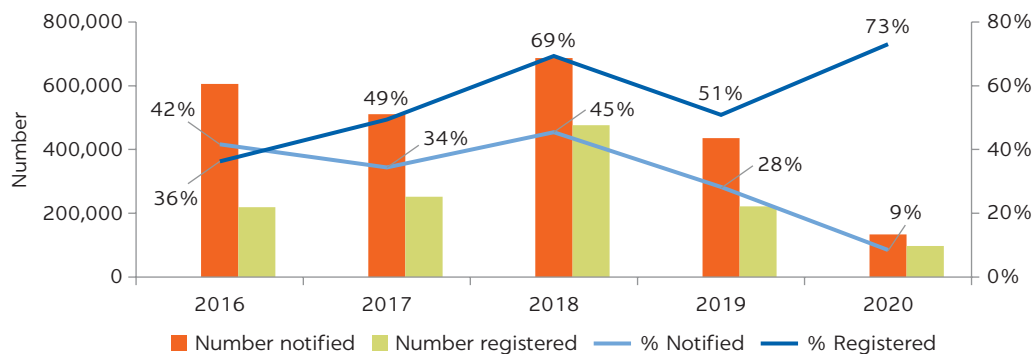
A previous study conducted by UNICEF for a pilot initiative in two districts reported that birth registration rates improved from 30 percent in 2011 to 70 percent in 2016, and birth certification rates also rose (UNICEF 2013). However, a baseline survey, in a nationally representative sample conducted by NIRA in 2018, reported lower birth registrations, with only 30 percent of children younger than age 5 having their births officially reported. Furthermore, of this number, only 40 percent had their birth certificates issued by NIRA and URSB (NIRA 2018). The rates were even lower than those reported by UBOS (2016). Similarly, Atuhaire and colleagues (2022) observed that in six districts of Uganda, including Kampala, only 4.5 percent of the deaths were certified, far below the expected rate.

BDR is a function of the availability of services across the country, functional access to the services, and the demand for the services. Coverage of events reporting is expressed as a proportion against the expected number within a specified time period, usually a year. Recent data from NIRA records show that a total of 3,719,014 births were notified in the MVRs between 2015 and 2020, excluding 4,142 (0.2 percent) duplicate births. Of the total births notified between 2015 and 2020, 1,730,193 (47 percent) were registered, with minimal difference between the proportion of male and female registrants (see figure 9.1). There has been a *decreasing* trend of notifications and registrations against the expected births in recent years (figure 9.1). Expected birth estimates are always generated by UBOS based on the crude birth and death rates and base year values.

FIGURE 9.1
Trends in birth notification and registration versus expected births in Uganda



Source: National Identification and Registration Authority, Mobile Vital Records System databases.

FIGURE 9.2**Trends in registered births versus notified births in Uganda**

Source: National Identification and Registration Authority, Mobile Vital Records System databases.

The data, however, showed an upward trend in the proportion of notified births registered over time despite the sharp decline of 18.4 percent between 2018 and 2019, as presented in figure 9.2.

Death registration. No data were available for deaths notified between 2015 and 2018, and no duplicates were observed for the 2019–20 data. Between 2019 and 2020, 4,142 deaths were notified, of which 1,405 (34 percent) were registered. However, this translates to only 0.24 percent of the expected deaths registered for these two years. There is an overall sevenfold increase in the absolute number of deaths registered in 2020 as compared with the previous year (from 82 to 1,323). This figure is partly due to NIRA’s interventions since 2019 to expand their internet systems and the introduction of online registrations.

Male deaths were notified more frequently than were female deaths (2,939 and 1,140, respectively), and 1.5 percent of notified deaths were missing a gender assignment. Of those notified, 33 percent of the male deaths and 37 percent of the female deaths were also registered. In addition, more adult deaths were notified and registered than were deaths among young people. This difference could be attributed to requirements related to property ownership following death events driving registration.

Geographic distribution of BDR services

Currently, NIRA has a total of 117 CROs in 112 districts that were originally gazetted, with an office each for the 5 newer divisions of Kampala. However, only 70 districts countrywide have the capacity to register and issue event certificates. Most key informants (42 of 53) reported low coverage for registration and certification for births and deaths, estimating that for births, they fell below 50 percent, and for deaths, the registrations range was between 1 and 10 percent. Many thought that the Central region performed relatively well due to better access to services and awareness of the registration process’ importance.

Central region has more birth registration and death registration . . . There is more access to these services in the Central region, because this is where these services begin, and there is more access in terms of information

dissemination, whether friends, electronic, media, you have more of an elite community in the region . . . talking about Kampala, Wakiso, and Mukono. —KII with a Central region representative

The maps in figure 9.3 show that overall, more districts reported birth and death data in 2020 as compared with 2019, probably because of the resource inputs to strengthen the system through URMCHIP. However, there is wide variation across districts, with some showing no reporting for both years and some reporting more events in 2019 than in 2020.

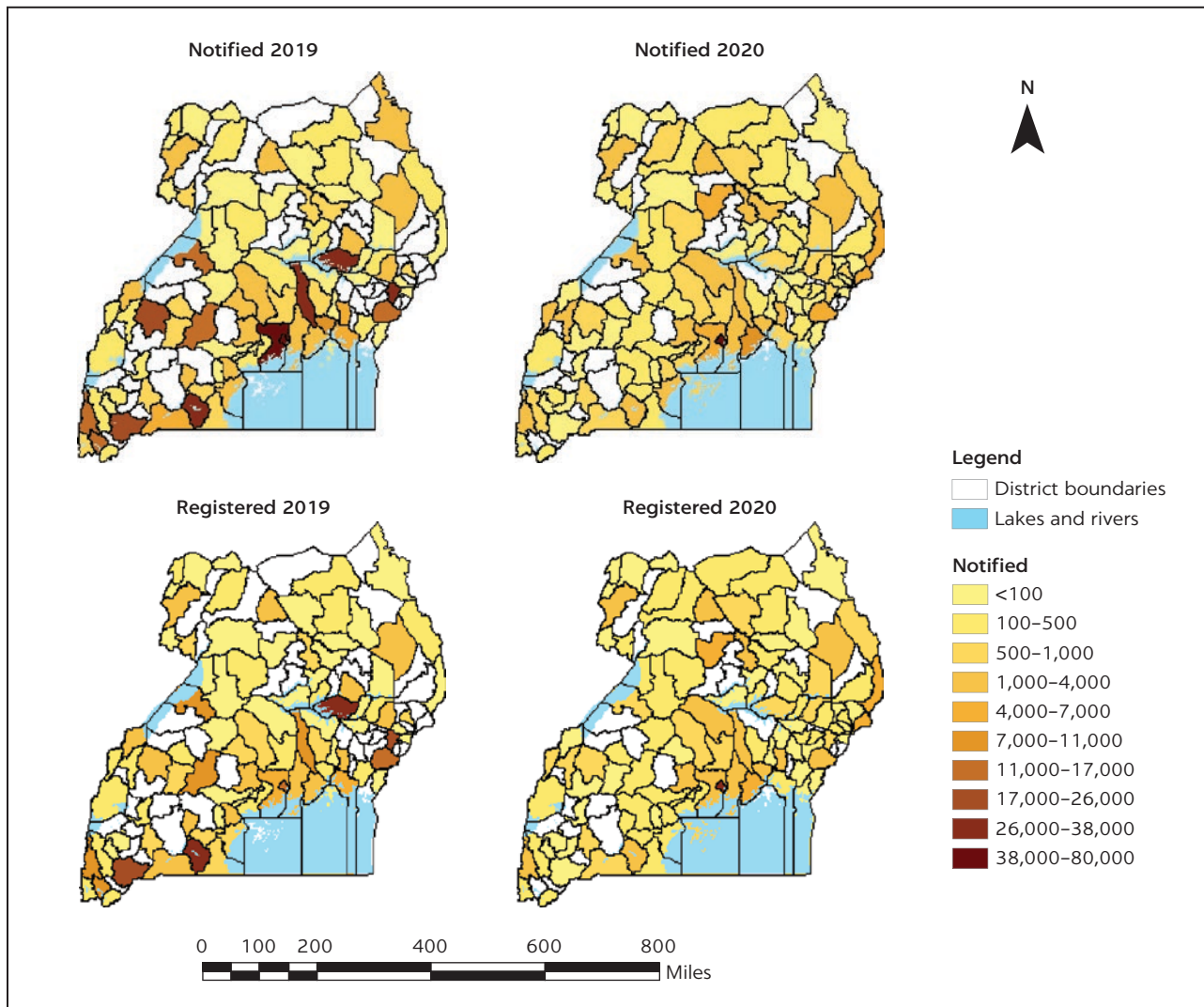
Completeness of BDR data

This section discusses data capture and the completeness of records.

Data capture: Comparison of DHIS2, NIRA, and UBOS data. The capture of data for birth and death vital events in the DHIS2 and NIRA systems

FIGURE 9.3
Birth and death registration reporting by district in Uganda

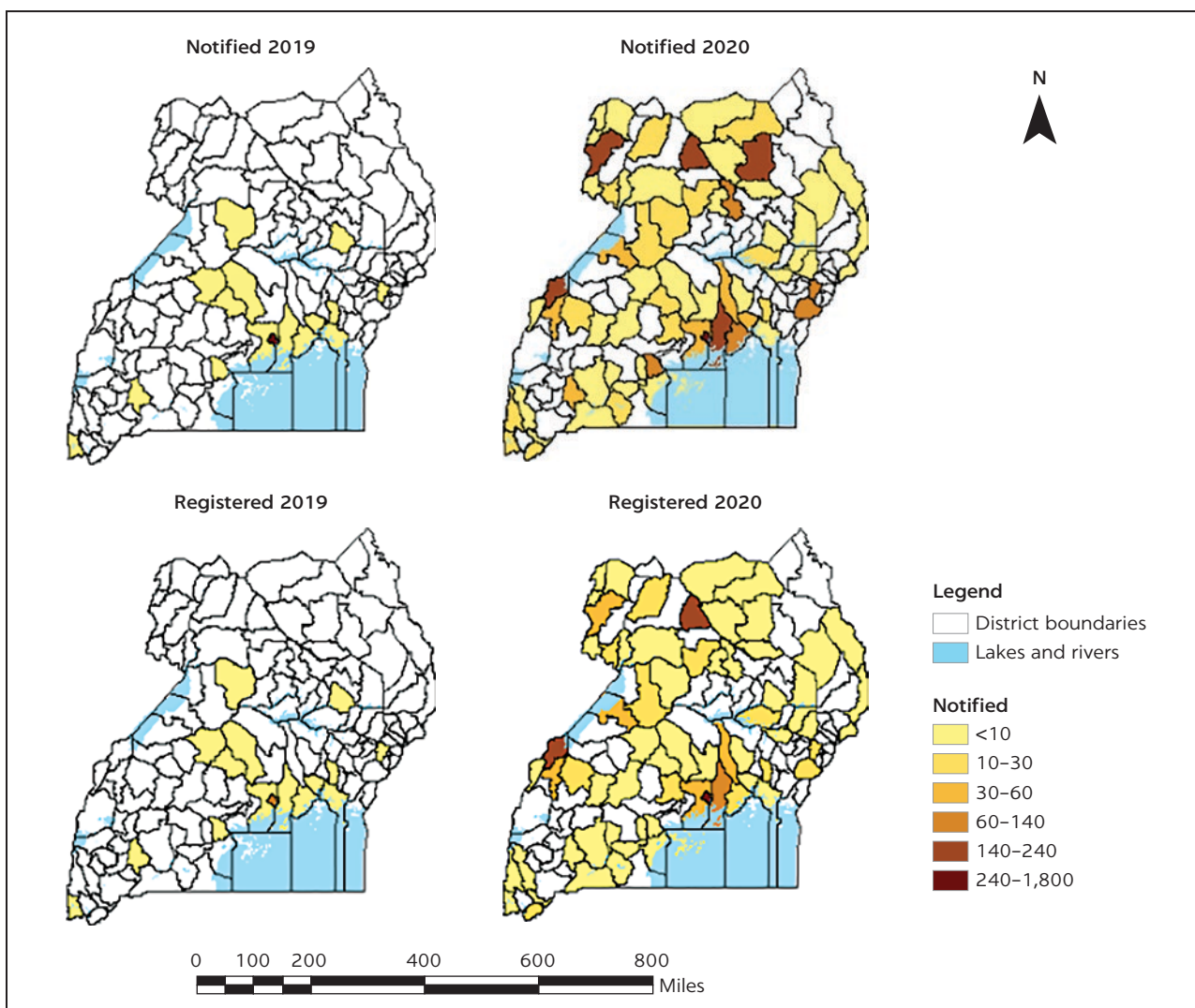
a. Birth registration



continued

FIGURE 9.3, continued
Birth and death registration reporting by district in Uganda

b. Death registration

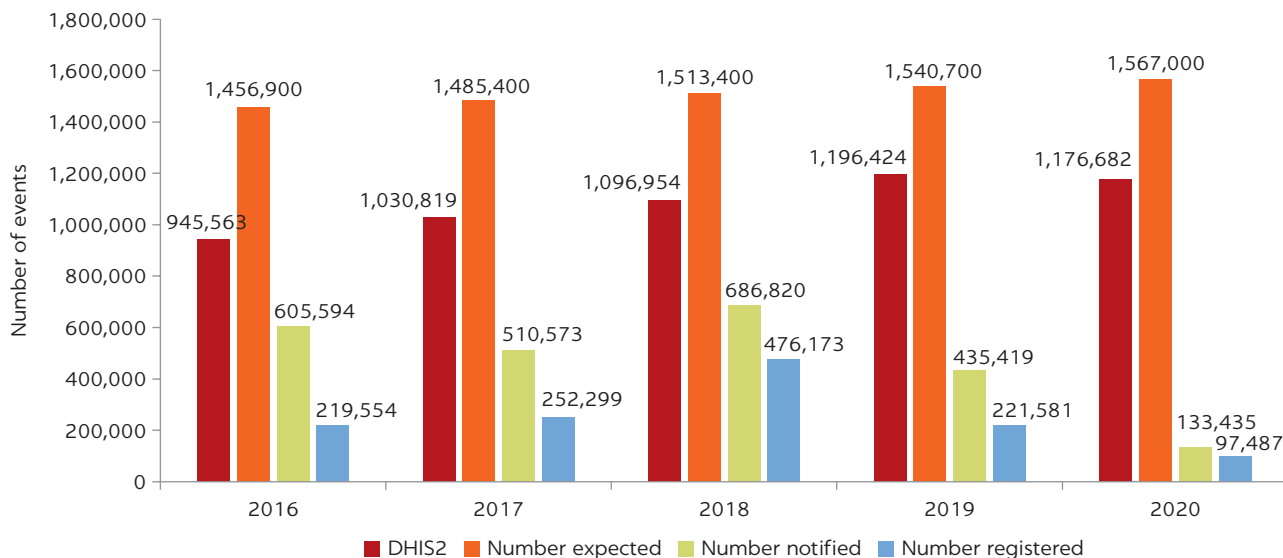


Source: National Identification and Registration Authority, Mobile Vital Records System databases.
 Note: The map shapefiles are open source from ESRI arcgis, <https://www.arcgis.com/apps/mapviewer/index.html>.

is inadequate. Figures 9.4 and 9.5 show that, overall, the DHIS2 system captured more births than did the NIRA system. Both births and deaths show that the capture of vital events is not yet adequate. Overall, the DHIS2 system captured more births than did the NIRA system for all events, irrespective of whether they were timely. DHIS2 captured 44 percent of the expected births and 37 percent of the expected deaths between 2016 and 2020, while NIRA captured 31 percent of the births and 0.3 percent of the deaths. The low capture rates could be due to the many births and deaths that occur within the community and are not reported to health facilities or administrative units, where most of the DHIS2 and NIRA data are captured.

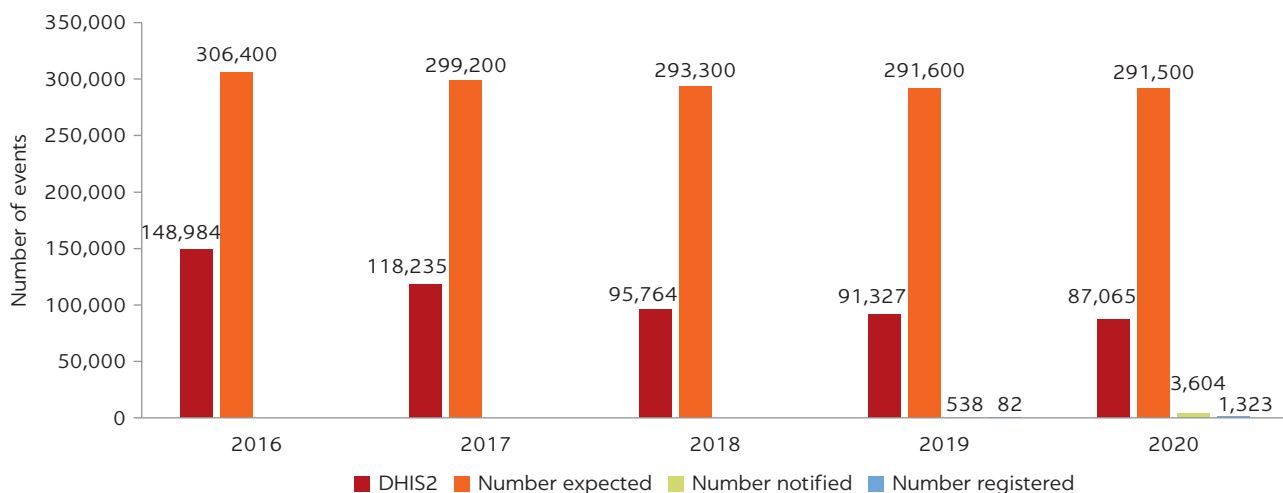
Completeness of records. According to NIRA officials, the essential and compulsory attributes or variables for capturing a birth event within the MVRS system include the national identification number (NIN) of parents, date and

FIGURE 9.4
Distribution of births expected, notified, and registered in Uganda



Source: Uganda Ministry of Health, District Health Information Software version 2.1, and National Identification and Registration Authority, Mobile Vital Records System databases.

FIGURE 9.5
Distribution of deaths expected, notified, and registered in Uganda



Source: Uganda Ministry of Health, District Health Information Software version 2.1, and National Identification and Registration Authority, Mobile Vital Records System databases.

place of birth (facility, subcounty, and district), and name and gender of the child. The attributes required for capturing a death event include the NIN, date of birth and death, age at death, gender, place of death (village, subcounty, and district), and cause of death.

Analysis of records in the MVRS system shows that the *facility of birth* was the most common incomplete variable, with 90 percent of records missing this variable, while the *district*, *subcounty*, and *date of birth* were the most often completed (table 9.3). According to NIRA, most of the health facilities lack computers to use MVRS, so births are notified on paper forms that are later

TABLE 9.3 Proportion of missing event-capturing variables in MVRS records

ATTRIBUTE OR VARIABLE	INCOMPLETENESS: BIRTH RECORDS, 2015–20	INCOMPLETENESS: DEATH RECORDS, 2019–20
1. Date of birth	0.49%	63.6%
2. Facility of birth	90.0%	60.1%
3. Subcounty of birth	<0.1%	n.a.
4. District of birth	<0.1%	n.a.
5. Sex	0%	1.5%
6. Date of death	n.a.	7.6%
7. Age at death	n.a.	43.0%
8. Place of death	n.a.	0%
9. Cause of death	n.a.	0%

Source: National Identification and Registration Authority, Mobile Vital Records System databases.

Note: MVRS = Mobile Vital Records System; n.a. = not applicable.

submitted to subcounties and treated as community events. In the case of death registration, the *date*, *facility name*, and *age at death* were the most missed variables.

Despite the inbuilt data quality checks that encourage completeness of records, a few study participants mentioned that completeness was poor and had gaps, especially in notification data, as one quoted here:

Of course, most of our data tools are not completed, some do not know what is required, and others are reluctant, and they just fill what they feel they should. –KII with a district official

Missing data in the system can be attributed to (a) late registrations, where a notifier cannot remember all the event elements and (b) notifiers not being aware of the required fields on the form. However, NIRA recently embarked on training health facility staff (in-charges, midwives, and records assistants) and subcounty, municipality, and town council staff (town clerks and health assistants) on the required fields of the notification process.

Accuracy of BDR data

Scrutiny of MVRS data showed that the description of the cause of death was not based on the ICD but instead on clinical descriptions, resulting in inconsistencies in the cause-of-death descriptions.

Timeliness of reporting BDR data

According to ROPA (2015), a timely birth notification is one that is reported to the registration officer immediately after the date of birth for registration, whereas a timely death registration is one that is registered no more than 3 months from the time of death. Based on these definitions, the number of births registered on time rose from 133 in 2016 to 176 in 2018, followed by a decline and then an increase in 2020 to 194 events. However, all annual coverages are less than 1 percent (table 9.4).

This study redefined timeliness as guided by the data. The study delineated timeliness into three levels based on the time of notification or registration after the occurrence of a vital event:

- “Current,” if notification or registration occurs within 1 year of a birth or death;

TABLE 9.4 Birth and death events registered on time in Uganda

YEAR	EXPECTED EVENTS (UBOS)	DHIS2	NO. NOTIFIED ON TIME	NO. REGISTERED ON TIME
Birth registrations				
2016	1,456,900	945,563	432	133
2017	1,485,400	1,030,819	300	174
2018	1,513,400	1,096,954	318	176
2019	1,540,700	1,196,424	214	112
2020	1,567,000	1,176,682	385	194
Death registrations				
2016	306,400	148,984	n.a.	n.a.
2017	299,200	118,235	n.a.	n.a.
2018	283,300	95,764	n.a.	n.a.
2019	291,600	91,327	418	29
2020	291,500	87,065	1,736	417

Source: Uganda Bureau of Statistics and National Identification and Registration Authority, Mobile Vital Records System databases.

Note: "On-time" refers to events either notified or registered within 1 year of occurrence. DHIS2 = District Health Information Software version 2.1; n.a. = not applicable; UBOS = Uganda Bureau of Statistics.

- "Late," if notification of registration occurs after 1 year but within 2 years after the event; or
- "Delayed," if the notification or registration occurs 3 or more years after the event.

Using these definitions, of the 3,719,014 notified births in the NIRA data, only 544,489 (15 percent) were a current notification, and 36,430 (1 percent) were current registrations. The majority of notifications, 2,020,750 (54 percent), were late, and 1,460,714 (84 percent) of registrations were delayed (figure 9.6). However, of the 4,141 notified deaths, most deaths (2,152, or 52 percent) were current notifications. Most deaths were registered within 1 year, while births were mostly registered after 1 year (figure 9.7).

The majority of the key informants affirmed that the timeliness of notification and registration was poor. They reported that clients often followed up a notification, registration, and certification processes late, with some key informants reporting up to 16 years of lag time. Transmission of data from the districts to the NIRA headquarters was also reported to be delayed, especially the requisite paperwork.

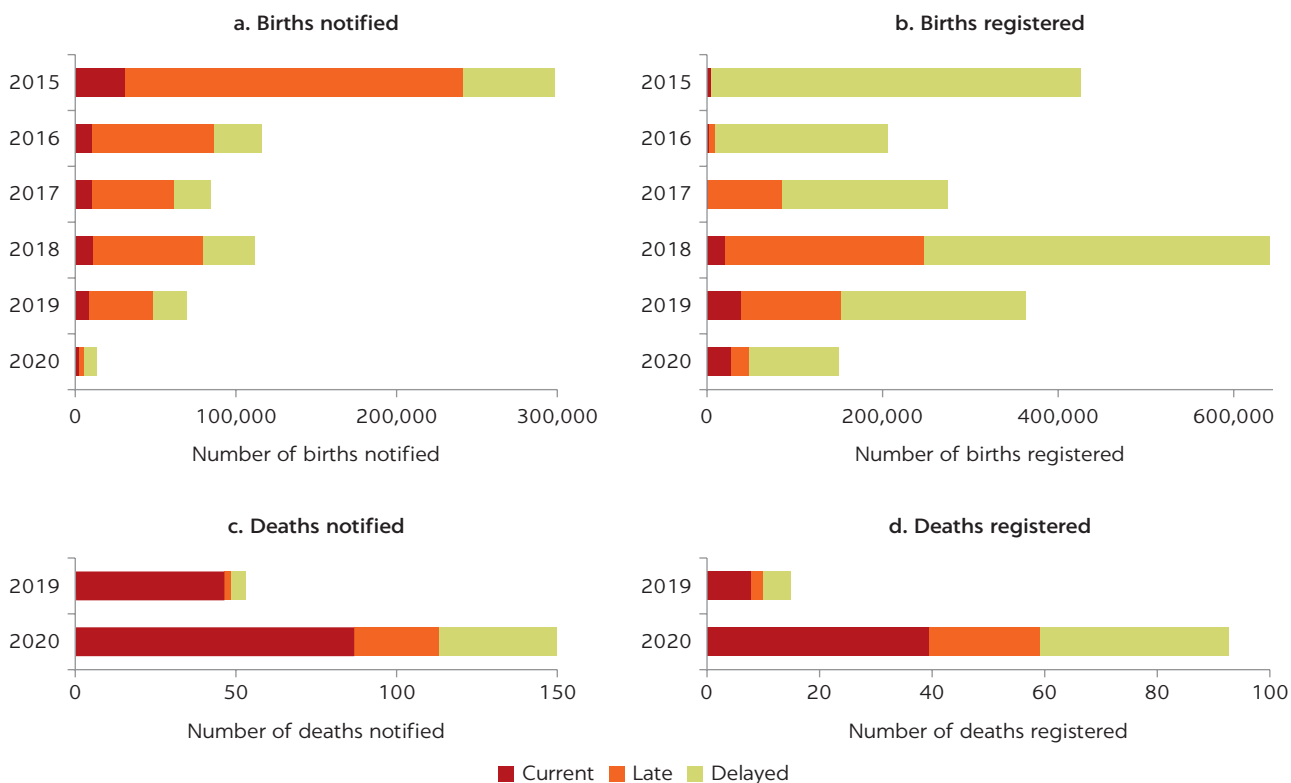
People don't report events in time, especially those that occur in homes and within communities. If you try to check for the validity of the information, you feel like you want to cry. —KII with an NIRA official

2. Status of the national vital statistics systems

This section discusses birth and death reporting, the compilation and transfer of data to NIRA, existing technology for data management, and the generation and use of birth and death information.

Birth and death reporting

NIRA took on the management of the CRVS in 2015 using systems and data inherited from the Uganda Registration Services Bureau. The CRVS system under NIRA comprised the National Identification Register, the Civil Register,

FIGURE 9.6**Distribution of births and deaths notified and registered in Uganda, by year and timing**

Source: National Identification and Registration Authority, Mobile Vital Records System databases.

Note: "Current" refers to events notified or registered within 1 year of occurrence, "late" refers to events notified or registered after 1 year but before 2 years of occurrence, and "delayed" refers to events notified or registered after 3 years of occurrence.

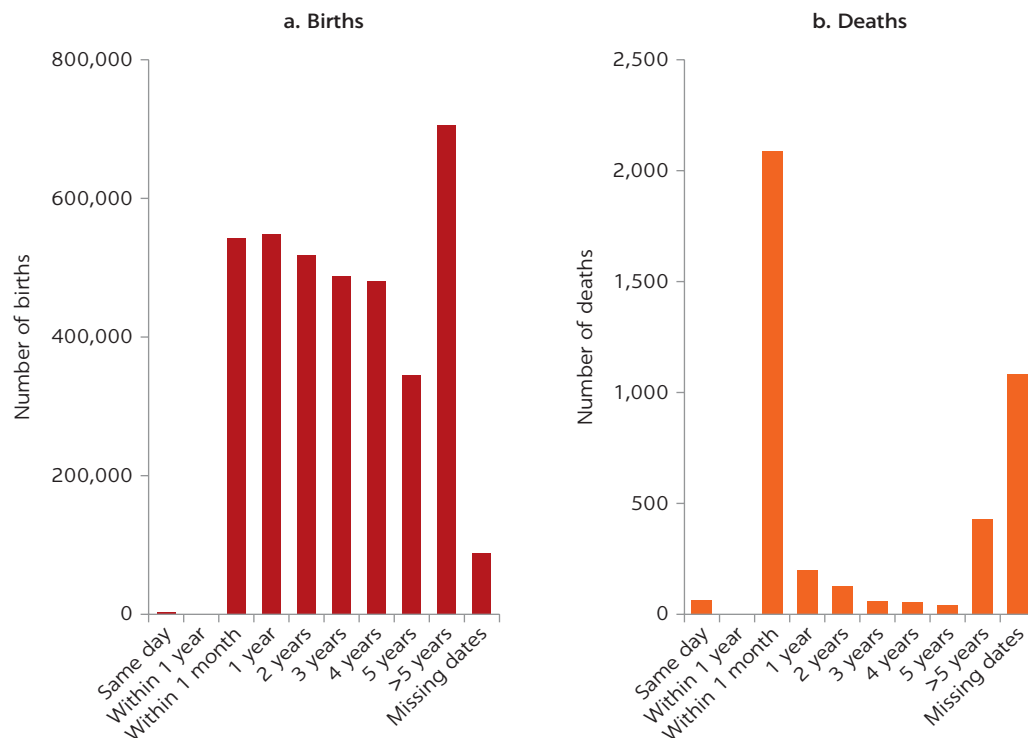
and the Population Register. However, marriage registration does not have an explicit entry in any of these registers.

For births, a declarant or parent receives a signed birth notification form from the hospital or health facility administrator, which should be presented to NIRA for registration. Similarly, for deaths in a health facility, the administrator provides notification of death with a certificate showing cause of death—Form 12; this notification should be signed by the medical officer who took care of the deceased (NIRA 2015b) and then presented to NIRA. At the community level, death notification forms are issued by subcounty administrators; however, most of them do not specify the cause of death despite the legal requirement to do so.

NIRA has offices in the original 112 gazetted districts, plus 1 each in the 5 divisions of Kampala for a total of 117; however, birth and death certificates are issued only in 70 districts due to resource constraints. All recently created districts in the country have not yet designated CROs. The district registrar's office validates notified events before registration and certification. Most district officials interviewed observed that birth reporting at the district level (including births at facilities and in the community) was high. This rate was attributed to increasing health facility deliveries that are well recorded in facility registers and from which districts can derive NIRA indicators. However, many of the births that occur within the community are not registered.

Baseline surveys in 2014 and 2018 in Uganda indicated that subcounty chiefs and town clerks are supposed to register and notify births that occur in the community, while hospital administrators register births for those born in health

FIGURE 9.7
Registration of births and deaths in Uganda, by timing of registration, 2016–20



Source: National Identification and Registration Authority, Mobile Vital Records System databases.

facilities (NIRA 2018; URSB 2014). There are currently two systems in place: (a) electronic registration, which uses the MVRS, and (b) paper notification and registration, by which birth and death notification forms are manually delivered to the regional or national offices for issuance of birth or death certificates. Reconciliation of the two systems is cumbersome, which causes significant delays, leading to public frustration and discontent with NIRA services (NIRA 2018; URSB 2014).

Most district officials also noted low death reporting. The officials intimated that this was because many deaths happened in communities and, because the population does not understand the relevance of reporting deaths, people there do not bother to report them:

Reporting birth, now for us in our health centers, they register birth and report to the division . . . where the division compiles a report and reports to the municipality . . . [In] the community where we are, reporting death is rare. —KII with a subcounty chief

Compilation and transfer of data to NIRA

Compilation and data transfer are critical stages for maintaining data quality in the CRVS system. NIRA is migrating from a paper-based system to electronic data compilation and transfer. However, over three-quarters of NIRA officials noted that the paper-based system is still being used, posing challenges, such as transporting hard copies and data on hard discs from the district to NIRA headquarters.

Although they all considered electronic compilation and data transfer robust for real-time communication, they had concerns about the new system's success, especially regarding data interoperability across registration and certification systems.

We have had challenges with transferring data from the district to the headquarters manually, but we are working together with the World Bank. We are moving from manual transfer to electronic transfer of data. —KII with a national-level NIRA official

Existing technology for data management

Currently, NIRA operates in-house systems that are not interoperable, including systems for procurement, human resources, and BDR data. Importantly, the MVRS is not interoperable with the CRIMS, which handles certification. Further, UBOS, which is responsible for generating vital statistics, does not have direct access to NIRA databases. The lack of interoperability contributes to fragmented data, challenges in analyzing the “big picture” and assessing interrelated trends, and undue bureaucratic processes along the various stages of notification, registration, and certification. An area of potential progress is in interoperability with the DHIS2. NIRA has completed discussions with MoH to link the CRVS system to the health information management system to increase death notifications. The two signed a memorandum of understanding in 2020 that awaits operationalization.

Generation and use of birth and death information

NIRA currently has systems to share and store BDR data, but they are not fully utilized. The UBOS Act of 1989 and the ROPA Act of 2015 mandate that UBOS compile, analyze, publish, and disseminate vital statistics. NIRA also has systems to share and store BDR data. However, there is limited BDR information in the UBOS statistical abstract; it consists of a graph and a brief narrative on the total number of notified and registered births from MVRS, stratified by gender. Other birth attributes, such as places of occurrence, region, and age, are not included in the report, and no death information is provided. Although civil registration databases capture death data, all the recent statistical information sources use the MoH databases to compile information on the causes of death countrywide. The nonuse of mortality data from the CRVS is attributed to the system's low coverage and lack of ICD coding.

Half of the NIRA key informant interviewees affirmed that their organizations produce simple statistics, such as total registrations per year, for operational purposes, as the UBOS is mandated to produce vital statistics. In recent years, all national-level representatives reported no evidence of data use, analysis, or dissemination of registration information.

Ideally, NIRA would be generating statistics for UBOS to be able to generate a periodical or statistical abstract telling you how many births have occurred, where are they concentrated, things like that . . . We have not had a statistical abstract since 1985! UBOS has never produced a statistical abstract. —KII with a Uganda Registration Services Bureau official

Most of the national- and district-level study participants raised concerns about the inadequate use of BDR data for the intended purposes, which they

reported were for planning, especially for improving service delivery in education, health, and security:

We collect this data, of course, to help inform government policy and planning but, unfortunately, most of this data is actually not used, and yet government and partners spend much money in the hope that this data will inform public policy and guide in planning, but it faces minimum utilization. —KII with NIRA official

Regional efforts, such as Kenya's *Statistical Abstract 2020*, a full-fledged publication of health and vital statistics, can be used as benchmarks. The analyses presented in Kenya's report shows the number of registered births and deaths by gender, place of event occurrence, coverage rates, mothers characteristics at birth, and baby's characteristics. Kenya's statistical reports also present compressive analysis down to the county level for deaths. As described in Statistics Norway (2014), vital registration data need to be extended to those responsible for analysis to enable them to do routine data checks on quality in terms of coverage, completeness, and consistency. After analysis, de-identified data should be made public as a tool for improving data quality. Such a link needs to be created between NIRA and UBOS.

3. Factors that influence the BDR system in Uganda

This section discusses the enablers of BDR by NIRA, the demand-side enablers and barriers for BDR clients, and the supply-side barriers expressed by NIRA and other stakeholders.

Enablers of BDR by NIRA

This section discusses NIRA's mandate for vital registration, support from development partners, and other promoters of BDR.

NIRA's mandate for vital registration. Most national-level study participants observed that NIRA's establishment provided a more-focused platform for implementing BDR, and some agreed that the capacity building and infrastructure development (computers and internet) at NIRA's district offices, together with awareness creation within communities and multisectoral engagements and partnerships, have led to improved data collection.

Support from development partners. Development partners such as Plan International, UNICEF, the World Bank, and World Vision have provided institutional development assistance and inputs for the vital registration system. Examples of the institutional development assistance and inputs for vital registration provided include computers, cameras, stationery supplies, and capacity-building training for registration personnel. UNICEF also has conducted mass birth registration exercises in several districts.

Other promoters of BDR. Health facilities and district authorities also play a crucial role in BDR, extending to community sensitization regarding birth registration. Other crucial partners are media companies and cultural and religious leaders, who are critical players in community sensitization on BDR. Two district-level officials mentioned BRAC Uganda, one of the largest nongovernmental development organizations in the country, as a key stakeholder of death

registration because of their requirement of a death certificate before offering financial help to widows and orphans.⁵

There are people helping, like, the orphans, because someone can come and say, “I need a death certificate because someone promised to pay for me school fees, medication for my orphans,” but I have not been keen to ask [about] such [an] organization though I know BRAC Uganda. —KII with a town clerk

Demand-side enablers for clients of BDR

This section discusses knowledge about and the need for BDR.

Knowledge about BDR. Most participants at both the national and district levels reported high community awareness of the availability of BDR services at the health facility, subcounty, and district levels. However, they noted that only a few community members knew the importance of completing the registration process. These members were mainly those who were educated, had more resources, and lived in urban areas and thus were able to follow through and obtain birth and death certificates. One participant in an FGD stated,

A few people in our community, especially those who are educated, usually understand the importance for those certificates . . . They can know what to do. But for the majority, they are not aware of the importance of these certificates. —A community leader

Need for BDR. The study noted that several situations requiring birth certificates drive the demand for birth registration. These include police filing of cases on defilement, rape, and underage marriages; travel documents; national IDs; applications for bursaries; Christian baptism; some job applications; and enrollment and registration for Uganda National Examinations Board tests. The last reason was unanimously reported in all the FGDs and during most IDIs and KIIs:

When children are going to do primary leaving examinations they have to be registered. That is why parents see to it that they acquire birth certificates for their children. This is also a requirement for every child that is joining school. —IDI with community member with a birth certificate

Supply-side barriers expressed by NIRA and other stakeholders

This section discusses the gaps in the legal framework; inadequate infrastructure, human resources, and incentives; poor staff attitudes; access issues; and NIRA’s disproportionate focus on NIDs.

Gaps in the legal framework. Although the legal framework for NIRA operations is in place, some aspects have not been fully enforced. ROPA 2015 clearly states the need for notification of birth immediately after the birth at no cost. However, the birth registration process requires information from both parents, the child’s name, and other information, which may not be available for all immediately after birth. The law also stipulates that a fee, determined by NIRA, should be paid before a birth certificate is issued, which could be a barrier to potential registrants.

For a death event, section 44 of the 2015 ROPA Act states that every death shall be registered immediately after it occurs and, in any case, not more than

3 months from the event date. However, the death registration process is more complex and requires a notifier, a certificate on the cause of death signed by a medical officer, and a fee for the certificate, which can delay the process. Although death registration is free and compulsory, uptake is still very low. Section 52 of the act clearly indicates that it is an offense not to register a vital event. Reasons for not implementing related sections of the act may call for a review of the law or the implementation of strategies, including penalties and incentives.

ROPA 2015 is broad regarding NIRA's collaboration with other agencies in the BDR process, and there is a need to clarify the roles of the different agencies to streamline the coordination of data sharing, analysis, and dissemination.

Inadequate infrastructure, human resources, and incentives. NIRA and other stakeholders have made efforts to ensure the effective registration of events. However, gaps in infrastructure, human resources, and incentives hinder implementation, especially at the district and community levels. Over half of the national-level key informant interviewees noted that some districts lacked adequate registration facilities and human resources and also shared registration resources with other districts; registration points exist in 112 of the 135 districts, plus the 5 divisions of Kampala with only 70 district-based offices having the ability to certify. Although these offices are functional, staffing is inadequate, with 2–3 staff members instead of the ideal number of 5.

Some participants reported that they had never received or heard of training on the ICD during basic or on-the-job training. The CRVS baseline study in 2018 identified a lack of clarity on staff roles in completing the required medical forms, heavy workloads, and unfriendly officers (NIRA 2018). Additionally, verbal autopsies are not routinely used to determine cause of death if the death was not certified by a physician. However, there have been recent efforts to train health workers on ICD at Regional Referral Hospitals and to cascade the training to lower-level health facilities, and preparations are under way for the Justice Law and Order Sector and NIRA to train VHTs on the use of verbal autopsy.

Poor staff attitudes. A few IDI participants reported poor professionalism and attitudes among the staff who conducted the registration. For example, one client acquiring a death certificate said about them,

Some are rude, and they don't give a clear description about the entire process. —IDI with a community member with a death certificate

Access issues, including distance, cost, and processes. Long distances to registration points and the long registration process hinder civil registration, as reported in half of the IDIs and FGDs. This issue was notably worse for clients from hard-to-reach areas, especially for districts without registration points. All FGD and most IDI participants mentioned registration charges. This levy was further exacerbated by bribes requested to quicken the processes. Participants suggested that acquiring certificates should be free of charge, like the national identity cards:

They don't speak. They want bribery, and that is why they delay acting. The process is very slow, I don't know whether it is intended . . . I almost took a full year without getting that thing . . . It is a hustle thing to process . . . Do you know that securing that introductory letter from LC1, you leave some money? From there you go to LC3, you leave some money; all the way from there up? —IDI with a community leader with a death certificate

NIRA's disproportionate focus on NIDs rather than registration of events.

A few national- and district-level participants mentioned that NIRA mainly focuses its resources on NID registration rather than on BDR. This issue was reflected in the many activities NIRA offered to increase demand for NID registration, including sensitization and mass registration. Additionally, it was indicated that the public was generally not aware of the roles of NIRA in the registration of births and deaths. This observation, however, was not mentioned in the FGDs and IDIs.

We are mostly known for National IDs. This other bit of civil registration of births, deaths, adoption, etc., . . . the country, in general, has no idea . . . People who are older still think that such certificates are gotten from URSB at Amam house. —KII with a NIRA official

Demand-side barriers for BDR clients

This section discusses the limited knowledge about the importance and process of registration, event occurrence at home or in the community, stigma, cultural and religious concerns, and grief and related emotions.

Limited knowledge about the importance and process of registration.

Awareness about the importance and process of registration plays a significant role in the demand for BDR services. Participants cited illiteracy and ignorance of the importance and processes of registration and certification. One key informant noted,

It is like if people were supposed to register events, do they even know it is compulsory to register an event? . . . Do they even know why it is important to register? . . . And when I get the birth certificate, why is it important for me or the child or why is it important for me or my family to have a death certificate when a family member dies? —KII with an NIRA official

Furthermore, community FGDs revealed that most people thought that the birth and death notification forms obtained from health facilities and subcounties were the final certificates and did not see the need to obtain NIRA certificates. The quote that follows highlights the need to publicize the correct process:

They [most people] usually go by notifications they get from hospitals, so it is all about telling people that birth certificates are not those notifications they picked up from hospitals but to get them from NIRA. —FGD with a community leader

Event occurrence at home or in the community. The likelihood of missing BDR if an event occurs outside a health facility is high, because registration of events in the home or community is later and limited by access, costs, and ignorance of registration and certification requirements:

Many parents ignore the issue of birth certificates, especially if the child was born at home. Besides, it requires you to go to the subcounty and pay 5,000 shillings. —FGD with a community leader

Half of the FGDs mentioned that birth and death events at home limited their registration, because family members of the deceased saw no reason for reporting the event, especially for stigmatized deaths, for example, those from homicide, suicide, or certain disease or if the death was assumed to be caused by witchcraft.

Stigma in registration. A minority of informants and one-quarter of the FGDs mentioned stigmas related to the registration of births and deaths as a hindrance to BDR in the communities. Registration of births is generally perceived as a role for women in the community. The stigma associated with child-birth by young and elderly mothers hinders birth registration.

These girls are hidden. Especially in the Muslim society, they marry at a young age . . . A young girl is married to an old man, so it's a bit shameful; others are kept at home. They are not allowed to go out into public. —KII with a subcounty chief

Stigma was also reported among mothers with multiple sexual partners who were not sure of the father of their children.

Cultural and religious concerns. A few participants commented that some cultural and religious rites that are performed before a newborn is given a name can delay the notification of birth. An example is the traditional birth initiation, whereby the mother presents the newborn to the grandparents for naming, as one interviewee remarked:

You see, most times when you go to deliver, you don't go with the name of the child. The child is named one or two days later. When they go back home, the grandparent does it. So not every parent comes with the real name of the child ... Notifying that birth is a challenge because a baby is nameless. —KII with a NIRA official

Grief and related emotions. In some FGDs and a few IDIs, participants mentioned grief and emotions as barriers to death registration, especially for deceased close relatives. In some cases, prolonged hospitalization and burial proceedings left some families financially constrained to register a death.

Some people want to forget completely about the dead person since it is a painful experience to lose somebody. Besides the death certificate is also not for free, they have to pay some money, and they would not want to lose money as well. —FGD with a community leader

4. Lessons learned in implementing ROPA 2015

This section discusses scaling up BDR and certification services, strengthening the oversight functions of national CRVS coordinating bodies, addressing the delays in the BDR process that hinder services' use, creating a demand for birth and death certificates, strengthening the use of electronic registration, and using outreach and mass registration events.

Scale up BDR and certification services to bring services nearer to the communities

Only 70 CROs have the capacity to issue certificates; however, it was reported that some of these offices are not easily accessible. Some districts are large, and few offices are located in remote places, such as islands and the mountainous areas, where community members find it very costly to travel for NIRA services. Staff capacity also hampers the performance of the system. Many offices are not well staffed, and some face logistical challenges. Health facilities and subcounties also face logistical inadequacies, such as lack of notification forms and computers to provide continuous services to their communities. In addition, because more

than 7 of 10 notifications occur in health facilities (UBOS 2016), to increase registration coverage, NIRA should consider focusing on birth registration there. In the case of deaths, however, because most occur within communities, a clear community strategy for notification must be explored, with targeted engagement of cultural and religious leaders, because of their role in burial arrangements.

Strengthen the oversight functions of national CRVS coordination bodies

Since 2017, the CRVS National Task Force—with representatives from government MDA, namely, URSB, UBOS, the Ministry of Internal Affairs, and the Electoral Commission, which cooperate with NIRA—has worked to strengthen leadership collaboration and coordination for CRVS. The CRVS Technical Working Group was also informally established, according to NIRA. However, the operations of the task force and working group are suboptimal, mainly because NIRA's civil registration budget did not allocate funding toward the operations of either.

Address the delays in the BDR process that hinder the use of services by the community

Data from MVRS clearly show an increase in the number of births and deaths registered over time, but most of these events were registered beyond the standard period of 1 year (table 9.3 and figure 9.6). There is a need to continuously address these delays by making changes in the CRVS business processes.

Create a demand for birth and death certificates

Most NIRA participants reported that the community could only demand notification, registration, and certification if there were a requirement for the certificate of other activities, such as NID registration, school examination registration, and travel document processing. These services present opportunities for providing services nearer to those who need them through integrating BDR.

Strengthen the use of electronic registration, which reduces service delivery costs

The majority of KII participants mentioned electronic registration. Currently, NIRA is using the MVRS, which has eased the data transfer process from the districts to the center.

Use outreach and mass registration events to boost BDR

Some NIRA participants highlighted the importance of using outreach events to increase the number of public registering events, while others highlighted the use of mass registration.

5. Existing opportunities and capacities for linkages and technologies for BDR

This section discusses NIRA structures and existing registration facilities, existing cultural and religious institutions, optimization of available technology, and the opportunity for harmonized and interoperable CRVS systems.

NIRA structures and existing registration facilities

NIRA's formation has led to establishing an administrative structure for implementing BDR. For example, NIRA works with subcounty chiefs and hospital personnel who are already employed by the government or private hospital owners:

We use government personnel; like subcounty has subcounty chiefs who are paid by the government. Hospitals have their personnel who are paid by that hospital, if it's a government hospital or a private hospital, there are personnel who are paid by that hospital. So, for us, we just install the system there to enable them to do these registrations and facilitate them with equipment like computers, printers. —KII with an NIRA official

Another opportunity reported is the strategic constitution of the board, which has enabled the provision of effective oversight to NIRA and real-time linkages with other relevant institutions:

NIRA's board is very strategic. The composition of the NIRA board has a representative from UBOS, EC, Ministry of Internal Affairs, NITA-U, so I think all this was done to ensure that we harmonize our relationships, because if you have the ED of UBOS on your board, he is definitely interested in how you are performing statistically. —KII with an NIRA official

NIRA's structures can be used to improve vital events registration and certification by employing additional human resources, training staff on the CRVS process (for example, on ICD and verbal autopsy), providing the requisite technology to make the district offices more functional, and sensitizing community members to create more demand for BDR services. NIRA should have a capacity-building strategy that its partners, such as UNICEF and the World Bank, and other government entities, such as UBOS, MoH, and NITA-U, can support to implement.

Existing cultural and religious institutions

Cultural and religious institutions act as centers for learning, hope, and sources of information for many community issues, including BDR. Religious and cultural institutions, such as the kingdoms, and their leaders play a role in baptisms and in death ceremonies and rituals, which can provide an opportunity to promote notification, registration, and certification.

Like the kingdom of Buganda, many people would listen to their king, the kabaka, when he speaks about something, so if the king blesses birth registration, many people can go in and register their children. —KII with a district official

Optimization of available technology

Efforts to digitize notification, registration, and certification have led to increased availability of technology equipment at district and NIRA headquarters. An increase in access to mobile phones—60 percent of the country's population have a mobile phone connection, and 46 percent can access the internet—among community members has also led to a significant increase in the demand for services. Such technological advancements allow stakeholders to minimize costs, time, and bureaucracy for the notification, registration, and certification processes. Methods include the use of electronic notification, Unstructured Supplementary Service Data (USSD), QR code scanners, and smartphones to facilitate online registration.

I think we need to make vital e-registration, for example. If we had a mobile application where we can install it on the laptop, then when someone gets internet, they can automatically load the information on

the internet. So, we need to do that, maybe also do a USSD registration.
 –KII with an NIRA official

Opportunity for harmonized and interoperable CRVS systems

The robustness of the CRVS system can be greatly enhanced if there is technological interoperability that enables automation of processes between different databases and reduces the cost and time of communications. By benchmarking to previous operations in NID registration (for data linking, sharing, and communication), NIRA can use advanced technology to eliminate redundancies in the CRVS processes.

Because the demand for BDR services is linked to other services, such as student registration and processing of inherited property, BDR services can be integrated with these services to facilitate uptake by those who need them. In a systematic review and synthesis of policies in 25 countries, including some in Africa, to identify those that improve BDR, researchers found that (a) supply-side policy interventions consistently increased BDR rates and (b) information, education, communication, and effective advocacy through demand-side policies can help strengthen the implementation of functional CRVS systems through social and behavioral change. However, the second approach has limited utility without functional CRVS systems in place, and most articles reporting results of demand-side policies focused on those that coupled such interventions with other approaches (Suthar et al. 2019). NIRA will, therefore, need to consider a combination of both supply-side and demand-side interventions to increase BDR uptake.

RECOMMENDATIONS

Based on the findings, the following are recommended for implementation at both the policy and program levels by NIRA in partnership with relevant agencies.

Policy

- Advocate for a review and revision of ROPA 2015 and consider clarifying the roles of different stakeholders, such as UBOS, the police, health workers, and community leaders, to enhance the coordination of BDR interventions. To supplement existing CRVS laws, local governments should be encouraged to introduce bylaws for additional support.
- Revise the fees and penalties charged for registration, as well as certificate replacement, authentication, and verification, to remove cost barriers to civil registration and birth and death certification.
- Develop a plan with UBOS to generate required information on time. The plan should clarify UBOS's role in data management, analysis, and dissemination of BDR results. It should also allow for sharing of de-identified NIRA data with UBOS and other relevant entities interested in further analysis of the data (such as academic and research institutions) to generate and disseminate requisite vital statistics in accordance with the prescribed regulations. Such a plan would help promote data quality and use and encourage the different agencies to improve coordination, collaboration, service delivery, and the overall vital statistics system.

- Review the minimum requirements at the different civil registration stages, starting from notification and registration up to certification. This work may call for benchmarking from other countries, such as Namibia, that have reduced the requirements for registration to the bare minimum.

Coordination of stakeholders

- Strengthen coordination with the MoH and the MoLG to further decentralize civil registration services down to the health facility and subcounty levels, and also explore the option of empowering community leaders and VHTs to record and notify births and deaths in the community to NIRA offices.
- Set up satellite BDR offices at health facilities—because more than 70 percent of birth notifications take place there—especially at high-volume facilities, as a means of increasing vital registration centers and improving coordination of civil registration activities.
- Explore the option of integrating low-cost or free vital-events registration periods with other services that create a demand for BDR one-stop centers, such as those in the Philippines and Tanzania.
- Institute monetary and nonmonetary incentives for the staff involved in the notification and registration processes, and also work with the MoH to provide vital registration services during child immunization and other public health days to extend civil registration services, especially newborn notification and registration to the community.

Capacity building

- Develop a capacity-building program that includes the continuous training of registration officials and health workers on ICD reporting to improve data quality.
- Allocate resources to set up a functional distribution system to ensure that all district offices are fully equipped.
- Conduct an assessment of the current organizational structure, and advocate for additional resources for staffing. Engage the MoPS in the recruitment of more staff to fill human resources gaps at CROs, focusing on people with data-processing, analysis, presentation, and reporting skills, to supplement UBOS analyses. Further, prioritize performance monitoring and management of CRO staff.

Community engagement

- Develop a communication strategy that guides vital registration and the objectives and processes of acquiring a certificate. Existing communication channels, such as the media, places of worship, and school and community meetings, should be considered as well as educating mothers at ANC and PNC clinics about the importance of registration. The strategy should also include ways to engage cultural and religious leaders in community sensitization about BDR processes and in the actual notifications of births and deaths, as they play a significant role in the rites related to both.
- Benchmark against the MoH's models for increasing immunization coverage, which have worked well.

Generation of civil registration statistics

NIRA, in collaboration with partners, should address the key bottlenecks that hinder or delay civil registration. Key actions to accomplish this work include the following:

- Collaborate with UBOS to ensure that all vital events in the country are registered on time and that relevant statistical products for vital events are generated and disseminated to stakeholders.
- Develop terms of reference for the CRVS National Task Force and formally request the relevant organizations, including academic and research institutions, to nominate members to technical working groups and to lobby other government MDAs responsible for CRVS to include the generation of the relevant CRVS information in their budgeting processes to reduce funding gaps.
- Document guidelines and implement the designed mechanisms for linking and interfacing the HMIS and DHIS2 with NIRA databases to stimulate notification and MVRS, and explore other integrated and interoperable digital solutions that enable automation of notification and registration processes such as web interfaces and USSD for the population with access to the internet or mobile telephones.
- Put in place mechanisms to make all CRVS systems within NIRA and relevant databases outside NIRA interoperable.

Suggested areas for further investigation and research

Areas deserving further study include the following:

- Population-based or household surveys to estimate current civil registration uptake and to quantify attributes that affect the quality of the CRVS system in Uganda.
- Methods for involving community leaders (VHT, religious, local, and cultural) in the BDR process. This work can be done in a phased manner: first, conduct a qualitative assessment to establish willingness to participate in civil registration, and second, develop, test, and validate an Android-operating system for BDR that community leaders can use.
- Feasibility studies and technical discussions concerning the use of ICD for cause-of-death coding and for linkages and interoperability among the CRIMS, MVRS, and DHIS2 and NID registration.

NOTES

1. World Health Organization, “Civil Registration and Vital Statistics,” [https://www.who.int/data/data-collection-tools/civil-registration-and-vital-statistics-\(crvs\)](https://www.who.int/data/data-collection-tools/civil-registration-and-vital-statistics-(crvs)).
2. Ibid.
3. Center of Excellence for CRVS Systems, <https://crvssystemsc.ca/country-profiles>.
4. Registration of Persons Act, 2015, <https://www.ict.go.ug/wp-content/uploads/2018/06/Registration-of-Person-Act-2015.pdf>.
5. BRAC Uganda implements six programs in health, education, ultra-poor graduation, emergency preparedness and response, empowerment and livelihood for adolescents, and financial inclusion.

ANNEX 9A DEFINITIONS OF TERMS USED IN THIS STUDY

TABLE 9A.1 Operational definitions for this study

TERM	DEFINITION
Accuracy	Extent to which all data items or variables are correctly filled.
Birth registration	Recording of childbirth in the civil register by the government authority. Registration provides the first legal recognition of the child and is generally required for the child to obtain a birth certificate and, as a result, any other legal documents and rights.
Civil registration	Notification of an event to official. Validation and verification are followed by formal registration of the event by a registrar.
Completeness	Extent to which the anticipated events' attributes are recorded.
Coverage	Geographical registration of vital events and statistical reports filed. Other dimensions to be considered include gender, age, residence (rural and urban), and certification of hospital and nonhospital events.
Death registration	Recording of death in the civil register by the government authority.
Quality (of a CRVS system)	Ability of a system to capture vital events as well as process and generate evidence that is used for planning and decision-making.
Timelines	Events registered within time limits; data transmitted as per policy and statistical reports generated, filed, and achieved.

Source: ROPA Act of 2015.

REFERENCES

- AbouZahr, C., D. de Savigny, L. Mikkelsen, P. W. Setel, R. Lozano, and A. D. Lopez. 2015. "Towards Universal Civil Registration and Vital Statistics Systems: The Time Is Now." *The Lancet* 386 (10001): 1407–18. doi:10.1016/S0140-6736(15)60170-2.
- Atuhaire, L. K., E. Nansubuga, O. Nankinga, H. N. Nviiri, and B. Odur. 2022. "Prevalence and Determinants of Death Registration and Certification Uptake in Uganda." *PLoS One* 17 (3). doi:10.1371/journal.pone.0264742.
- Cobos Muñoz, D., C. AbouZahr, and D. de Savigny. 2018. "The 'Ten CRVS Milestones' Framework for Understanding Civil Registration and Vital Statistics Systems." *BMJ Global Health* 3. doi:10.1136/bmjgh-2017-000673
- Fisker, A. B., A. Rodrigues, and S. Helleringer. 2019. "Differences in Barriers to Birth and Death Registration in Guinea-Bissau: Implications for Monitoring National and Global Health Objectives." *Tropical Medicine & International Health* 24 (2): 166–74. doi:10.1111/tmi.13177.
- Maduekwe, N. I., O. O. Banjo, and M. O. Sangodapo. 2017. "The Nigerian Civil Registration and Vital Statistics System: Contexts, Institutions, Operation." *Social Indicators Research* 134 (2): 651–74. doi:10.1007/s11205-016-1448-5.
- Makinde, O., B. Olapeju, O. Ogbuaji, and S. Babalola. 2016. "Trends in the Completeness of Birth Registration in Nigeria: 2002–2010." *Demographic Research* 35 (12): 315–38. doi:10.4054/DemRes.2016.35.12.
- Mikkelsen, L., N. Richards, C. AbouZahr, T. Adair, A. D. Lopez, et al. 2018. *A Framework for Evaluating National CRVS Systems at Baseline*. CRVS Technical Outcome Series. Melbourne, Australia: Bloomberg Philanthropies Data for Health Initiative, University of Melbourne. <https://crvssystemsc.ca/framework-evaluating-national-crvs-systems-baseline>.
- MoH (Ministry of Health). 2016. *Investment Case for Reproductive, Maternal, Newborn, Child and Adolescent Health Sharpened Plan for Uganda 2016/17–2019/20*. Kampala: MoH. https://www.globalfinancingfacility.org/sites/gff_new/files/Uganda-Investment-Case.pdf.

- NIRA (National Identification and Registration Authority). 2017. *Mass Registration of Pupils and Students*. Kampala: NIRA. <https://www.nira.go.ug/publications/mass-registration-of-pupils-and-students-handbook>.
- NIRA (National Identification and Registration Authority). 2018. *Baseline Survey on Civil Registration, Vital Statistics and Identification Registration in Uganda*. Kampala: NIRA.
- Ogojoi, S. A., J. C. Ojuko, A. Wassago, C. Zirarema, and UNICEF Kampala. 2002. "Revitalisation of Birth Registration in Uganda." Paper presented at Anglophone Africa Workshop on Birth Registration, Kampala, Uganda, October 21–24, 2002.
- Phillips, D. E., T. Adair, and A. D. Lopez. 2018. "How Useful Are Registered Birth Statistics for Health and Social Policy? A Global Systematic Assessment of the Availability and Quality of Birth Registration Data." *Population Health Metrics* 16 (1). doi:10.1186/s12963-018-0180-6.
- Statistics Norway. 2014. "Status Analysis on Civil Registration and Vital Statistics (CRVS)." Statistics Norway, Oslo–Kongsvinger. https://www.ssb.no/befolkning/artikler-og-publikasjoner/_attachment/206851?_ts=14a15a5c0c0.
- Suthar, A. B., A. Khalifa, S. Yin, K. Wenz, D. Ma Fat, S. Lantei Mills, et al. 2019. "Evaluation of Approaches to Strengthen Civil Registration and Vital Statistics Systems: A Systematic Review and Synthesis of Policies in 25 Countries." *PLoS Medicine* 16 (9): e1002929.
- UBOS (Uganda Bureau of Statistics). 2016. *Uganda Demographic and Health Survey*. <https://www.dhsprogram.com/pubs/pdf/FR333/FR333.pdf>.
- Uganda National Assessment on Civil Registration and Vital Statistics*. <https://ursb.go.ug/>.
- UN (United Nations). 2015. "Goal 3: Ensure Healthy Lives and Promote Well-Being for All at All Ages." Sustainable Development Goals. <http://www.un.org/sustainabledevelopment/health/>.
- UN (United Nations). 2017. "Goal 17: Strengthen the Means of Implementation and Revitalize the Global Partnership for Sustainable Development." Sustainable Development Goals. United Nations Statistics Division, New York. <https://unstats.un.org/sdgs/metadata/?Text=&Goal=17&Target=17.19>.
- UNICEF (United Nations Children's Fund). 2000. *UNICEF: Uganda Country Programme*. New York: UNICEF.
- UNICEF (United Nations Children's Fund). 2013. *Every Child's Birth Right: Inequities and Trends in Birth Registration*. New York. <https://data.unicef.org/resources/every-childs-birth-right-inequities-and-trends-in-birth-registration/>.
- URSB (Uganda Registration Services Bureau). 2014. *Uganda National Assessment on Civil Registration and Vital Statistics*. <https://ursb.go.ug/>.
- Williams, A. O. 2014. "Assessment of the Completeness of Births and Deaths Registration in an Urban Nigerian Community." *African Population Studies* 27 (2): 263–72. doi:10.11564/27-2-473.
- World Bank. 2016. *Uganda Reproductive, Maternal and Child Health Services Improvement Project*. <https://documents1.worldbank.org/curated/en/854971471534008736/pdf/PAD-07182016.pdf>.
- World Bank and Philippine Statistics Authority. 2017. *Philippines Success in Improving Birth Registration*. Washington, DC: World Bank. <http://hdl.handle.net/10986/28970>.
- World Bank and WHO. 2014. *Global Civil Registration and Vital Statistics: A Scaling Up Investment Plan 2015–2024*. Washington, DC: World Bank. <https://openknowledge.worldbank.org/handle/10986/18962>.
- WHO (World Health Organization). n.d. *International Classification of Diseases*. 11th ed. <https://icd.who.int/en>.
- WHO (World Health Organization). 2010a. *Improving the Quality and Use of Birth, Death and Cause-of-Death Information: Guidance for a Standards-Based Review of Country Practices*. Geneva: WHO. <https://www.who.int/publications/i/item/improving-the-quality-and-use-of-birth-death-and-cause-of-death-information>.
- WHO (World Health Organization). 2010b. *Rapid Assessment of National Civil Registration and Vital Statistics Systems*. Geneva: WHO. <https://www.who.int/publications/i/item/rapid-assessment-of-national-civil-registration-and-vital-statistics-systems>.

WHO (World Health Organization). 2013a. *Civil Registration and Vital Statistics 2013: Challenges, Best Practice and Design Principles for Modern Systems*. Geneva: WHO. <https://www.who.int/publications/i/item/civil-registration-and-vital-statistics-2013-challenges-best-practice-and-design-principles-for-modern-systems>.

WHO (World Health Organization). 2013b. *Strengthening Civil Registration and Vital Statistics for Births, Deaths and Causes of Death: Resource Kit*. Geneva: WHO. <https://apps.who.int/iris/handle/10665/78917>.

WHO (World Health Organization). 2014. *Strengthening Civil Registration and Vital Statistics Systems through Innovative Approaches in the Health Sector: Guiding Principles and Good Practices*. Geneva: WHO. Report of a technical meeting, Geneva, December 17–18, 2013. <https://getinthepicture.org/resource/strengthening-civil-registration-and-vital-statistics-systems-through-innovative>.

10 Enablers, Deterrents, Lessons Learned, and Recommendations Concerning the Use of the RMNCAH Scorecard at the District and Health Facility Levels in Uganda

RICHARD KIBOMBO AND SAMUEL K. KAYABWE

EXECUTIVE SUMMARY

To accelerate interventions aimed at reducing preventable maternal and child mortality, the government of Uganda (GoU) developed the Reproductive, Maternal, Newborn, Child, and Adolescent Health (RMNCAH) investment case, also called the Sharpened Plan, in 2013. The following year, the government also introduced an RMNCAH Scorecard to better monitor the implementation of the Sharpened Plan, strengthen accountability, and inform decision-making for RMNCAH interventions.

Since the rollout of the scorecard, however, there has been limited research on the experiences and factors deterring or promoting its use (at either the district or health facility level) or on the measures necessary to ensure its institutionalization. This study, therefore, aimed to generate evidence on (a) strategies and procedures used to implement the RMNCAH Scorecard in selected districts, (b) the extent to which the scorecard has been adopted and how it is being utilized, (c) the factors that enable or deter its adoption and use, and (d) recommendations for improving its adoption and use.

Study objectives

The objectives of this study were as follows:

- Examine the strategies and procedures used to implement the RMNCAH Scorecard in selected districts and health facilities in Uganda;
- Assess the extent to which the RMNCAH Scorecard has been adopted and utilized in the selected districts and health facilities;
- Investigate the factors that enable and those that deter use of the RMNCAH Scorecard in the selected districts and health facilities and identify lessons learned; and
- Propose practical recommendations for improving the use and institutionalization of the RMNCAH Scorecard at the selected districts and health facilities.

Methodology

The study used a cross-sectional, qualitative design. Document reviews, key informant interviews (KIIs), and semi-structured interviews (SSIs) were utilized to collect data from relevant Ministry of Health (MoH) and implementing partner officials at the national level and among district Health Management Information System (HMIS) managers, health facility managers, data officers, and other key stakeholders. Study participants were purposively selected from the following eight districts of Uganda: Bugiri, Bushenyi, Butambala, Gulu, Hoima, Katakwi, Kotido, and Masaka. As a result of travel restrictions imposed by the government to minimize widespread transmission of COVID-19, data for the study were primarily collected virtually through telephone calls by research assistants. The data were then analyzed by extracting and categorizing key content into relevant themes and subthemes.

Key findings

- Although there is broad appreciation of the potential benefits of implementing the scorecard across all the study districts, usage remains moderate at the district level, mainly due to limited skills among potential users (for example, district health officers (DHOs), district administrative staff, and political leaders). Usage is low at the health facility level as most health facilities are not using the scorecard at all, because the relevant officers in most study districts have been unable to roll out the scorecard at the health facility level.
- Knowledge, skills, interest, and leadership among key staff (data personnel and those in charge of RMNCAH services in districts and health facilities) were found to be major drivers in use of the scorecard, and loss of these personnel (such as through retirement, death, or relocating to other districts) has seriously affected usage. Nevertheless, initial mentoring and support supervision were seen as critical for adoption and sustained use, particularly at the health facility level.
- Although its use has been limited, in some districts and health facilities where data were collected for this study, the scorecard is viewed positively. Specifically, stakeholders (for example, chief administrative officers [CAOs]) in these contexts note that the design and visualization features of the scorecard helps them better understand trends in RMNCAH indicators and also facilitates district- and facility-level discussions. The positive feedback on the scorecard, however, was most prevalent in districts and facilities with strong leadership and where staff had been appropriately sensitized.
- The government's reliance on implementing partners, such as international nongovernmental organizations (NGOs), to roll out the scorecard at the district level, while well intentioned, yielded marginal results, because it led to inconsistency in the delivery of training of trainers (ToT) workshops; further, it minimized opportunities for follow-up to ensure the successful training of facility-level stakeholders. Additionally, the MoH's limited support supervision of the processes of the implementing partners undermined ownership and also led to variations in the quality of the training provided.
- At the health facility level, where available, the scorecard is not adequately integrated with other performance-based interventions and programs, such as the results-based financing (RBF) scheme supported under the Uganda Reproductive Maternal and Child Health Services Improvement Project (URMCHIP). This lack of integration creates the sense of parallel systems or

metrics, as well as the notion that the scorecard adds an additional data “burden” for staff.

- District performance review meetings remain the main platform through which districts share scorecard information with health facilities. However, these meetings are not well attended by in-charges of RMNCAH (or maternal and child health [MCH]) services, who are better placed to readily use the information received.
- Many Health Centers (HCs), particularly those at the HC III level, do not have the necessary infrastructure, such as computers and reliable internet, to adopt and use the scorecard effectively, yet these are the frontline facilities in the provision of RMNCAH services.
- Furthermore, in some instances, few personnel are appropriately trained on the process of generating scorecard data, making it more difficult to easily access and utilize the tool. Respondents noted that only biostatisticians at the district level tended to have the necessary skills set, thereby limiting health facility capacity to generate reports in real time.

Recommendations

Study recommendations apply to national- and district-level policy makers and program implementers.

Policy makers and program implementers at the national level

- The MoH should take stock of all the districts where implementing partners have rolled out the scorecard to establish the exact extent of coverage nationally and to assess the adequacy of the training provided, all to inform programming and provide better guidance to the implementing partners.
- The MoH, together with the health sector development partners and NGOs implementing RMNCAH services, should develop a comprehensive and costed national rollout plan for the scorecard to enable systematic resource mobilization and implementation of the initiative in all districts and health facilities. Given the scarcity of resources, the support for rollout of implementation of the scorecard to health facilities could be phased, starting with districts where some officials already have been trained. The support should include equipping HC IIIs that do not have the required information and communication technology (ICT) infrastructure (particularly, computers, reliable internet, and electricity supply) to enable them to use the scorecard.
- The MoH, implementing partners, and the districts should adopt a harmonized, multisectoral training and implementation approach. This approach would involve both health sector staff (for example, DHOs, assistant DHOs [ADHOs], health facility in-charges, and midwives) and other key stakeholders (for example, administrators, political leaders, and representatives of community Health Unit Management Committees [HUMCs]) who have a stake in the RMNCAH outcomes to promote buy-in and ownership of the scorecard at the subnational levels.
- Relatedly, the MoH needs to provide enhanced support supervision in the rollout of the scorecard and put in place a mechanism for improved accountability from implementing partners and district stakeholders. In terms of training, beyond expanding the audience and ensuring consistency in the delivery of the courses, the MoH should make provision for stakeholders to update their knowledge and address skills gaps in scorecard use. This work

can be achieved through continuous professional development programs, including the use of an online module to minimize costs and create greater flexibility. The ongoing update of the RMNCAH Sharpened Plan 2022/23–2027/28 (NPA 2022) presents an opportunity to revise the scorecard training and modules. The MoH, in collaboration with stakeholders, should systematically review the scorecard based on the findings of this study and the indicators in the revised Sharpened Plan II. The supply and availability of training and operational resources—that is, user manuals (hard or soft copies), internet connectivity, installation of software applications, and technical support—will be integral to ensuring that training translates into practice.

- Given the complementarity among the scorecard initiative, the RBF program in the URMCHIP, and innovative RMNCAH pilots funded through primary health care (PHC) funds, the MoH should explore options for integrating these programs with a view toward minimizing the data collection requirements placed on facility and district stakeholders as well as for improving efficiency generally. Systems can be integrated under the broad framework of performance-driven service delivery at the health facility level, with staff appropriately trained in the various tools and in understanding how they contribute to service delivery outcomes.

Policy makers and program implementers at the district and health facility levels

Considering that performance review meetings remain the primary way in which scorecard reports are shared with health facilities, districts and health facility managers need to take the following steps:

- Put in place short-term arrangements so those in charge of MCH services can attend these meetings. Participation in the meetings is critical to promoting greater awareness, appreciation, adoption, and use of the scorecard at the health facility level.
- Popularize the scorecard among all the stakeholders to increase its adoption, utilization, and institutionalization at the local government level. Part of this work lies in clearly articulating the value proposition of the scorecard so that it is understood as a tool that provides a unique and important perspective.
- Link scorecard use with the ongoing RBF schemes so that those who utilize them are tracked and rewarded. This linkage would encourage health facility managers and service providers to periodically assess and address the gaps in the delivery of RMNCAH services in the facilities and their catchment areas.

INTRODUCTION

In 2017, approximately 295,000 women died globally either during or immediately after a pregnancy. Of this number, 94 percent were in the developing world, with Sub-Saharan Africa accounting for about two-thirds of these deaths (WHO 2019). The high level of mortality in developing countries has necessitated the reinvigoration of efforts toward and support for RMNCAH interventions. These efforts include, notably, (a) the commitments articulated in the UN Sustainable Development Goals, which aim to reduce child mortality to 25 deaths per 1,000 live births and maternal mortality to 70 deaths per 100,000 live births and (b) the 2012 Call for Child Survival forum convened by the United Nations Children's

Fund (UNICEF) to commit countries to addressing maternal and neonatal deaths and invest resources toward a clear road map or plan of action.

In Uganda, RMNCAH conditions are a primary cause of death and illness, accounting for 60 percent of the disease burden. The country's National Development Plan III (2020/21–2024/25) (NPA 2020) similarly commits Uganda to ambitious targets in RMNCAH, including a vision to reduce the maternal mortality ratio from 336 per 100,000 live births in 2016 to 211 per 100,000 live births by 2024–25.

The current development plan goals build on earlier efforts. In 2013, the GoU developed its first RMNCAH investment case, or Sharpened Plan, to accelerate interventions to reduce preventable maternal and child mortality. Linked to this effort, Uganda also introduced the RMNCAH Scorecard in 2014 to monitor progress toward achieving targets on MCH. With support from UNICEF, the scorecard was automated and embedded within District Health Information Software version (DHIS2) as a dashboard and then pilot tested in 13 districts before it was gradually rolled out to other districts.

The scorecard itself features four dashboards allowing for (a) data quality assurance, (b) bottleneck analysis, (c) action tracking, and (d) stock management. These dashboards, especially for bottleneck analysis, help identify bottlenecks in interventions and their root causes and inform management of the necessary actions for reducing maternal, newborn, and child vulnerabilities and deaths (UNICEF 2017). Other complementary interventions (such as engagement with and sensitization of stakeholders to the benefits of the scorecard) have been implemented over the years to further promote and enhance its use.

The RMNCAH Scorecard

A “scorecard” is a performance tool used to identify, improve, and control an organization's functions and resulting outcomes. This concept was introduced in 1992 by David Norton and Robert Kaplan and is now one of the most important performance management tools globally (Zelman, Pink, and Matthias 2003). One key benefit of using a scorecard is that it helps establish a visible connection between the strategic components of projects and programs (organization mission, vision, and strategy), the measurements being used to track success, and the organizational strategic objectives (Balanced Scorecard Institute 2020).

The RMNCAH Scorecard was launched by many countries that signed on to the Call for Child Survival to monitor progress toward achieving targets for MCH. Scorecards were also adopted as a tool for reviewing progress of the global strategy within countries. The approach was developed and supported by the African Leaders Malaria Alliance, which also published guidance for developing and using the RMNCAH Scorecard (Every Woman Every Child 2016). The primary objectives of the scorecard include the following:

- Enabling better profiling and monitoring of high-impact RMNCAH interventions to help decision-makers identify and prioritize gaps;
- Facilitating and strengthening evidence-based action plans to improve internal management of programs and policies;
- Promoting advocacy for RMNCAH services among partners and civil society organizations (CSOs);
- Aligning with existing national review processes and timings; and
- Validating and triangulating the implementation of actions intended to improve the health of women, children, and adolescents.

Study rationale

Although the scorecard has been heavily promoted in Uganda since its introduction, a review of related literature in Uganda and other countries in Sub-Saharan Africa indicates a lack of research regarding its rollout, adoption, utilization, and impact on service delivery. This knowledge gap, therefore, begets four key questions that merit research in Uganda: (a) What strategies and processes have been adopted to implement and institutionalize use of the scorecard for RMNCAH service delivery? (b) What is the extent of the adoption and use of the scorecard at both the district and health facility levels? (c) What factors enable, and what factors deter, the use of the scorecard? and (d) What are the perceived impacts of implementing the scorecard in the study districts and health facilities?

Objectives of the study

In view of the research questions noted earlier, the specific objectives of the study were as follows:

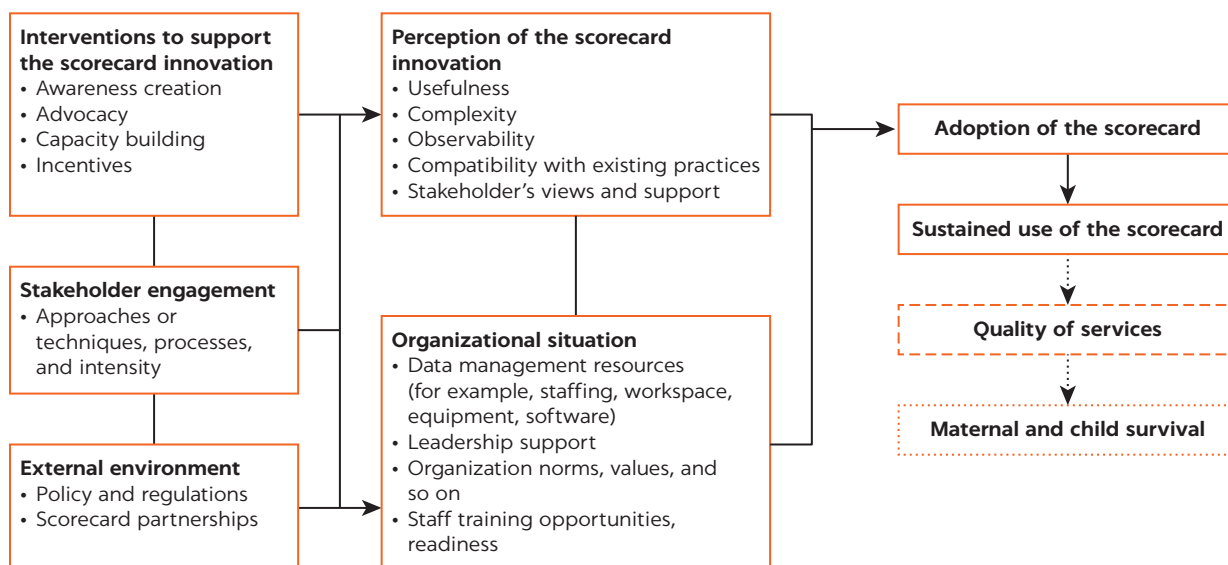
- Examine the strategies and procedures used to implement the RMNCAH Scorecard in selected districts and health facilities of Uganda;
- Assess the extent to which the RMNCAH Scorecard has been adopted and utilized in the selected districts and health facilities;
- Investigate the factors that enable and deter use of the RMNCAH Scorecard in the selected districts and health facilities and identify lessons learned; and
- Propose practical recommendations for improving the use and institutionalization of the RMNCAH Scorecard in the selected districts and health facilities.

Conceptual framework

Successful uptake of the scorecard embodies two different but related outcomes: (a) adoption of the tool as a system for monitoring service provision and RMNCAH outcomes and (b) sustained stakeholder awareness and utilization of the data generated for decision-making in planning, implementation, and management of services. The conceptual framework for this study borrows from both the theory of change for adoption of information systems and that for promoting evidence-based decision-making. Specifically, this framework lends itself to the diffusion of innovations theory (DIT) and the International Network for Advancing Science and Policy (INASP) framework (figure 10.1).

The DIT (Rogers 1995) stipulates that the adoption of a new idea (which is diffusion of an innovation) depends on the characteristics of the innovation (which is how the innovation is perceived by the targeted or potential users), communication channels, time, and the community or social system (Sahin 2006). The INASP framework asserts that the incentives for data use, existing capacity to utilize data, the relationship between data producers and users, and the effectiveness of how data are communicated to users are critical factors in the adoption of innovations (INASP 2012).

This conceptual framework asserts that the adoption of the RMNCAH Scorecard for monitoring the provision of health services and the continued utilization of the information it generates for decision-making by district and health facility stakeholders is dependent on the following:

FIGURE 10.1**Conceptual framework for adoption and utilization of the RMNCAH Scorecard**

Source: This figure is original to this publication.

- The “pre-adoption” organizational situation;
- How the organization perceives the innovation in comparison with existing practices; and
- The influence of the external and internal interventions provided to support its acceptance and sustained use, such as laws and policies, stakeholder engagement and partnerships, advocacy, capacity building, and incentives.

The conceptual framework further asserts that the adoption and continued utilization of the scorecard would enhance the delivery of RMNCAH services and ultimately reduce maternal and child morbidities and mortality.

METHODOLOGY

This section discusses study design, sites, and population; data collection methods, tools, and procedures; data analysis; ethical considerations and assurance; and study limitations.

Study design

This cross-sectional, qualitative study used a mixed-methods approach to collect data from national and district HMIS managers, as well as health facility managers, data officers, service providers, and other key stakeholders.

Study sites

This study was conducted in eight districts across four geographic regions of Uganda: Bushenyi and Hoima in the Western region, Butambala and Masaka in Buganda or the Central region, Buguri and Katakwi in the Eastern region, and Gulu and Kotido in the Northern region. These districts were selected based on their scorecard use.

Study population

Study participants were purposely selected based on their involvement in the roll-out or implementation of the scorecard at the district or health facility level. Participants included key officials from the MoH, the study districts, and the international NGOs involved in supporting the rollout of the RMNCAH Scorecard.

Data collection methods

Document review, KIIs, and SSIs were used to collect data to answer the four key research questions. Interview guides and a semi-structured questionnaire were developed and used to collect data for the study. The interview guides were used to collect data from stakeholders who were involved in rolling out the district scorecard, RMNCAH service providers, and managers, as well as potential users of the scorecard at the district and health facility levels. The guides captured stakeholders' opinions on the process used to roll out the scorecard, the extent of utilization of the scorecard, the factors that promote or hinder the utilization of the scorecard, the perceived positive and negative effects of implementing the scorecard, and what can be done to strengthen and mainstream the use and adoption of the scorecard.

A semi-structured questionnaire was used to collect data from district and health facility officials responsible for managing scorecard data. This tool focused more on how the scorecard data are being utilized, the type of data and purpose of use, who the users are, and barriers to use. Table 10.1 summarizes the categories of respondents and number of interviews conducted.

Data collection methods and tools

Data collection activities started in the second week of December 2020, beginning with identifying and contacting respondents, obtaining signed informed consent, and scheduling appointments for the interviews. The tools were pre-tested in Kayunga district and fine-tuned to improve the flow and clarity of the questions. This process was facilitated by the DHOs in the targeted study

TABLE 10.1 Respondents and number of interviews conducted

CATEGORY OF RESPONDENT	NO.
National-level key informants (MoH and implementing partners' representatives)	4
Local Council V chair, CAOs, and DHSs	8
DHOs and ADHOs in charge of MCH services	13
District biostatisticians	8
Health officers in charge of district or regional hospitals; those in charge of MCH; and those in charge of the HMIS at district or regional hospitals	8
Health officers in charge of HC IVs; those in charge of MCH; and those in charge of the HMIS at HC IVs	20
Health officers in charge of HC IIIs; those in charge of MCH; and those in charge of the HMIS at HC IIIs in urban and rural areas	20
Representatives of HC IV HUMCs	5
Representative of HC III HUMCs	5
Total	91

Source: This table is original to this publication.

Note: ADHOs = assistant district health officers; CAOs = chief administrative officers; DHOs = district health officers; DHSs = district health secretaries; HC = Health Center; HMIS = Health Management Information System; HUMCs = Health Unit Management Committees; MCH = maternal and child health; MoH = Ministry of Health.

districts. All the interviews were conducted by telephone owing to the COVID-19 regulations that restricted travel and face-to-face interactions during the execution of the research activities.

District and health facility data were collected by research assistants. National interviews were conducted by the principal investigator and the co-investigator. All the interviews were audio-recorded. Table 10.2 summarizes the methods adopted to collect data for each research question.

Data analysis

The study team prepared and reviewed summary matrices of all interviews in each district and those conducted at the national level to extract data by themes and stimulate further investigation of key informants' assertions and perspectives. Information garnered from interviews and document review was triangulated to provide a deeper understanding of what transpired in the various districts and health facilities.

Ethical considerations and assurance

The research proposal was approved by the National HIV/AIDS Research Committee and the Uganda National Council of Science and Technology. All research participants were informed about the purpose, objectives, procedures, confidentiality, risks, and benefits of the study as well as their right to choose to participate or not to participate. The participants signed consent forms prior to commencement of data collection.

Study limitations

- This study was primarily qualitative and covered eight districts that were purposely selected based on the availability of the scorecard initiative to adequately answer the research questions. Therefore, findings of this study may not be representative of the entire country.

TABLE 10.2 Data collection methods used to answer the research questions, by type of respondent

RESEARCH QUESTION	METHOD USED TO ANSWER QUESTION	TYPE OF RESPONDENT
What strategies and processes have been used to implement the RMNCAH Scorecard?	Kilis and document review	MoH and partners, DHOs, ADHOs in MCH, those in charge of HCs, those in charge of RMNCAH at HCs, Local Council V chairs/CAOs, DHSs, and HUMC representatives for HC IVs and IIIs
To what extent has the scorecard been adopted and utilized at the district and health facility levels?	Kilis, SSIs, and document review	MoH and partners, DHOs, ADHOs in MCH, those in charge of HCs, those in charge of RMNCAH at HCs, Local Council V chairs/CAOs, DHSs, HUMC representatives for HC IVs and IIIs, biostatisticians, and those in charge of the HMIS at HCs
What are the factors that enable and deter the use of the scorecard in the district and health facilities?	Kilis	MoH and partners, DHOs, ADHOs in MCH, those in charge of HCs, those in charge of RMNCAH at HCs, Local Council V chairs/CAOs, DHSs, and HUMC representatives for HC IVs and IIIs
What are the perceived positive and negative impacts of implementing the scorecard?	Kilis	MoH and partners, DHOs, ADHOs in MCH, those in charge of HCs, those in charge of RMNCAH at HCs, Local Council V chairs/CAOs, DHSs, and HUMC representatives for HC IVs and IIIs

Source: This table is original to this publication.

Note: ADHOs = assistant district health officers; CAOs = chief administrative officers; DHOs = district health officers; DHSs = directors of health services; HCs = Health Centers; HMIS = Health Management Information Systems; HUMC = Health Unit Management Committee; Kilis = key informant interviews; MCH = maternal and child health; MoH = Ministry of Health; RMNCAH = reproductive, maternal, newborn, child, and adolescent health; SSIs = semi-structured interviews.

- Given that the study was conducted virtually, the researchers were unable to access some documents, such as meeting minutes, at the district and health facility levels to aid in triangulation of the data gathered through virtual means. This constraint may have affected the findings of this study.
- The low response rate (20 percent) of health facilities affected the use of the data gathered with the self-administered SSI. The low level of adoption of the scorecard at health facilities partly explains the low response rate.
- The absence of a comprehensive list of districts where the scorecard had been rolled out impeded the selection of sample sites. Hence, the selection criteria may not have yielded the most ideal or representative sample for the study. For example, four of the original sample districts had to be dropped during field work when it became apparent that they were not implementing the scorecard and could, therefore, not provide useful lessons for the study.

FINDINGS

The results presented in the following sections are organized according to the components of three of the research objectives: (a) strategies and procedures used to implement the RMNCAH Scorecard, (b) adoption and usage of the scorecard at the district and health facility levels, and (c) factors that enable or deter usage of the scorecard in the district and health facilities.

1. Strategies and procedures used to implement the RMNCAH Scorecard

Strategies and procedures used to implement the RMNCAH Scorecard are discussed in this section.

Implementation strategies

The MoH used three strategies to roll out the scorecard in districts and health facilities.

Collaboration with relevant implementing partners to train district stakeholders on scorecard use. The MoH, recognizing its funding and capacity constraints, pursued the approach of identifying implementing partners to support the rollout. The partners' specific task was to train district- and facility-level stakeholders on the RMNCAH Scorecard, drawing from a common guidance document provided by the MoH. The implementing partners consisted of CSOs and development partners that were already supporting RMNCAH interventions at the district level. Their role in RMNCAH Scorecard processes afforded them an opportunity to link their own activities and monitoring or reporting processes to the scorecard. For the MoH, engaging these implementing partners provided an opportunity to leverage external capacity and funding available at the frontlines. One key informant summarized the MoH's rationale for using implementing partners as follows:

We used implementing partners because they have some resources, their commitment is realistic, they were already implementing some health interventions, and we depended on them for soft landing. —Key informant at the national level

Use of trained district stakeholders to train selected health facility staff on scorecard use. The cascade strategy consisted of using trained district

leadership, district administrators, and District Health Teams (DHTs) to train and sensitize stakeholders at the facility and community levels. Furthermore, the MoH's plan was that, after training the relevant district and health facility staff, these stakeholders would appreciate the value of the RMNCAH Scorecard, be able to conduct periodic reviews of the results, and focus on the interventions on real-time issues that need to be addressed to achieve program goals.

Digitization and creation of a web-based application of the scorecard and linking it with the DHIS2. The intent was to create an interoperable system that could link the scorecard with the data on the RMNCAH indicators already collected in the DHIS2. The relevant categories of staff (for example, biostatisticians and HMIS officers) were to be trained in the use of the web-based scorecard as a monitoring, planning, and decision-making tool focused on RMNCAH.

Implementation processes

The implementation process for the scorecard, at the district level, ran from 2017 through 2020. The entry point for implementation was the regionalized ToT workshops, organized by the MoH or the implementing partners for district officials who were deemed to be critical in the implementation process. The one- to five-day training sessions targeted DHOs, ADHOs, biostatisticians, and CAOs, who would then, on average, train (or were supposed to train) staff in two to three health facilities per district after the ToT. The integration of the scorecard dashboard into DHIS2 was undertaken with UNICEF support.

Because the rollout process to the health facilities relied heavily on implementing partners, training activities could not be undertaken at the same pace across the country. Each implementing partner had its own priorities, resource envelope, and mode of operation. Furthermore, key informants noted that the training by some implementing partners was inadequate (lasting only one day) and without follow-up, so some of the personnel who were trained soon forgot what they had learned and began demanding retraining opportunities. The challenges were further compounded by weak supervision from the MoH, resulting in a fragmented approach to training and rolling out the scorecard, poor accountability in implementation, weak ownership, and ultimately—in some cases—a failure to sustain use of the tool.

In fact, whereas the rollout to health facilities was expected to be a continuous, district-driven process, this strategy did not work in a majority of the study districts. The study found that about two-thirds of the study districts did not receive any support during or after the initial rollout period, and only one-third were provided with user manuals during the ToT workshops. This issue impeded the ability to further train facility- and community-level stakeholders. In the few facilities that did receive training, the districts did not sustain regular follow-up, as expressed by selected district key informants:

We didn't train because donor funds are not sustainable. They were telling us that we were supposed to train people at [the] health subdistrict and, you know, as districts we are handicapped financially, because I am supposed to go to a health subdistrict, which is Health Center IV, to train, but when you ask for fuel, it's not there. So, we ended there. —Key informant at the district level

Technical, financial, and other material support was not there. There was no allowance and materials to enable the district trainers to train the relevant

health service providers and stakeholders on the use of the scorecard. It is like they had to do these things on their own. And also, even after the training the Ministry people never came to visit us. There was no further support; it was a matter of training people, and they go home and do what they are supposed to do or do nothing. —Key informant at the district level

There was no follow-up to see that the district is using the scorecard. Things ended in the workshop where we went for training. —Key informant at the district level

Overall, lack of a well-defined, costed, and resourced plan for scorecard roll-out by districts affected its adoption. Further, reliance on the implementing partners as an implementation strategy for rollout to the health facilities without close supervision by the MoH as a parent institution of the scorecard played a role in the loss of interest by some departments, districts, and individuals to continue with the rollout to lower-level health facilities. This issue was manifested especially following the departure of implementing partners, to the extent that even where the tool had been rolled out, its usage was discontinued. Furthermore, the uneven quality of training in terms of duration, tooling (with reference manuals), and mentorship has resulted in limited skills among those supposed to be responsible for scorecard rollout.

2. Adoption and usage of the scorecard

This section discusses scorecard adoption at the district and facility levels.

Extent of adoption at the district level

This study found several reasons for lack of scorecard adoption and use.

While the rollout of the scorecard was a countrywide initiative, this study was unable to conclusively establish the geographical extent of its adoption. Data on how many districts and health facilities to which the scorecard had been rolled out were not available at the national or district levels.

Use of the scorecard was limited at the district and health facility levels. Although some district leaders were trained about the use of the scorecard, and some, especially the resident district commissioners, the district secretary for health services, and the CAOs, monitored its implementation to enable accountability to the state and the citizenry, the scorecard was not relied on for periodic review of RMNCAH service delivery issues in most of the districts and health facilities involved in the study.

In all the study districts, information on the use of the scorecard was found mostly in health sector planning meetings and quarterly performance reviews. The ToT workshops for the RMNCAH Scorecard were heavily skewed toward the health sector staff, with no or limited inclusion of other key stakeholders, such as administrators and political leaders at the district and lower levels. Only one assistant CAO was invited to a ToT workshop, and—according to respondents—he had been very instrumental in ensuring or demanding that the scorecard data be regularly updated, having been trained on the usefulness of the scorecard for monitoring the health status of the targeted population and identifying bottlenecks that require action. This finding implies that inclusion of administrators among the scorecard trainees can facilitate its uptake and utilization.

District key informants reported that they lacked sufficient data and competency to generate scorecard reports on their own. Informants could not produce scorecard reports without the help of the biostatisticians. Reliance on the biostatisticians and staff in charge of the HMIS for data generation and interpretation on behalf of the health workers partly reflects Uganda’s hierarchical civil service structure, which emphasizes reporting and compliance instead of analysis and innovative use of data at the level of data generation and service delivery (Clar et al. 2011; H6 Joint Programme 2015; MEASURE Evaluation 2018). One respondent stated,

If I could generate the scorecard myself, I would access the information faster than when I have to get it from the biostatistician. I have to keep asking the biostatistician to make the scorecard, and we look at it. I need a refresher course so that I learn and get to own that scorecard—so that I can make it myself, particularly the one for the district. It would be good for me. —Key informant at the district level

Linked to the issue of reliance on biostatisticians, districts and health facilities also face challenges in accessing and using up-to-date ICT infrastructure. Most districts reported that they were unable to disseminate the color-coded scorecard information to other potential users because of a lack of color printers to produce hard copies that can then be widely circulated. A few also said that they did not have readily available internet service to enable them to access the scorecard data. One district (Bushenyi) reported that they did not have the scorecard application installed on their computers. For this reason, they had to export the DHIS2 data to Excel to compute the indicators and then present the results using PowerPoint. This issue creates an added layer of complexity that can discourage use of the scorecard.

Furthermore, at the district level, there remains the challenge of consistency in the scheduling of and attendance at review meetings. While some of the health facilities confirmed that scorecard data were shared during performance review meetings, they also indicated that this came a little too late to address the problems identified. In other cases, key stakeholders did not consistently attend review meetings, and there was not always adequate time to discuss the scorecard during the meetings. As one respondent noted,

We share scorecard information in the performance review meetings, but you find some health facility in-charges paying little attention to what you are sharing, while others don’t even attend the meetings. You find that an in-charge of a facility has missed meetings for all the four quarters in the financial year. —Key informant at the district level

Despite the barriers cited, some district-level stakeholders expressed appreciation for the scorecard. These respondents noted that the scorecard has helped them monitor district performance, identify service gaps, and plan for appropriate interventions to close those gaps. Some also revealed that they use the information to lobby for support from implementing partners. The following are selected quotes from key informants:

I look at the scorecard and see where we are not performing well; I inform the DHT members during our monthly meetings and the participants in the performance review meetings. It also helps me when looking at the staffing—which place does not have a midwife, and where can I get a

midwife to put in that place? If there is no midwife, I ask the DHO if we can consider recruiting one. —Key informant at the district level

In the last quarter, we [performed poorly] under institutional delivery. We then had to put in an intervention and introduced incentives for mothers, so we want to see what is happening in the second quarter. I wish we could shift from red to yellow so it can help us to monitor the effectiveness of the intervention. —Key informant at the district level

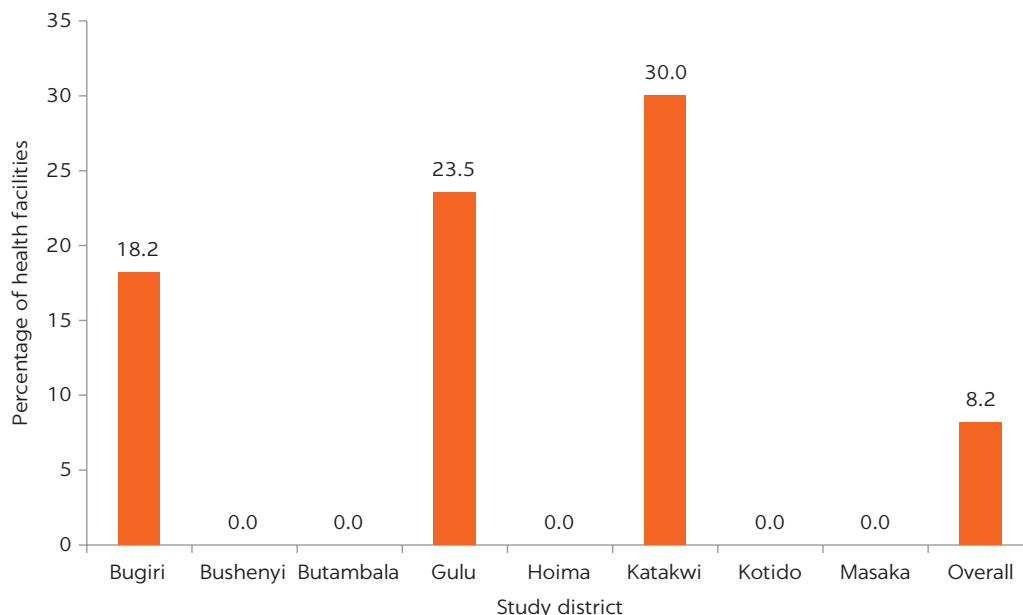
The assistant CAO in-charge of health is really trying to ensure that the scorecard is updated regularly to the extent that, even when you miss sending a report to him, he always calls to remind you, “I have not received [it] for this month.” So, because of that, the scorecard is always updated, and we are using it. —Key informant at the district level

Extent of adoption at the health facility level

Key informants for only three of the eight study districts were able to report the exact number of health facilities in their district where the scorecard had been adopted. Key personnel in these facilities confirmed that they were, indeed, implementing the scorecard, although they were facing many challenges. Figure 10.2 shows the percentage of health facilities, HC III and higher, that were implementing the scorecard per district; Katakwi had the highest number of implementing health facilities (four), while Gulu had three, and Bugiri had two. The rest of the districts could not confirm whether any of their health facilities had adopted the scorecard.

Some key informants identified districts that they thought “likely” to be implementing the scorecard, but when staff in health facilities from those districts were interviewed, the researchers established that none of them had

FIGURE 10.2
Percentage of public health facilities in study districts implementing the RMNCAH Scorecard



Source: This figure is original to this publication.

begun implementing the scorecard. However, a few were using scorecard information they received at quarterly performance review meetings held at their district headquarters.

The limited use of the scorecard at the facility level indicates the tendency of health facilities largely remaining data producers but not data users. This was observed by one district key informant:

The scorecard majorly remained at the district level because we generate the scorecard data on a monthly basis and share it with health facilities during our quarterly performance review. —Key informant at the district level

Regardless of the low level of the scorecard's uptake at the health facility level, it was found that where it had been implemented, the district health departments were able to improve the quality of data through regular updates.

Overall extent of scorecard utilization at the district and health facility levels

Overall across the study districts, the respondents use several types of information generated from the scorecard, including, but not limited to, antenatal, perinatal, delivery, and neonatal data. These data are mainly used for planning, monitoring, and decision-making, for example, to address perinatal, maternal, and neonatal deaths; identify facilities that need supervisory support; and, where necessary, redirect resources to improve health outcomes. Usage of the scorecard information was reported by some respondents to have contributed to improvements in data analysis. It was noted in one study district that besides the health workers, other categories of district staff, such as the population officer and the district planner, also used the scorecard because they work on issues related to population statistics (for example, birth and death registrations), which are captured in the scorecard.

On the whole, the scorecard remained a health sector tool. This finding was consistent even though the original intent was for it to serve as a multisectoral tool, given that health outcomes are driven by determinants in other sectors. One respondent at the national level noted regrettably that the scorecard has ended up being used exclusively as a monitoring tool for the on-the-ground health sector:

The scope of the scorecard user goes beyond the health worker to include centrally administrative leaders and political leaders who have a serious role and responsibility to play in communicating to the masses . . . It should have been adopted among other accountability tools in the health system. —Key informant at the national level

The level of scorecard utilization at the health facility level is low. This finding is attributable to the challenges, noted earlier, in cascading training, sensitization, and resources at the facility level. In six study districts, the following cadres of health facility personnel were not using the scorecard on a routine basis: (a) those in charge of health facilities, (b) those in charge of the HMIS, (c) midwives, and (d) medical superintendents at two hospitals. Additionally, training did not target health assistants for community engagement, health educators, health inspectors, and ADHOs in charge of environment. These roles were all mentioned during the interviews as critical RMNCAH stakeholders that were not included in scorecard sensitizations. This lack of diversity in the

targeted audience limits the potential utility and utilization of the scorecard, and it inhibits a broader view of some of the determinants of the RMNCAH outcomes being assessed and tracked. One key informant explained the challenge of broadening stakeholder usage as follows:

The challenge for other people using the scorecard is accessing . . . and understanding the information, because for them it's not well understood like we understand it. So, they get difficulties in interpreting the scorecard data, so we have to coach them to understand and then they put it into use. —Key informant at the district level

Another constraint to scorecard utilization at the health facility level is the notion that it adds an additional layer of bureaucracy and data collection requirements that overburden staff. Furthermore, there is limited knowledge of the scorecard as well as weak capacity to generate and use the scorecard information in real time. The preferred data source for RMNCAH analysis remains the DHIS2, which most stakeholders are familiar with and accustomed to using. While some health facility stakeholders agreed that the scorecard had some benefits, they also revealed that it had important limitations that discouraged its use. Some of these perspectives are as follows:

Of course, the scorecard talks about data, but I have not used it . . . When we are reviewing our performance, we go direct to the HMIS tool and get the data from there because the scorecard doesn't have everything in detail. —Key informant at an HC III

The people at the health facilities have no knowledge about the RMNCAH Scorecard. Do you think they will implement what they don't know? Even us at the district [level], it is the biostatistician who shows us how we are doing in relation to the scorecard. I think more training should really be done. —Key informant at the district level

I don't use the scorecard information because I don't know much about it, and I have no access to it. I only hear about the scores we have got during our performance review meetings. Whenever we go for meetings, I hear that we scored zero, you scored red, something like that, but I don't know anything about it. —Key informant in an HC IV

3. Factors that enable or deter use of the scorecard in the districts and health facilities

Several factors either promote or deter the adoption and use of the scorecard in the districts.

Enabling factors

Enabling factors include leadership, the appreciation of added value, and the positive attitude of key stakeholders.

Leadership buy-in positively impacts the implementation of the scorecard. In the Bugiri district, for example, the assistant CAO in charge of health, as well as the DHO and the ADHO in charge of MCH, were instrumental in the scorecard rollout. In districts where trained staff had left office, there was a glaring leadership gap leading to minimal utilization of the scorecard data. This issue was exacerbated by the fact that the DHOs, who would

otherwise be expected to fill the leadership vacuum, did not participate in the scorecard training and, therefore, lacked the knowledge or incentive to use the scorecard.

Appreciation of the added value. Use of the scorecard is strongest in districts and health facilities where there is appreciation for its added value—its ability to provide a snapshot of performance across core RMNCAH indicators, identify bottlenecks in service delivery, and provide an objective basis for discussion of appropriate interventions. The key stakeholders who tended to appreciate this value included CAOs, ADHOs, and biostatisticians.

Positive attitude of key stakeholders. Most of the key informants interviewed who had been trained on the scorecard spoke positively about its potential to improve service delivery. In some cases, staff who had not been trained were eager to receive the training so that they could start using the tool. Linked to the earlier discussion on appreciation of the tool's value addition, proactivity by staff—especially at the health facility level—is an important enabling factor to developing and utilizing the necessary skill sets to adopt the scorecard for routine performance monitoring and service delivery improvements.

Implementing partners enabled the MoH to roll out the scorecard to districts and helped fill a potential financing gap. They also provided support to some of the districts to organize the quarterly performance review meetings where scorecard reports are disseminated and discussed, and they were reported to be major users of the scorecard data, hence creating demand for its use.

Deterrent factors

Deterrent factors include limited funding; insufficient knowledge, skills, and quality of training; limited support supervision and mentoring; staff turnover; and a limited cadre of staff.

Limited funding. The MoH faced funding constraints that impacted its ability to (a) ensure a comprehensive and standardized rollout of the scorecard tool, (b) adequately finance districts to train and sensitize facilities and community stakeholders, (c) provide equipment and connectivity that allow for reliable access to data, and (d) support routine supervision and quality assurance. Among the districts covered by this study, only Bugiri had trained staff at three health facilities without external support. This was possible partly because these facilities were close to district headquarters, which reduced transportation-related costs. Even in such instances, trade-offs had to be made, such as shortening the length of the training program to minimize logistical costs.

Insufficient knowledge, skills, and quality of training. Insufficient knowledge and skills were frequently mentioned by stakeholders as a barrier to rolling out the scorecard and to utilizing the tool. At the district level, some stakeholders—while they had received the five-day training—still felt unequipped to train others because of a lack of knowledge on how to use ICT tools to generate, analyze, and interpret scorecard data. This knowledge gap was attributed to the lack of laptops, manuals, and operational tools to practice with during and after the training sessions to become adequately conversant with the tool.

Limited support supervision and mentoring. Lack of support supervision and mentoring by both MoH and the districts was widely reported as another major reason why the use and uptake of the scorecard remained low. Improved supervision was considered important because it would help ensure MoH

leadership and ownership of the scorecard process and implementation, create a sense of greater accountability, and promote stakeholder appreciation for the tool, including enhancing understanding of its link to the overall performance of RMNCAH outcomes. In addition, performance review meetings included discussion of many other issues concerning the performance of the health sector, leaving little time for the RMNCAH Scorecard. All these factors diminished the effectiveness of this mechanism in promoting the use and adoption of the scorecard.

Staff turnover. In most of the districts covered, there was a high staff turnover, especially in the District Health Offices. Many ADHOs in charge of MCH who had been trained as well as the DHOs had either been transferred or retired prior to the introduction of the scorecard. The situation was not very different at the health facility level. The turnovers created a knowledge gap that districts and health facilities found difficult to address and that affected scorecard usage. The missing officers are those expected to be at the forefront in using scorecard data to inform plans and actions for improved service delivery.

Limited cadre of trained staff. Some key informants noted the low numbers of health personnel who were trained and that some potential users of scorecard information within the RMNCAH service delivery chain had been excluded from the training. In some districts, DHOs were excluded from training, which is concerning given their important role at the district level and in mobilizing health facility uptake. Furthermore, reliance on biostatisticians to generate and analyze data limits the capacity of other personnel to effectively utilize the scorecard and also to train others as part of the cascade model.

CONCLUSION

The important role of the RMNCAH Scorecard of tracking locally determined priority indicators and informing decision-making is widely appreciated across all study districts. The scorecard has helped user districts pinpoint data and service gaps and plan for appropriate interventions. However, this appreciation is generally lacking at health facilities, where the actual service delivery takes place. Unless dedicated funding is secured to systematically roll out the scorecard to the health facilities, its adoption, use, and impact will remain minimal.

RECOMMENDATIONS

Based on the findings and the associated discussions at both the program and national levels and the district and health facility levels, the key recommendations for policy makers and implementers to improve the use and institutionalization of the RMNCAH Scorecard are as follows:

Policy makers and program implementers at the national level

- The MoH should take complete stock of all districts where implementing partners rolled out the scorecard to establish the exact extent of coverage nationally as well as to assess the adequacy of the training provided to inform programming and to provide better guidance to the implementing partners.

- The MoH, together with the health sector development partners and NGOs implementing RMNCAH services, should develop a comprehensive and costed national rollout plan for the scorecard to enable systematic resource mobilization and implementation of the initiative in all districts and health facilities. Implementation of the scorecard at health facilities could be phased, starting with districts where some district officials have already been trained. The support should include equipping HC IIIs that do not have the necessary ICT infrastructure (particularly computers, reliable internet, and electricity supply) to enable them to use the scorecard.
- The MoH, implementing partners, and districts should adopt a harmonized, multisectoral training and implementation approach involving both health sector staff (for example, DHOs, ADHOs, those in charge of health facilities, and midwives) and other key stakeholders (for example, administrators, political leaders, and representatives of community HUMCs) who have a stake in RMNCAH outcomes to promote buy-in and ownership of the scorecard at the subnational levels.
- In terms of training, the MoH needs to provide enhanced support supervision in the rollout of the scorecard and put in place a mechanism for improved accountability from implementing partners and district stakeholders. Beyond expanding the audience to be trained and ensuring consistency in course delivery, the MoH should provide for stakeholders to update their knowledge and to address skills gaps in scorecard use. This work can be achieved through continuous professional development programs, including the use of an online module to minimize costs and create greater flexibility. The development of the RMNCAH Sharpened Plan II 2022/23–2027/28 presents an opportunity to update the scorecard training and modules. The supply and availability of training and operational resources—that is, user manuals (hard or soft copies), internet connectivity, installation of software applications, and technical support—will be integral to ensuring that training translates into practice.
- Given the complementarity among the scorecard initiative, the RBF program (in the URMCHIP), and innovative RMNCAH pilots funded through PHC funds, the MoH should explore options for integrating these programs with a view toward minimizing data collection requirements for facility and district stakeholders as well as for improving efficiency. The integration of systems can be done under the broad framework of performance-driven service delivery at the facility level, with staff appropriately trained on the various tools and their contribution to service delivery outcomes.

Program implementers at the district and health facility levels

Considering that performance review meetings remain the main forum through which scorecard reports are shared, health facilities, districts, and health facility managers need to do the following:

- Put in place short-term arrangements that would enable those in charge of MCH services to attend these meetings. Participation in the meetings is critical to promoting greater awareness, appreciation, use, and adoption of the scorecard at the health facility level.

- Popularize the scorecard among all the stakeholders to increase its adoption, utilization, and institutionalization at the local government level. Part of this work lies in clearly articulating the value proposition of the scorecard, so that it is understood as a tool that provides a unique and important perspective.
- Link RMNCAH Scorecard use with ongoing performance-based financing schemes so that those who use them are tracked and rewarded. This linkage would encourage health facility managers and service providers to periodically assess and address gaps in delivery of RMNCAH service in the facilities and their catchment areas.

REFERENCES

- Balanced Scorecard Institute. 2020. "What Is a Balanced Scorecard?" <https://balancedscorecard.org/bsc-basics-overview/>.
- Clar, C., S. Campbell, L. Davidson, and W. Graham. 2011. *Systemic Review: What Are the Effects of Interventions to Improve the Uptake of Evidence from Health Research into Policy in Low and Middle-Income Countries?* London: Department for International Development. <https://www.gov.uk/research-for-development-outputs/systematic-review-what-are-the-effects-of-interventions-to-improve-the-uptake-of-evidence-from-health-research-into-policy-in-low-and-middle-income-countries>.
- Edward, A., B. Kumar, F. Kakar, A. S. Salehi, G. Burnham, and D. H. Peters. 2011. "Configuring Balanced Scorecards for Measuring Health System Performance: Evidence from 5 Years' Evaluation in Afghanistan." *PLOS Medicine* 8 (7). doi:10.1371/journal.pmed.1001066.
- Every Woman Every Child. 2016. *The Global Strategy for Women's, Children's and Adolescents' Health (2016–2030)*. [https://pmnch.who.int/resources/publications/m/item/global-strategy-for-women-s-children-s-and-adolescents-health-\(2016-2030\)](https://pmnch.who.int/resources/publications/m/item/global-strategy-for-women-s-children-s-and-adolescents-health-(2016-2030)).
- H6 Joint Programme. 2015. *H6 Annual Report*. https://www.unfpa.org/sites/default/files/pub-pdf/UN_H6_Annual_Report.pdf.
- INASP. 2012. *What Is the Evidence on Evidence-Informed Policy Making?* London: INASP. https://www.inasp.info/sites/default/files/2018-04/what_is_the_evidence_on_eipm.pdf?
- MEASURE Evaluation. 2018. *Barriers to the Use of Health Data in Low-and Middle Income Countries: A Review of Literature*. Working paper. Chapel Hill, NC: MEASURE Evaluation. <https://www.measureevaluation.org/resources/publications/wp-18-211.html>.
- MoH (Ministry of Health). 2016. *Investment Case for Reproductive, Maternal, Newborn, Child and Adolescent Health Sharpened Plan for Uganda 2016/17–2019/20*. Kampala: MoH. <https://www.health.go.ug/cause/reproductive-maternal-newborn-child-and-adolescent-sharpened-plan-for-uganda-2016-17-2019-20/>.
- MoH (Ministry of Health). 2017. *National Health Facility Master List: A Complete List of All Health Facilities in Uganda*. Kampala: MoH.
- MOH (Ministry of Health). 2022. *Reproductive, Maternal, Newborn, Child and Adolescent and Healthy Aging Sharpened Plan for Uganda 2022/23–2027/28*. Kampala: MoH. https://www.globalfinancingfacility.org/sites/gff_new/files/Uganda-GFF-Investment-Case-2022-2027.pdf.
- NPA (National Planning Authority). 2020. *Third National Development Plan (NDP III) 2020/21–2024/25*. Kampala: NPA. http://www.npa.go.ug/wp-content/uploads/2020/08/NDPIII-Finale_Compressed.pdf.
- Rogers, E. M. 2003. *Diffusion of Innovations*. 5th ed. New York: Free Press.
- Sahin, I. 2006. "Detailed Review of Rogers' Diffusion of Innovations Theory and Educational Technology-Related Studies Based on Rogers' Theory." *Turkish Online Journal of Educational Technology* 5 (2): 14–23. <http://tojet.net/articles/v5i2/523.pdf>.

- UNICEF. 2017. "Case Study–UNICEF Harnesses Use of Near Real-Time Data to Support Maternal, Newborn and Child Health in Eastern and Southern Africa." <https://www.unicef.org/esa/media/2076/file/UNICEF-ESA-2017-PMR-Data-Use-Case-Study.pdf>
- WHO (World Health Organization). 2019. "Maternal Mortality Evidence Brief" <https://iris.who.int/bitstream/handle/10665/329886/WHO-RHR-19.20-eng.pdf>.
- Zelman, W. N., G. H. Pink, and C. B. Matthias. 2003. "Use of the Balanced Scorecard in Health Care." *Journal of Health Care Finance* 29 (4): 1–16.

V Leadership and governance

11

Factors Affecting the Functioning of District- and Community-Level Structures for Governance and Management of RMNCAH Services in Uganda

HIZAAMU RAMADHAN AND FLAVIA NAKAYIMA MIIRO

EXECUTIVE SUMMARY

Despite ongoing investment to strengthen the health systems in Uganda, there is limited scientific evidence on the factors that enable or hinder the health sector's governance and management structures in the delivery of reproductive, maternal, newborn, child, and adolescent health (RMNCAH) services at the district and community levels. However, such evidence is needed to develop and implement appropriate management interventions for better RMNCAH outcomes.

Study objectives

The objectives of this study were as follows:

- Identify the current governance and management structure of Uganda's health system;
- Assess the formation, membership, competencies, and functioning of the governance and management structures at the district and community levels;
- Determine the factors that enable and inhibit functioning of these structures from an RMNCAH perspective;
- Examine stakeholder perspectives regarding the composition and functioning of health governance and management structures in the context of RMNCAH at the district and community levels; and
- Suggest ways of strengthening the governance and management of RMNCAH services at the district and community levels.

Methodology

This cross-sectional study used literature reviews, key informant interviews (KIIs), and focus group discussions (FGDs) to collect data simultaneously from relevant documents and health services managers, providers, and users of RMNCAH services in 10 districts: Adjumani, Bugiri, Bushenyi, Kalangala,

Kampala Capital City Authority (KCCA), Kiryandongo, Mbale, Moroto, Mukono, and Rukungiri. Data were collected from 70 key informants, including 2 RMNCAH program managers in the Ministry of Health (MoH), 38 members of District Health Teams (DHTs), 20 managers of health facilities, 7 district personnel officers, 1 hospital human resources manager, 1 Health Management Information System officer, and 1 senior health educator. In addition, 160 members of the Health Unit Management Committees (HUMCs) provided information through 28 FGD sessions, with each involving 5–6 participants.

Key findings

Key findings include those for the presence and functioning of RMNCAH governance and management structures and the factors influencing the functioning of these structures.

Presence and functioning of RMNCAH governance and management structures

- All districts involved in the study had functioning health sector governance and management structures, and their functioning was encouraged by Uganda's results-based financing (RBF) scheme, which was a precondition for admittance. The structures were established in accordance with policy guidelines.
- The composition of the governance and management structures in some districts was politically influenced, so their performance largely depended on the political leaders at various levels of the health system. The functioning of the structures was poorer in the districts that reported excessive political influence during their establishment.
- Additionally, capacity building was not harmonized with the responsibilities of the structures, namely, practicing oversight and monitoring of the districts' health sector activities.

Factors influencing the functioning of these structures

- The management and leadership capacity-building approaches used among the DHTs and District Health Management Teams (DHMTs) were not streamlined to steward the delivery of RMNCAH services.
- Guidelines were lacking for the induction of health sector managers into governance and management of the health care delivery system upon entry into the health services.
- No standard module existed for on-the-job training through coaching or mentorships, nor did courses on governance and management competence development for health sector managers.
- There was no systematic capacity building for health personnel in RMNCAH governance and management in the decentralized system, no legal or regulatory frameworks to define their mandates and roles, and no linkages with other decentralized governance and management structures.
- Supervision of the health management teams was inadequate, and there was no work-based managerial and leadership competency framework to use to prioritize their RMNCAH service delivery needs. This issue constrained the streamlining of relationships between governance and management structures within the district local governments (DLGs) in a bid to minimize conflicts.

- Awareness of the Public Service Standing Orders (government instruments that detail the management, term, and conditions of public services) among lower-level managers was limited, resulting in inappropriate delegation processes and affecting the delivery of RMNCAH services.
- The composition of the governance and management structures was insufficient to facilitate the effective execution of their oversight roles.
- Governance and management performance indicators were better in the districts where planning, budgeting, and service delivery monitoring meetings were conducted regularly.

Recommendations

Recommendations include those addressing the factors hindering the delivery of RMNCAH services and those promoting the factors enabling service delivery.

Address factors hindering the delivery of RMNCAH services

To ensure that skills and competence development programs are coordinated across the different districts' health care delivery levels, the MoH, in partnership with the Ministry of Local Government (MoLG), should do the following in the short term:

- Assess and document the skills and competence gaps in governance structures, managers, and health workers.
- Simplify the Public Service Standing Orders and disseminate them to health sector managers and workers at all levels of the health care delivery structures to enhance understanding of their rights and responsibilities.
- Put in place standard guidelines for the induction of newly appointed and acting managers in the health system, and incorporate them into the orientation and deployment process for health system managers in all DLGs.
- Develop simplified capacity-building strategies and conduct purpose-driven supervision for HUMCs in the governance and management of health care services.

Furthermore, the MoH and the MoLG should do the following in the long term:

- Establish a team of master coaches and mentors at the Regional Referral Hospitals (RRHs), comprising DHTs, DHMTs, and retired professionals, and train them so that they can provide routine supervision and on-the-job mentoring to the district- and lower-level health sector governance and management structures.
- Lobby for increased allocation of funding from government and development partners toward capacity building for management and governance teams concerning their roles and responsibilities as stipulated in guidelines, and facilitate competence development training for managers at the district and lower levels.
- Support salary increments for health workers who attain higher qualifications during the first three years after training to enable DLGs to prepare for their absorption.
- Revise the HUMC guidelines to (a) include representatives of community-based organizations and nongovernmental organizations (NGOs) and patient groups on the governance structures, as they can play a crucial role in mobilizing and linking communities to RMNCAH services, and (b) mitigate the

recurrent political interference in the selection of members for the different governance structures by clearly describing the members' minimum educational qualifications and relevant working experience in the public or health sector, vetting or interviewing all nominated persons, and sensitizing the selected persons to their roles.

- Explore the use of information and communication technology solutions, such as smartphone-based applications, to conduct regular and cost-effective governance and management meetings; provide information to stakeholders, especially communities, on the available services; and promote referrals for RMNCAH services, among other solutions.
- Link the functions of the governance and management structures to the ongoing performance-based schemes, and ensure their accountability to the community, local governments, and central government.

Promote factors enabling the delivery of RMNCAH services

Given that DHTs shoulder the greatest responsibility for delivering health care services at the community level, the DLGs in partnership with the MoH and the MoLG should pursue the following in the short term:

- Support the DHTs to create their own leadership and management courses to provide training and supervision to health facility managers and leaders at the community level at minimal cost.
- Review the supervision process with a view toward transforming it from a ritualized to an accountability-driven practice, and ensure that managers are capable of providing on-the-job support in health system governance and management to managers of the lower-level health care delivery facilities.

Furthermore, the MoH and the MoLG should pursue the following in the long term:

- Support District Executive Committees (DECs) to put in place performance-monitoring systems for the district- and lower-level health governance structures, build their capacity to help address weaknesses in their oversight roles, and enhance their accountability.
- Review the organizational structures for health facilities and DHTs to provide adequate numbers of required staff and specify the job descriptions and competencies for managers at various levels for effective leadership and management.
- Create a standardized governance and management competency development framework with performance indicators for districts to design capacity-building plans.
- Address in the revised guidelines the challenges of political patronage and the need for supervision of district leadership by the MoH and the MoLG.

INTRODUCTION

According to the World Health Organization (WHO), health system governance and management are important for ensuring the effective delivery of health services and for improving health outcomes (WHO 2007c). The elements of a functional health system include supportive policies and guidelines and effective governance and management underpinned by adequate supervision and accountability in the delivery of health services (WHO 2007b). Rockers and

Bärnighausen (2013) have noted that governance and management are connecting fabric that binds the six WHO health system building blocks: (a) service delivery, (b) health workforce, (c) health information systems, (d) access to essential medicine, (e) financing, and (f) leadership or governance.

The leadership function is executed by administrators at the different levels of a health system, and their competencies determine the quality of health services delivered, which in the long run can impact health outcomes, including those for RMNCAH. Strong health governance and management systems require a sufficient number of competent managers, an appropriate management support system, and an enabling work environment (WHO 2007a).

The health system in Uganda comprises all health facilities under the MoH, the Ministry of Defense and Veteran Affairs (MoDVA), the Ministry of Education and Sports (MoES), and the Ministry of Internal Affairs (MIA; Uganda Police Force and Uganda Prison Services); local governments; and civil society, faith-based, and private organizations. The system is overseen by the MoH and governed by the respective local governments and civil society organizations (CSOs). Currently, there are 6,937 health facilities (public, community, private for-profit [PFP], and private not-for-profit [PNFP]) in the country. Of these, 3,133 (45.2 percent) are government owned, 1,002 (14.4 percent) are PNFP, 2,795 (40.3 percent) are PFP, and 7 (0.1 percent) are community owned (MoH 2018c). Their governance and management structures are attached to the respective government and civil society, faith-based, or private organizations that operationalize the health system. Also, decentralized mechanisms exist in the respective health facilities, including all national referral and specialized health services centers (such as Butabika Hospital, Mulago Hospital, the National Cancer Institute, and the Uganda Heart Institute), RRHs, district General Hospitals (GHs), and Health Centers (HCs) from the village level to the county level (HC Is–HC IVs) (MoH 2015).

This study focused on the governance and management structures at the district and community levels of the health system in Uganda, considered management to be a function of health care system managers, and considered governance to be a function of political and community leadership (Bevir 2013; Mukundane et al. 2016; Scholz, Ngoli, and Flessa 2015). *Governance* is defined as the practice of managing or providing leadership in organizations or other entities in accordance with the established regulatory instruments, norms, actions, and rules that regulate and hold stakeholders accountable (Becht, Bolton, and Röell 2002; Bevir 2013; Hufty 2011). *Leadership* is defined as the ability of the individual to influence, inspire, or guide others and the entire organization toward the realization of a common cause (Chin 2015; Western 2019). Examples of governance structures in the health care delivery system include the DECs, hospital boards, and HUMCs (MoH 2015). *Management* is defined as a process of planning; decision-making; organizing; motivating; and controlling identification, deployment, use, and accountability of resources in accordance with the policies, structures, procedures, values, and objectives of the entity (Pryor and Guthrie 2010; Wren, Bedeian, and Breeze 2002). Examples of management structures in the health care delivery system include DHTs, DHMTs, and boards and management committees for health facilities at various levels (MoH 2015).

Global and regional governance and management context

Globally, there has been sustained investment in health system strengthening, including governance and management, as a way of ensuring effective delivery of health services and improving health outcomes (WHO 2007b). Despite

this investment in low-income countries, governance and management of health care delivery systems have remained weak, and this weakness has resulted in poor health outcomes (Darmstadt et al. 2009; Hofmeyr et al. 2009; Walley et al. 2008). Weak health care delivery systems and poor health outcomes are attributed to poor governance and management, owing to both the lack of requisite technical capacities and resources (Tetui et al. 2016) and to the fact that health managers, especially in the public system, are either medical officers or nurses with no pre-service training or in-service experience in health system management. Most of these managers must take on health system management functions as additional, often burdensome responsibilities (Prashanth et al. 2012).

Furthermore, qualified health managers are in short supply at all health facility levels, and most are concentrated in urban areas and in the private health sector (van Rensburg 2014). The decentralized health management structures in low-income countries are weak, and the managers and community representatives appointed to serve on them lack the necessary administrative skills to effectively manage the system at the district and lower levels (Mangham and Hanson 2010; Prashanth et al. 2012; Prashanth, Marchal, and Criel 2013; Rockers and Bärnighausen 2013).

A review of relevant literature found that all countries in the East African community have a limited number of health system managers who are competent in the management of health services, have high levels of attrition, experience the migration of health system managers and workers to middle- and high-income countries due to low remuneration (Tetui et al. 2016), and have very poor RMNCAH indicators. For instance, as of 2016, the maternal mortality ratio per 100,000 live births, which is one of the indicators for assessing health sector performance in RMNCAH services, was 262 in Kenya, 320 in Rwanda, 336 in Uganda, 556 in Tanzania, 712 in Burundi, and 789 in South Sudan (African Union 2016).

To address the previously mentioned governance and management challenges and poor RMNCAH outcomes, several low-income countries, including Uganda, have been training existing health system managers and personnel in health system management. These undertakings have yielded varying degrees of success (Powell and Yalcin 2010; Prashanth et al. 2012).

Key initiatives and knowledge gaps

Uganda's health system was one of the best in the Sub-Saharan Africa region in the 1960s, with well-equipped and well-staffed hospitals and a set of connected health units that offered high-quality health services to patients in and outside the country (Mukasa 2012). However, political instability in the 1970s and 1980s weakened the health governance and management structures, which harmed health care delivery. The government of Uganda (GoU) has since implemented several health sector reforms to improve scores on health indexes. Notable among these reforms was the adoption in 2001 of the Sector-Wide Approach, which aimed at consolidating health financing, abolishing user fees in all public health facilities to enable unlimited access to services, and creating more health subdistricts to provide some specialized services close to the communities and improve governance and management of the health care delivery system (Jeppsson 2002). These policy reforms did result in the provision of some specialized RMNCAH services closer to the communities and improved access to health services.

Later, new challenges emerged due to rapid population growth, at a rate of 3.4 percent per year, and limited financial and human resources for health, which worsened the health worker-to-patient ratio. In the mid-1990s, the government began to decentralize health services, along with a broader devolution of all public administration and the creation of more districts. The Local Government Act of 1997 made districts and subdistricts responsible for the management and delivery of health services at the lower levels. The ever-increasing number of districts resulted in a fragmented health system and human resources challenges, such as the appointment of health workers without formal management training or experience to management positions in the health care delivery systems of some of the newly created districts, thus contributing to poor health indicators (Mukasa 2012).

By 2016, there were 23 neonatal deaths per 1,000 live births, 54 infant deaths per 1,000 live births, 64 child deaths per 1,000 live births, 69 deaths under age five per 1,000 live births, and about 1 in 4 adolescents reporting teenage pregnancy (MoH 2016). In 2017, poor RMNCAH conditions were the highest cause of disability-adjusted life years in Uganda (MoH 2018a). Between 2016 and 2020, however, health facility deliveries rose from 58 percent to 63.3 percent, and HC IVs that offered comprehensive emergency obstetric care increased from 44.6 percent to 51 percent (MoH 2019a). The suboptimal performance on these RMNCAH indicators was attributed to the ineffective governance and management of health care systems, particularly at the decentralized levels (Darmstadt et al. 2009; Hofmeyr et al. 2009; MoH 2019a).

In response, the GoU, with support from development partners, adopted several strategies to boost management capacity in the health care system. Because districts are at different levels of development, they experience varied governance and management challenges that adversely affect the delivery of services. Therefore, in 2013 the MoH developed and rolled out guidelines for establishing health system governance structures to oversee service delivery and management structures to manage service delivery at the district and lower levels (MoH 2013). Given that stakeholder involvement in the governance and management of the delivery of health care services is critical to shaping community perceptions about the nature of services at any given level of the health system and to ensuring good health service delivery (WHO 2007b), the guidelines emphasized the active involvement of stakeholders in the governance and management structures at the district and community levels. The key stakeholders recommended for involvement in these structures included health care service users, political leaders, development partners, and CSOs (MoH 2015).

In addition to the countrywide rollout of the guidelines for health system governance structures in 2013, the government through the MoH in 2015 developed and launched the RMNCAH Sharpened Plan for the period 2016/17–2019/20 (MoH 2016). This plan prioritized strengthening health systems management at the district and lower levels of the health care delivery system as one of the intervention areas for accelerating and improving RMNCAH service delivery outcomes. To implement the Sharpened Plan, the government, with support from the Global Financing Facility, Sweden, and the World Bank, launched the Uganda Reproductive, Maternal, and Child Health Services Improvement Project (URMCHIP), which aimed to (a) improve the use of essential health services, with a focus on RMNCAH services in target districts, and (b) scale up birth and death registration services. The project also prioritizes operational research to generate specific evidence for strengthening

stewardship and management structures and improving RMNCAH service delivery and outcomes.

Existence of health care governance and management structures

A review of relevant literature found that no research has examined the existence and functioning of the health system governance and management structures at the different levels of the health care delivery system in Uganda. The Health Sector Development Plan (2015) indicated that most of the health care delivery systems had governance structures that comprised representatives of the technical, political, and community leaderships as well as management structures that consisted of the technical officers prescribed in the guidelines. It also showed that governance and management structures overlapped in their membership and functions and that leadership plays a critical role in streamlining their establishment and functions (MoH 2015). However, the plan did not specify the processes followed or the types of stakeholders considered in establishing these structures.

Management training and development

Studies have shown that on-the-job training and growth are crucial for creating and retaining health system managers who are competent in leadership and management (Bonenberger et al. 2016; Dieleman, Gerretsen, and van der Wilt 2009; Hooijberg and Quinn 1992; Rockers and Bärnighausen 2013; Tetui et al. 2016; WHO 2007a). This work includes providing opportunities for ongoing education to acquire higher academic qualifications; short-term in-service training courses, mentoring, or coaching to acquire skills relevant to the position; supervision to ensure adherence to the prescribed standards; and work-based problem solving (Powell and Yalcin 2010; WHO 2007a, 2007b). These capacity-building interventions can help health sector managers practice what they learn in a real work environment, which is beneficial as a pathway toward lifelong learning and realizing organizational goals (Powell and Yalcin 2010; Wall 2017; WHO 2007c).

The *Annual Health Sector Performance Report* (MoH 2017, 2018a, 2019a) showed that the MoH, with support from development partners, had implemented different training programs for health sector managers. However, a review of these and other relevant documents provided scant information about the content and approach of these management training and development programs, including the extent to which they affected the competencies of the trained managers and quality of services in the health care delivery system.

Competence of health sector managers

The proper functioning of health system management structures requires a sufficient number and constant supply of competent managers as well as strategies for training and retaining good managers at all health system levels. A health manager's longevity in their position is also critical in advancing their management competencies and health facilities' performance in planning, budgeting, and service delivery (Tetui et al. 2016). Studies in Uganda indicate that most health managers at the district and community levels are either doctors or nurses who did not receive lessons in health systems management during basic clinical training; they perform their professional duties alongside their management functions. Therefore, having a sufficient number of managers may not necessarily result in improved health service delivery (Rockers

and Bärnighausen 2013; Tetui et al. 2016; West 2001; WHO 2007c). In addition, whereas some universities in Uganda have introduced training programs in health system management for students and in-service managers (Batalden et al. 2002), these programs are not aligned with the expected roles and competencies of managers (Calhoun et al. 2002; Westera 2001). However, the studies on Uganda did not examine the adequacy of health system managers who are competent in health system management and its contribution to the delivery of RMNCAH services at the district and lower levels.

Existence of supportive policies and resources

According to Donev, Kovacic, and Laaser (2013), the functionality of governance and management structures is influenced by the sociocultural, economic, political, and other circumstances at different levels of the health system. The circumstances may be internal or external to these structures or both. Studies in Uganda and elsewhere have shown that for these structures and the health care delivery system to function well they need adequate funding; a sufficient number and constant supply of competent managers; strategies for mentoring and supervising potential managers as well as training and retaining good managers; and longevity in management positions (Bonenberger et al. 2016; Dieleman, Gerretsen, and van der Wilt 2009; Hooijberg and Quinn 1992; Powell and Yalcin 2010; Rockers and Bärnighausen 2013; Tetui et al. 2016; Wall 2017; West 2001; WHO 2007a, 2007b).

Furthermore, the effective functioning of the structures at the various levels of the health care delivery system requires the availability of supportive policies, legislation, and norms for the structures; the provision of incentives to active managers and members; and the adoption of leadership styles that help define relationships among all who participate in these structures, including health workers and the citizenry. The defined relationships of concern here include the delegation of authority, inclusive management decision-making, and accountability to stakeholders, which all facilitate governance and management (Steffl 2008). Conversely, factors that hinder the proper functioning of the governance and management structures include inadequate planning and funding for their functions, inappropriate staffing, lack of training or experience in health system management, staff concurrently working as health system managers and as service providers, low pay for and attrition of qualified health managers, appointment of inappropriate stakeholders to the governance and management structures, inadequate supervision of the structures, remote location of sites in the health care delivery systems, inefficient health management practices, and narrow decision-making space for health services providers (Bonenberger et al. 2016; Mangham and Hanson 2010; Prashanth et al. 2012; Rockers and Bärnighausen 2013; van Rensburg 2014).

Studies in Uganda have mainly explored factors that are *external* to the health system's governance and management structures, such as the availability of attendant policies and structures. They have paid little attention to factors *within* these structures, such as the processes of appointing members, competencies of those appointed, issues discussed in meetings, and the leadership styles or management behavior of managers. They also have not explored the functionality factors of these structures from the perspective of health services delivery in general. Hence, there is scant information on the internal and external factors that facilitate or hinder the functionality of these structures from the perspective of RMNCAH service delivery at the decentralized and community levels in Uganda.

Study rationale

The foregoing review indicates a growing body of research into the governance and management of the health care delivery system. However, the majority of the obtainable studies were conducted outside Uganda and mostly focused on factors that influence the delivery of health services as a whole (Cometto, Buchan, and Dussault 2020; Egger and Ollier 2007) and how to develop competent health managers (Tetui et al. 2016). A deeper review of this literature showed that extant research has generated specific evidence on how health governance and management structures function, especially in Uganda; the manner in which they were established; how they function; their strengths and weaknesses as well as opportunities and challenges; and the conditions that influence their functioning from the perspective of RMNCAH service delivery in district- and lower-level health facilities.

These knowledge gaps beget eight key questions that merit research: (a) What is the current governance and management structure of Uganda's health system? (b) How were the health system governance and management structures at the district and community levels formed? (c) What stakeholders make up these structures? (d) What are the competencies of the members of these structures? (e) How do these structures operate at the district and community levels? (f) What factors enable and inhibit proper functioning of these structures in the delivery of RMNCAH services? (g) What are the views of stakeholders regarding the constitution, composition, and functioning of these structures from the standpoint of RMNCAH? (h) What actions are required to improve the functioning of these structures from the standpoint of RMNCAH?

Objectives of the study

This study aimed to generate evidence on the factors that enable or hinder the proper functioning of health sector governance and management structures in the delivery of RMNCAH services at the district and community levels in Uganda. The utility of this evidence is to enable stakeholders to use it to devise strategies for improving the governance and management of the health system and, ultimately, to facilitate attainment of the goals of the RMNCAH Sharpened Plan, Health Sector Development Plan (2020), National Development Plan (2020), Sustainable Development Goals (UN 2018), and Uganda Vision 2040.

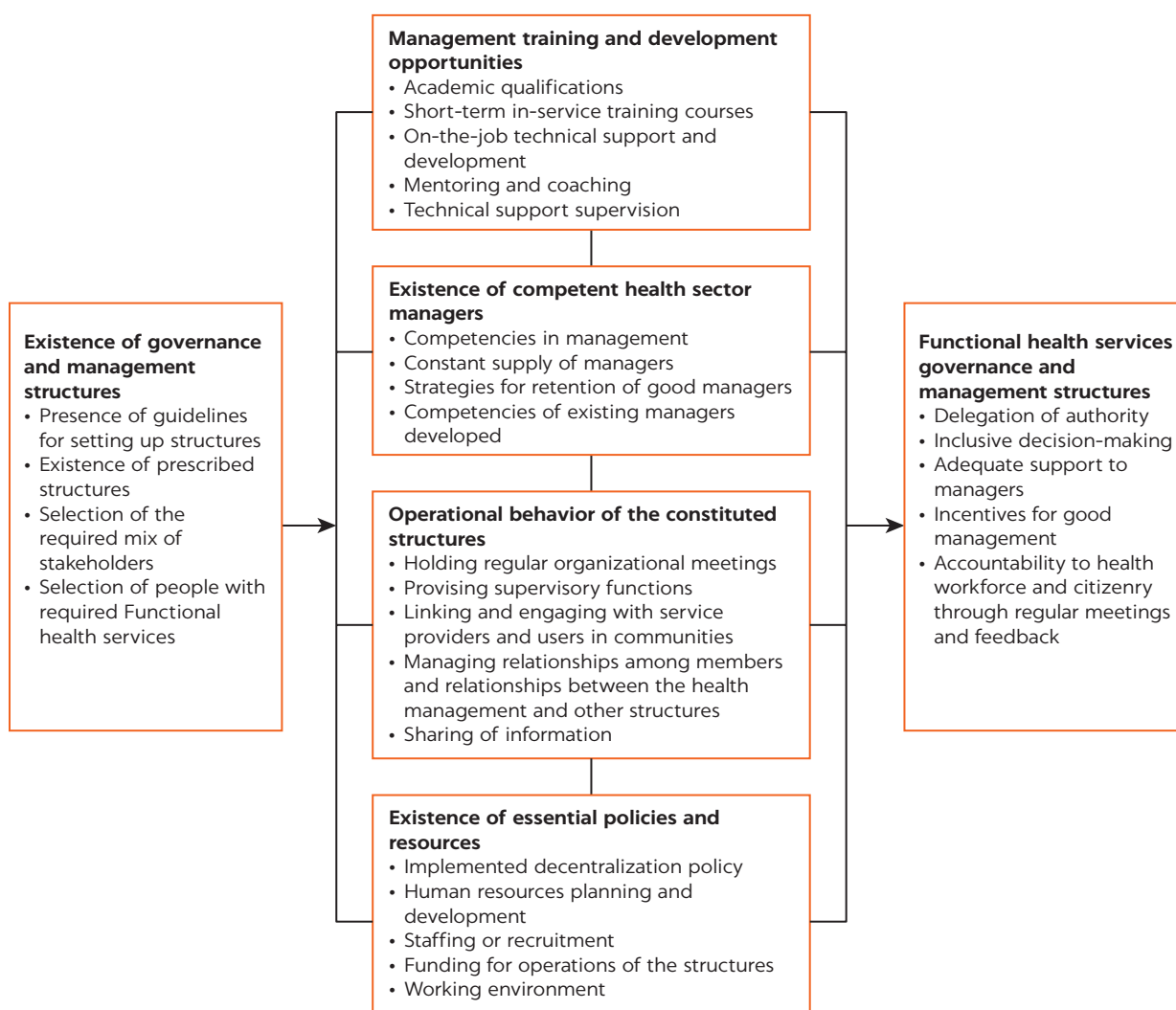
The specific study objectives were as follows:

- Identify the current governance and management structure of Uganda's health system.
- Assess the formation, membership, competencies, and functioning of the governance and management structures at the district and community levels.
- Determine which factors enable and which inhibit the functioning of these structures from the perspective of RMNCAH.
- Examine stakeholder perspectives regarding the composition and functioning of health governance and management structures in the context of RMNCAH at the district and community levels.
- Suggest ways to strengthen the governance and management of RMNCAH services at the district and community levels.

Conceptual framework

This study was based on the Egger and Ollier (2007) conceptual framework for strengthening governance and management, which was modified to six key conditions (figure 11.1) to adequately examine the research objectives: (a) management training and development opportunities, (b) the existence of governance and management structures, (c) the existence of competent health sector managers, (d) the operational behavior of the constituted structures, (e) the existence of essential policies and resources, and (f) functional health services governance and management structures. The framework asserts that the good governance and management of health systems—which is assessed in terms of delegation of authority, inclusive decision-making, adequate support to managers, incentives for good management, and accountability to users and workers through regular meetings and feedback—depends on five interconnected conditions:

FIGURE 11.1
Conceptual framework for strengthening governance and management



Source: Adapted from Egger and Ollier 2007.

- Existence of *governance and management structures*. This is assessed by the presence of guidelines for establishing health sector governance of management structures, existence of all prescribed structures, selection of the required mix of stakeholders, and appointment of stakeholders with the required competencies.
- Existence of *training and development opportunities* in governance and management for health system managers. This is assessed based on academic qualifications, job-related training, or mentorship and supervision acquired.
- Existence of *competent managers* in health system management. This is assessed based on the presence of managers with competencies in management and on strategies for building the competencies of existing managers and retaining good managers.
- *Operational behavior*. This is assessed based on the frequency of organizational meetings and supervisory engagements with service facilities, providers, and users.
- Existence of essential *policies and other resources* for implementing management functions. This is assessed based on the availability of policies, legislation, and standards for inclusive management decision-making, human resources planning, recruitment and development of relevant managers, and funding of operations for the governance and management structures.

METHODOLOGY

This section describes the study's research design, sites, participants, sampling strategy, methods, data collection instruments and procedures, data quality assurance and analysis, and limitations.

Study design

This cross-sectional qualitative study collected data simultaneously from selected documents, as well as from managers, providers, and users of RMNCAH services in 20 districts in Uganda.

Study sites

This study was conducted in 10 districts of Uganda, namely, Adjumani, Bugiri, Bushenyi, Kalangala, Kiryandongo, Mbale, Moroto, Mukono, Rukungiri, and KCCA. The 9 districts were included because they (a) had a high or low health services performance ranking on the MoH District League Table 2017–18 (MoH 2018a); (b) had either predominantly rural or urban characteristics; (c) were either at an early or an advanced stage of implementing RBF for health services; (d) had attained the status of the district before or after enactment of the 1995 Constitution; and (e) were situated in the Eastern, Western, Northern, or Central regions of Uganda. KCCA was included because it is the location for the headquarters of the MoH and National Referral Hospitals (NRHs) and stakeholders required for this study. Table 11.1 specifies the districts selected for each criterion. The district inclusion criteria helped to obtain information that was representative of the governance and management structures for RMNCAH services at the district and community levels in Uganda.

TABLE 11.1 Districts selected for the study, by inclusion criteria

NO.	INCLUSION CRITERIA	STATUS	DISTRICT	REGION
1.	Ranking on the MoH District League Table, 2017–18	Low	Moroto	Northern
		High	Adjumani	Northern
2.	Time of attaining district status	After 1995	Bugiri	Eastern
		Before 1995	Mbale	Eastern
3.	Stage of implementing RBF	Advanced	Bushenyi	Western
		Early	Rukungiri	Western
4.	District characteristics	Urban	Mukono	Central
		Rural (hard to reach)	Kalangala	Central
		Rural (easy to reach)	Kiryandongo	Western
5.	Location of the MoH, NRHs, and partners		Kampala	Central

Source: This table is original to this publication.

Note: MoH = Ministry of Health; NRHs = National Referral Hospitals; RBF = results-based financing.

Study population

The participants in this study included 2 officers from the MoH Reproductive Health Division; 1 World Bank staff member responsible for URMCHIP; 38 members of the DHTs and DHMTs, including the district health officers (DHOs); 20 health facility in-charges, including hospital directors, human resources managers, and members of hospital boards; and 144 members of the HUMCs. Approximately 53 percent of the research participants were selected from HC IIIs because they accounted for most of the facilities involved in this study. Additionally, most participants were male, because men occupy most of the positions in the governance and management structures of the health system.

Study districts' sampling approaches, sites, and participants

Purposive sampling was used to select the districts or sites and participants for this study. The 9 districts were selected based on their ranking on the MoH District League Table, 2017–18, which evaluates and grades the performance of districts based on an index of health services indicators; rural versus urban characteristics; RBF implementation stage; time of attaining district status; regional setting; and whether they were the location of MoH offices and National Referral Hospitals and stakeholders. Another consideration was ensuring the representation of 5 regions. Research participants were also purposively selected based on their level of knowledge and involvement in financing the health care delivery system, their roles in the governance and management of the system, and their civic and leadership roles in society.

Data for this study were collected through a review of 97 documents related to health system governance and management; 70 KIIs with RMNCAH program managers in the MoH; DHT members; managers of the sampled health facilities; and 28 FGD sessions (1 for each sampled HUMC), with each session comprising 5–6 members.

Literature review

Programs and scholarly literature were gathered and reviewed to understand existing data regarding the health system policy environment, financing, governance and management, human resources for health, and RMNCAH service

delivery in Uganda and outside Uganda, the latter to corroborate the data with the findings of this study. The program documents that were gathered and reviewed included the Local Government Acts of 1997 and 2015, the *Guidelines for Governance and Management Structures* (MoH 2013), the *Annual Health Sector Performance Reports* for 2016–20, the *Uganda Health System Assessment* for 2011, *Uganda Human Resources for the Health Strategic Plan 2005–2020* (MoH 2005), *Human Resources for Health Audit Report 2017/18* (MoH 2018b), the *Health Sector Development Plan* for 2016, the RMNCAH Sharpened Plan for 2016, and the *National Development Plan II* (2015). Other program documents and scholarly literature that were reviewed are provided in the reference list at the end of this chapter.

KIIs

KIIs were used to gather data related to policies, norms, leadership, and other resources for governance and management of the health system, such as the processes followed to create the structures, especially regarding the recruitment, deployment, appraisal, skills development, motivation, retention, transfer, and supervision of staff as well as the provision of logistics and financing for managerial functions.

FGDs

FGDs were used to obtain general information from members of HUMCs on the factors influencing the creation and functioning of the health governance and management structures at the facility level. Additionally, FGDs provided specific information on the appointment of HUMCs; their understanding of the expected roles, skills, and competencies in carrying out management functions; their involvement in health facility management; their participation in committee meetings; working relationships; actions on committee resolutions; recording of management practices; and monitoring of accountability practices regarding the citizenry. The specific methods used to address each research objective and question are summarized in table 11.2.

TABLE 11.2 Methods used to answer the research questions

NO.	STUDY OBJECTIVE	RESEARCH QUESTION	METHOD USED
1.	Identify the current governance and management structure of Uganda’s health system.	What is the current governance and management structure of Uganda’s health system?	
2.	To assess the membership, competencies, and functioning of the governance and management structures at the district and community levels	How were these health system structures formed? What types of stakeholders make up these structures? What are the competencies of the members of these structures? How do these structures operate at these levels?	KIIs, FGDs, and document reviews
3.	To determine factors that enable and inhibit functioning of governance and management structures from the perspective of RMNCAH	What factors enable or inhibit the proper functioning of these structures in the delivery of RMNCAH services?	KIIs, FGDs, and document reviews
4.	To examine stakeholder perspectives regarding governance and management structures in the context of RMNCAH at these levels	What are the views of stakeholders regarding the constitution, composition, and functioning of these structures from the standpoint of RMNCAH?	KIIs and FGDs
5.	To suggest ways of strengthening the governance and management of RMNCAH services at the district and community levels	What actions are required to improve the functioning of these structures from the standpoint of RMNCAH?	KIIs and FGDs

Source: This table is original to this publication.

Note: FGDs = focus group discussions; KIIs = key informant interviews; RMNCAH = reproductive, maternal, newborn, child, and adolescent health.

Data collection instruments

Data were collected using (a) an interview guide for key informants, including national health-related human resources managers, policy makers, and program managers; DHOs; maternal and child health (MCH) focal persons; and health facility managers, and (b) the FGD guide for HUMCs. These instruments were field pretested in the Wakiso and Mpigi districts and refined prior to actual field data collection.

The KII guide for district personnel officers comprised unstructured questions about the appointment of health facility managers; training and development of management in competencies for managers; provision of incentives to staff; and personnel management, including performance appraisals. The interview guide for DHOs, MCH focal persons, and health facility managers consisted of questions on their involvement in the district health governance and management structures; financing of structures; relationships among the structures and their members; the required number and turnover of health system managers; support given to managers, such as training and development of management competencies and funding and incentives for better management; measures and lines of health service accountability; information management and sharing; personnel performance appraisal; specific factors that enable or hinder the functioning of the structures; and suggestions for improving the structures' functioning at various levels.

For the HUMCs, the FGD guide included questions about how members were selected; adequacy in the number and turnover of members; involvement in functions of the committee; training and development of management competencies for members; support given for functions of the committee, such as the provision of incentives to members for better management; measures and lines of health services accountability; information management and sharing; specific factors that enable or hinder the functioning of the structures; and suggestions for improving the structures' functioning at various levels.

Data collection procedures

Initially, the investigators obtained scholarly online articles and policy and program reports from the websites of the MoH and other relevant ministries and development agencies and searched them for data related to health system governance and management based on the themes aligned with this study.

Afterward, the respective leadership and focal persons of the selected national agencies, districts, and facilities were notified in advance about the study's purpose, objectives, and scope to enable them to prepare. The names and telephone contacts for research participants were obtained with the assistance of research facilitators and assistants. A schedule for interviews and group discussions with the research participants chosen from each agency and district and facility was created, and each was contacted via telephone to discuss and agree on a suitable interview time. The investigators conducted one-on-one telephone interviews with each research participant selected from the development agencies and the national, regional, and district health system levels. Research assistants conducted one-on-one telephone interviews with health facility managers and group telephone discussions with members of the sampled HUMCs using a smartphone with teleconference capabilities.

The respective researchers initiated a telephone call with each selected research participant. After introducing themselves, they explained the

objectives, purpose, and ethical considerations of the study and sought the participants' verbal and written informed consent to take part and be recorded. One-on-one interviews were conducted in English for a period of 30–45 minutes; group discussions were conducted in either English or a widely spoken local language for a period of 60–90 minutes to obtain detailed information. At the end of each session, the research participant was thanked and compensated for the time and any inconvenience incurred during the study. A meeting was held with research assistants at the end of each data collection day to review the data, discuss challenges encountered, and decide how to address problem areas in subsequent data collection sessions. Finally, the audio-recorded data were transcribed, typed, and when necessary translated into English.

Data quality and integrity were ensured by recruiting research assistants with experience in conducting similar research and training them in virtual means of data collection, pretesting and revising data collection tools, monitoring the research assistants during the virtual interview sessions, holding daily virtual debriefing sessions with the district research teams, and playing back the audio-recorded data to ensure consistency with the transcribed and translated transcripts.

Data analysis

All data gathered through literature review, KIIs, and FGDs were typed and exported into the qualitative data management software NVivo to condense the voluminous data from diverse sources into manageable levels. The analysis report of data for each research question was generated, scrutinized, and coded based on its relevance to the research questions. This analysis was triangulated with the responses by a few selected research participants deemed sufficiently knowledgeable about the issues investigated to verify the trustworthiness of the information (Creswell and Plano Clark 2007). The transcripts were further peer-reviewed in a debriefing, and themes and subthemes were generated from the study objectives and built on during analysis, discussion, and report writing (Janesick 2015). Relevant quotes were identified and selected from the typed transcripts and cited verbatim in the relevant sections of the report to buttress the results.

Ethical considerations and assurance

Ethical clearance was received from the National HIV/AIDS Research Council's Institutional Review Board and the Uganda National Council for Science and Technology. The researchers explained to each participant the objectives, purpose, and ethical considerations of the study and sought verbal and written informed consent to participate and be recorded. Participants received copies of their recorded interview.

Study limitations

Because some eligible respondents lacked access to mobile telephones, they were unable to participate. Hence, this study might have missed some important information from these potential participants. Furthermore, the replacement of face-to-face data collection with virtual means due to the restrictions against travel and gatherings to prevent the spread of COVID-19 constrained extensive and deeper inquiry into some aspects of the research that required physical interaction with the research participants. This work included verifying facts, reviewing proceedings for meetings, and verifying competencies of members of the health system

governance and management structures at the district and community levels. In addition, the virtual data collection approaches generated some responses that were socially desirable, but the researchers were unable to confirm them through physical consultations. Although the integrity of the considerable amount of data collected through virtual means was ensured through triangulation with information from the available literature, the aforementioned challenges may have influenced the findings of this study.

FINDINGS

This section presents the study findings according to the objectives, key questions, and conceptual framework of the research. Initially, the research set out to examine management structures at the district and lower levels of the health care delivery system, but it later came to include governance structures due to the observed fusion of governance and management roles at the different levels of the system.

1. Current governance and management structures of Uganda's health system

Objective 1 of this study was to identify the current governance and management structures of Uganda's health system. This objective was examined based on one key question: *What is the current governance and management structure of Uganda's health system?*

Governance and management structures

The findings indicate that Uganda's health care delivery system comprises all health facilities under the MoH, the MoDVA, the MoES, the MIA, and the MoLG. The MoH is responsible for setting policy and oversight of the entire health care delivery system in the country, while the local governments and respective NGOs direct governance and management functions for lower levels of the health system. The health care delivery system consists of (a) national referral and specialized service facilities, which include the Butabika Hospital, Mulago Hospital, National Cancer Institute, and Uganda Heart Institute; (b) RRHs; and (c) district General Hospitals (GHs) as well as HC IVs, HC IIIs, HC IIs, and HC Is. At each health care delivery level, governance and management structures were created to receive and pass along political and technical supervision. Whereas governance structures helped provide policy guidance and supervision of health facility services, the management structures helped guide their internal management functions, such as planning, forecasting, organizing, commanding or directing, coordinating, and controlling resources.

2. Formation, membership, competency, and functioning of governance and management structures

Objective 2 of the study was to assess the formation, membership, competencies, and functioning of the governance and management structures at the district and community levels. This objective was examined using four key questions: (a) *How were the health system governance and management structures at the district and community levels formed?* (b) *What types of stakeholders make up these structures?* (c) *What are the competencies of the members of these structures?* And (d) *How do these structures operate at these levels?*

Formation of structures at the district and community levels

The formation of these health system governance and management structures, which was presided over by the speaker, was assessed based on the processes used to appoint members.

Appointment of members to governance structures. The DEC is the top-most governance structure for all public matters in a district, including the health system. The members of the committee were nominated by the chairperson of the Local Council V and approved by the District Local Government Council (DLGC). Other health system governance structures constituted through the DLGC include sectoral committees of the Council, particularly the Social Services Committee, which oversees the health sector. The members of this structure were also nominated and approved through the same procedure as the DEC and are, therefore, largely selected based on the political persuasion of the Local Council V chairperson and considerations of the DLGC rather than on the competencies of the nominees for the positions they hold.

For RRHs, the respective DEC nominated members to the hospital's board, and the MoH permanent secretary approved them. For DGHs, the DEC nominated board members, and the DLGC approved the nominations. For HCs at the various levels—county (HC IV), subcounty (HC III), and parish (HC II)—the district chief administrative officers appointed the HUMCs in consultation with the political leadership of the respective local governments.

These findings indicate that, in all cases, local political leadership influenced the nominations, even when the nominees lacked the necessary competencies to execute their designated roles. As one HC III manager said,

You know, at the [HUMC] level, the selection is politically motivated. Some of the [HUMC] members have low education levels where they cannot articulate points [and] the local council members as well. Someone comes for supervision but cannot write their findings in the book . . . so as to sit down with managers and discuss them.

Political interference in the formation of governance structures at these levels of the health care delivery system was common, because of the perception of the politicians that the health sector had a lot of resources from government and donors that they could use to enhance their political clout. Their interference in the formation of these structures not only hindered equitable prioritization and allocation of locally generated funding but also negatively affected the delivery of RMNCAH and other health services at the district and community levels.

Appointment of members to health system management structures. Concerning the formation of health system management structures, the District Service Commission is responsible for interviewing and appointing the technical personnel in the various departments of the district. However, the criteria under which some members were appointed depended in part on seniority or allegiance to their supervisors and not necessarily on their managerial skills.

In addition, because of the autonomous nature of the decentralized systems and the fact that local governments are overseen by the MoLG, the MoH has been constrained from directly supporting initiatives that facilitate the delivery of RMNCAH services, which are a responsibility of the DLGs, such as the creation and capacity building of health system governance and management structures and the recruitment and deployment of health workers. Consequently, the effectiveness of the committees in managing health services has been affected by

the level of knowledge the district political leaders and technical teams have to effectively conduct their oversight roles (Dickovick 2012; Lewis 2014).

Membership of the health system's governance and management structures

The membership of the health system governance structures was assessed based on the types of stakeholders who nominated each of them at the district and facility levels.

RRH level. All RRHs are located and operate within DLGs, although they are directly funded and supervised by the MoH. The RRHs have boards that consist of the hospital director and a diversity of stakeholders from the districts served by the hospital, namely, the chief administrative officer of the district where the RRH is located, a prominent public figure nominated by the host District Local Council who serves as the board's chairperson, the director of health services of the host district, the medical superintendent (who serves as the secretary), and the head of the nursing division (MoH 2003). The diversity of stakeholders on the RRH boards helped ensure equitable resource allocation and accountability of funding to various constituents, while supervision by the MoH helped ensure the sustainable appropriation of funding for all services offered in these hospitals.

District and local government levels. The topmost governance structure of the health system at the district level is the DEC. This committee consists of the DLGC chairperson, the DLGC secretary for social services, and other secretaries of the council. The secretary for social services chairs the district Social Services Committee, which oversees health services in the entire district and consists of political representatives from the elected DLGC and technical staff from line departments of the local government, including health; probation; and welfare, labor, youth, and gender, as per the Local Government Act of 1997.

District facility level. The boards of the district GHs consist of the medical superintendent and eminent persons from the public. HUMCs, consisting of technical staff, constitute the governance structures for the HC IVs, HC IIIs, and HC IIs. The governance structures of the PNF facilities consist of members of the facility's founding body. Managers of GHs and health facilities at lower levels are accountable to their respective DLGs.

Management. The topmost management structure for the health services at the district level is the DHT, which consists of the DHO and selected heads of departments in the local government who are variously assigned the title of assistant DHO (ADHO). The DHO is the head of the DHT and is directly responsible for planning, implementing, and monitoring health care service delivery in the district. Immediately below this structure is the expanded DHT—the DHMT. This team consists of all members of the DHT plus all heads of the health subdistricts who are managers of HC IVs and of public and private hospitals in the area. The DHO also heads the DHMT. The management structure below the DHMT is the Health Subdistrict Team, which consists of all managers of HC IIIs and HC IIs and is chaired by the subdistrict manager. At this level, a medical officer is responsible for managing service delivery and supervising other lower-level HCs (MoH 2013).

Community level. At the community level, the Village Health Teams (VHTs) oversee the functions of the HC Is. The VHT consists of volunteers in the community who are involved in social or civic work. The volunteers help mobilize and sensitize community members about health matters and identify persons

who are sick or have had complications in households, linking or referring them to higher-level health facilities.

Competencies of governance and management appointees

The competency of the members appointed to the health system governance and management structures was assessed based on the members' academic qualifications, ability to fulfill mandates stipulated in the *Guidelines for Governance and Management Structures* (MoH 2013), and access to training and development opportunities. Findings indicate that the MoH provided guidelines for formation of the health system governance and management structures, which stipulate the minimum qualifications and experience of the technical staff to be appointed to these structures as well as the competency appraisal standards for nominees.

Competencies for governance. According to the MoH guidelines, unlike the other members of governance structures, the community nominees are not required to have specific qualifications or competencies in governance of the health care delivery system. A review of the records of the Social Services Committees for DLGCs found that some committee members had low levels of education, which limited their ability to understand the health care delivery issues and to appropriate the required resources for programs. In addition, whereas some members of the HUMCs were made aware of aspects of health system governance during routine meetings with program managers and supervisors from the MoH and development agencies, no structured training and development opportunities were provided to them in this area.

Therefore, community appointees played a nominal role in the decision-making processes of the governance structures. Furthermore, whereas some committee members were made aware of aspects of health system governance during routine meetings with program managers and supervisors from the MoH and development agencies, there were no structured training and development opportunities in the governance of the health system for them, which was given to the boards or committees. Therefore, many committee members do not have the necessary competencies to effectively carry out their oversight roles.

Competencies for management. The competencies of members of the health management structures were assessed based on the presence of competent managers in the health care delivery system, career development programs for future managers, and strategies for the retention of good managers.

Competence challenges. Although the membership of governance structures at the district and facility levels is inclusive to allow diverse opinions in the execution of their oversight roles, some managers and members of the governance and management structures have managerial and leadership skills that are inadequate for harnessing ideas and effectively supervising and guiding health workers in the delivery of RMNCAH services.

Presence of competent managers

The health care delivery system has managers in all districts and health facilities in this study who were either physicians or nurses. In addition, some DHMTs undertook the following:

- Encouraged health staff to vie for higher managerial positions, which ensured a constant supply of managers;
- Encouraged existing managers to delegate responsibilities to subordinate staff as a way of mentoring and motivating them to take on managerial functions in case they went on leave or resigned;
- Initiated capacity-building interventions for lower-level managers to help them gain confidence and subsequently take on higher-level managerial positions;
- Retained good managers by providing them with incentives, such as promotions to higher-level health facilities and provision of rewards and career development opportunities for good performance;
- Supported some managers in attending higher education and returning to their positions; and
- Provided special allowances, accommodations, or means of transportation to those working in remote areas.

However, in general, it was observed that most of the health care system managers at the district and community levels did not receive training in health systems management either during their formal clinical education or in-service courses but were, nonetheless, assigned managerial functions in addition to their clinical work and without increases in salary. This issue negatively affected their performance.

Furthermore, despite the career development opportunities and other incentives, such as special allowances and accommodations provided to managers and service providers in hard-to-reach districts and health facilities, some of them resigned to take more lucrative jobs with other organizations. This has reduced the presence of competent health care system managers in some districts and health facilities.

Building the management competencies of existing managers

Building the management competencies of existing managers was assessed based on participation in short-term in-service training courses and on-the-job skills development through mentorship, supervision, and work-based problem-solving.

Training courses were provided to health sector managers at different levels of the system by either the MoH or development partners through workshops. However, these courses were ad hoc in nature and not guided by a needs appraisal of management skills or training modules for managers. The courses focused more on specific disease and program management and less on other managerial and leadership skills critical for the good management of RMNCAH services. The short-term courses did not adequately target and address the management competency gaps of the current managers of the health system. As one manager of an HC IV said,

Most of us pay for ourselves [for] school fees in [the] case [we] identify an additional managerial course . . . but to think that the facility or district will facilitate you to go and become a manager does not happen here.

No districts involved in the study either had a management competency training and development framework or dedicated funds to support managerial training. Hence, most of the managers of the health system at the district and lower levels obtained management skills from their workplaces “by doing.” The findings also show that whereas the RMNCAH Sharpened Plan prioritized

strengthening health governance and management structures through capacity building, most of the RMNCAH programs, such as URMCHIP, did not allocate funding for training courses in leadership and management of the health system for improved outcomes.

Moreover, some of the health workers supported earlier by the MoH and development partners to acquire additional academic qualifications were not absorbed by the District Service Commissions due to limited funds to pay for increasing their salaries, which led to a halt in support for further training in academic courses. Consequently, most of the current health system managers involved in this study attained additional academic qualifications through personal initiative after requesting a study leave without pay from their DLGs.

Supervision of health system managers

All sampled districts used supervision as a strategy for on-the-job capacity building for DHOs and lower-level health managers. However, in most cases, this supervision was more of a routine activity to account for funds provided, and capacity building was provided mainly on disease management. The supervision team did not identify gaps in managerial skills and competencies early on to establish baseline parameters and provide tailored technical support, which complicated their later measurement of changes in skills and competencies. Therefore, in general, there was no structured or well-coordinated technical support supervision aimed at improving the managerial competencies of health facility managers for the delivery of RMNCAH services.

Additionally, there was a general view that some members of the supervision team were not sufficiently competent to transfer managerial knowledge and skills to other managers. In some situations, supervision was perceived as a fault-finding mission, especially when conducted by inexperienced managers, and thus made subordinates feel unmotivated.

Mentorship and coaching

Three of the ten districts assessed mentoring and coaching, which depended on the initiative of DHOs. In those cases, a DHO inducted a newly appointed ADHO and sent them to neighboring district counterparts for a mentoring period of two weeks to one month. However, it was unclear whether the mentors received any orientation or training in mentoring skills.

Work-based problem-solving

One strategy for work-based problem-solving is to encourage managers to be innovative. Through the RBF program and primary health care (PHC) funds, health care system managers set targets in collaboration with the DHTs. Then managers were required to design innovative forms of service delivery to meet those targets. This approach helped motivate some managers to innovate around RMNCAH service delivery bottlenecks to meet their targets, with support from the DHT and DHMT. One DHO said,

Managers are left on their own so that they can think. We have “hands off, eyes on” as our principle. We give all opportunities for these managers like [those at] Health Center III, we set targets for these managers, and we provide them with the resources. For example, PHC funds we transfer to their accounts, now [we] let them do the activities that they planned for, and we go quarterly to give technical support supervision.

Box 11.1**An RBF success story**

A Health Center II in Mbale was operating a maternal and child health project under the results-based financing program. The facility team was offered an opportunity to receive 40 percent of the income that came in through their childhood development center with the goal of improving their leadership capacity. This income was distributed based on a formula developed and agreed on between the facility in-charges and heads of departments. Each department was allocated funding to implement activities and was responsible for reporting the outcomes of these activities.

The ability to manage their own budget lines motivated the team members, and every week they had their reports ready on time to requisition funds for subsequent activities to produce improved results. As a result of this approach, the health facility met and surpassed its quarterly and annual targets set by the health subdistrict. However, for this approach to work, it was important to have someone at the top willing to support and guide the team. Then it became possible to produce positive results, even with meager resources.

Conducting managers' performance appraisals as the basis for supporting capacity-building interventions served as an incentive for attracting managers to remain in their duty stations and to encourage them to perform better in the delivery of RMNCAH services.

One goal of the RBF program is to motivate health sector managers to improve their performance through a reward system based on the achievement of set targets. This program enabled many districts that benefited from RBF for a longer period to improve their performance scores in clinical services delivery (box 11.1).

2. Functioning of governance and management structures

The functionality of health system governance and management structures from the perspective of RMNCAH was assessed based on the ability to conduct regular meetings, provide supervisory functions, create linkages with communities, and build relationships within and across the governance and management structures and between these structures and the health facility managers.

Conducting regular meetings

Convening periodic meetings of the members of governance and management structures to deliberate on issues affecting the health care delivery system is crucial for ensuring the functionality of health care systems, because it provides avenues for information sharing and fosters accountability (WHO 2011). The study found that some managers, especially at health subdistricts and lower-level health facilities, failed to conduct regular governance and management meetings due to a lack of leadership skills. Several members of the sampled hospital boards and HUMC and HC III management teams reported that some planned meetings were not conducted either because of the lack of a quorum or a lack of funding.

The sampled districts that did convene regular management meetings for planning, budgeting, and monitoring service delivery performance had better results for RMNCAH indicators. Findings also show that DHTs, DHMTs, RRHs, and HC IVs conducted regular management meetings because they had to satisfy reporting requirements to higher authorities.

Relationship between health management structures and service users

The study found that some HUMCs met on a quarterly basis, depending on the availability of PHC funds, and provided feedback to communities about health services and resources through community dialogues. During these community dialogues, the HUMCs and managers also received feedback from the community about the quality of services offered, which was used to inform planning and budgeting. Furthermore, the relationship among the different actors of the health care delivery structures was critical to improving RMNCAH service delivery. This relationship largely depended on the attitudes of managers of the health care delivery structure, how they exercised their authority, and how they managed the interface with the governance actors and structures overseeing the resource allocation and delivery of RMNCAH services.

3. Factors that enable or inhibit the functioning of governance and management structures

Objective 3 of this study was to determine factors that enable and inhibit the proper functioning of governance and management structures in the delivery of RMNCAH services at the district and community levels.

Enabling factors

The findings indicate, first, that in the DLGs where the DLGCs and DHT leadership were supportive, an organizational culture that motivated managers to effectively carry out their duties was created, resulting in improved delivery of RMNCAH services.

Second, in the health facilities where individuals of high caliber and integrity were appointed to the hospital boards and HUMCs, the relationships and performance of members in the governance and management structures of the health system were good, irrespective of their political allegiance. Their relationships and performance not only helped improve communication, feedback, trust, and harmony between the health facility management and governance structures but also contributed to increased resource allocation and delivery of RMNCAH services.

Third, the transformational leadership skills of some DHOs helped them guide their health teams and managers to improve delivery of health services within a resource-constrained environment. However, these leadership skills were largely acquired through personal rather than institutional capacity-building initiatives. As one DHO pointed out,

Good leadership, availability of some resources helps to create an organizational culture that instills confidence in the facility managers and program focal persons to do their work . . . Also, opportunities for continuous professional development through mentorships and other forms of trainings enable them to implement activities, and the way their supervisors provide leadership influences how they function . . . but there are limited training opportunities in leadership for managers.

Fourth, at the lowest levels of the health care system, the members of HUMCs and VHTs held occasional joint meetings to plan for, mobilize, and link communities to health facilities. They also jointly delivered to the communities some PHC services, such as the distribution of condoms, which helped improve the uptake of some RMNCAH services. A manager in one of the HC IVs stated,

[VHTs] . . . are critical structures in improving access to RMNCAH services.

Fifth, regular reporting to the different governance and management structures and information sharing created an enabling environment for feedback and accountability for resource use and service delivery, ensuring effectiveness.

Hindering factors

The findings further showed that, first, some DHOs created their own poor organizational work culture, characterized by weak support supervision, lack of mentorship, and absenteeism, which hindered their teams' performance in the delivery of health services.

Second, most of the managers below the level of DHO had a clinical training background and received limited on-the-job training on their appointment. They did not, therefore, have the requisite leadership skills and competencies to manage relationships among the various RMNCAH service delivery actors. This shortcoming contributed to uncoordinated implementation of activities, especially at the subdistrict level.

Third, some managers, particularly in the public health facilities located in rural areas, failed to conduct regular governance and management meetings and only worked with the board or HUMC chairpersons to manage the health facilities. This not only created acrimonious relationships among staff members but also negatively affected supervision of RMNCAH service delivery.

Fourth, all health facilities assessed had insufficient staffing levels, physical infrastructure, and financial resources. The districts in rural areas, in particular, lacked electricity, a reliable water supply, accommodations for staff, and tools and equipment for clinical practice. This work environment hindered managers from effectively carrying out their management functions, which negatively affected the delivery and supervision of RMNCAH services.

Fifth, funding for operations of the health governance and management structures came mainly from PHC funds and development partners, but it was irregular and inadequate. This negatively affected their performance.

Sixth, there was a persistent shortage in the number of required health workers in the health facilities, and most workers had insufficient skills and competencies in the management of health services. The staffing shortage was further exacerbated by elevating some countries to districts, whereby a few health workers were redistributed and assigned positions with higher responsibilities, which worsened the quality of delivery of RMNCAH services in the health facilities. The narratives presented in box 11.2 illustrates the implications of inadequate human resources for health.

RECOMMENDATIONS

Finally, this study examined stakeholder perspectives regarding the constitution, composition, and functioning of governance and management structures, including how to strengthen them for better governance and management of RMNCAH services. The following perspectives emerged from the stakeholders regarding how to address the key challenges of the district and community-level governance and management structures for RMNCAH services.

Box 11.2

Perspectives of two district health officers in Uganda

“Previously, the Health Center (HC) IV maternity [facility] was . . . managed by 1 nursing officer and 3 midwives, that is, 4 staff. But when you look at the population we are serving in a day, this small number of staff can attend to at least 100 mothers, out of which about 60 have come for prenatal care and about 15 are due for labor. You also have those who have come for postnatal care, but remember, some staff should be on night duty, others on day duty, and others on evening duty. So, what would happen to the patients if any of the staff goes on leave? Do you expect the services offered to be of good quality? . . . The organizational structures for HC IVs are uniform throughout the country, yet some of these facilities provide services that are supposed to be offered at a General Hospital level.”

“Given that most of them are in urban settings where the number of patients is high . . . drug supplies can be depleted in less than a month, and one has to wait for the next delivery from the National Medical Stores, which can come in after 1 month of stock-out. Now tell me, what you would do if you were in charge of a health facility? Would you close the facility, continue explaining to clients, or just sit down and let nature take its course, as you see clients dying of conditions that would have otherwise been handled with just simple tools? Our government needs to revisit its priorities, especially in supporting the human resources for the health component . . . without which, delivery of quality RMNCAH services will remain a challenge.”

Source: Two DHOs in charge of maternal and child health in a district with urban characteristics.

To ensure coordinated skills and competence development programs across the different districts and health care delivery levels, the MoH, in partnership with the MoLG should, *in the short term*, do the following:

- *Assess and document the skills and competence gaps* within and among governance structures, managers, and health workers.
- *Simplify Public Service Standing Orders*, and disseminate them to health sector managers and workers at all levels of the health care delivery structures to enhance understanding of their rights and responsibilities.
- *Put in place standard guidelines for the induction of newly appointed and acting managers in leadership and management of the health system*, and incorporate them into the orientation and deployment process for health system managers in all DLGs.
- *Develop simplified capacity-building strategies*, and conduct purpose-driven support supervision for HUMCs in the governance and management of health care services.

Furthermore, the MoH and the MoLG should, *in the long term*, pursue the following:

- *Establish a team of master coaches and mentors* at RRHs that comprises DHTs, DHMTs, and retired professionals, and train them virtually so that they can provide routine supervision and on-the-job mentoring to the district- and lower-level health-sector governance and management structures.
- *Lobby for increased allocation of funding from government and development partners toward capacity building* for management and governance teams concerning their roles and responsibilities as stipulated in the guidelines, and facilitate competence-development training for managers at the district and lower levels.

- *Support salary increments for health workers who attain higher qualifications for the first three years after training to enable DLGs to prepare for their absorption.*

Given that DHTs shoulder the greater responsibility in delivering health care services to beneficiaries at the community level, the DLGs, in partnership with the MoH and the MoLG, should, *in the short term*, do the following:

- *Support the DHTs to create their own leadership and management courses to provide training and supervision to health facility managers and leaders at the community level at minimal cost.*
- *Review the supervision process with a view toward transforming it from a ritualized practice to an accountability-driven practice, and ensure that managers are capable of providing on-the-job support in health care system governance and management to managers at the lower-level health care delivery facilities.*

Furthermore, the MoH and the MoLG should, *in the long term*, pursue the following:

- *Support DECs to put in place performance-monitoring systems for district- and lower-level health governance structures, and build their capacity to help address weaknesses in their oversight roles and enhance their accountability.*
- *Review organizational structures for health facilities and DHTs to provide adequate numbers of required staff, and specify the job descriptions and competencies for managers at various levels for effective leadership and management.*
- *Develop a standardized governance and management competency development framework with performance indicators for districts to design tailored capacity-building plans.*
- *Address the challenges of political patronage and the need for supervision of district leadership in the revised guidelines.*

CONCLUSION

One of the thrusts of the Sharpened Plan for Uganda is to enhance the effective coverage for RMNCAH services by removing system bottlenecks and improving leadership and management in the health care delivery system. This study delved into the current issues regarding health care system governance and management structures in selected districts and provides insights into some of the existing leadership, management, and governance strengths and opportunities as well as the challenges that have influenced RMNCAH service delivery in district- and lower-level health facilities.

Some of the strengths and opportunities include the provision of on-the-job training opportunities for some managers of health facilities, the regular supervision of service managers and providers by DHTs and DHMTs, and the development of good working relationships and regular information sharing between health system governance and management structures and among members of the same structures at several levels of the health care delivery system.

Some of the challenges include political interference in service managers' and providers' appointments; limited financial resources; inadequate human resources planning, which has resulted in understaffing; inadequate capacity

development in health system governance and management for members of these structures and managers of health facilities, which has contributed to poor service delivery at different levels of the health system; and inadequate pay and incentives for service managers and providers, which has resulted in high turnover of competent health systems management personnel.

Overall, the lack of strong leadership and management of the health care delivery system is the most critical bottleneck to the proper delivery of RMNCAH services, especially at the district and community levels. The development of strong leadership and management teams at these levels would enable proper coordination of the different stakeholders in prioritizing areas of focus, funding, and implementation and would improve the quality of RMNCAH services offered. This work is needed even more in newly created districts that have limited funding, numbers of skilled managers, and mechanisms for capacity building. Future Sharpened Plans should address the recommendations in this study to achieve more equitable and effective RMNCAH services in the country.

REFERENCES

- African Union. 2016. African Health Stats. Online data platform, African Union Commission's Department of Social Affairs. <https://africanhealthstats.org/>.
- Batalden, P., D. Leach, S. Swing, H. Dreyfus, and S. Dreyfus. 2002. "General Competencies and Accreditation in Graduate Medical Education." *Health Affairs* 21 (5): 103–111.
- Becht, M., P. Bolton, and A. Röell. 2002. "Corporate Governance and Control." Finance Working Paper no. 02/2002. European Corporate Governance Institute. <http://ssrn.com/abstract=343461> (accessed July 3, 2016).
- Bevir, M. 2013. *Governance: A Very Short Introduction*. Oxford: Oxford University Press.
- Bonenberger, M., M. Aikins, P. Akweongo, and K. Wyss. 2016. "Factors Influencing the Work Efficiency of District Health Managers in Low-Resource Settings: A Qualitative Study in Ghana." *BMC Health Services Research* 16. doi:10.1186/s12913-016-1271-3.
- Calhoun, J. C., P. L. Davidson, M. E. Sinoris, E. T. Vincent, and J. R. Griffith. 2002. "Toward an Understanding of Competency Identification and Assessment in Health Care Management." *Quality Management in Health Care* 11 (1): 14–38. doi:10.1097/00019514-200211010-00006.
- Chin, R. 2015. "Examining Teamwork and Leadership in the Fields of Public Administration, Leadership, and Management." *Team Performance Management* 21 (3/4): 199–216. doi:10.1108/TPM-07-2014-0037.
- Cometto, G., J. Buchan, and G. Dussault. 2020. Developing the "Health Workforce for Universal Health Coverage." *Bulletin of the World Health Organization* 98 (2): 109–116. doi:10.2471/BLT.19.234138.
- Creswell, J. W., and V. L. Plano Clark. 2007. *Designing and Conducting Mixed Methods Research*. Thousand Oaks, CA: Sage.
- Darmstadt, G. L., A. C. C. Lee, S. Cousens, et al. 2009. "60 Million Non-Facility Births: Who Can Deliver in Community Settings to Reduce Intrapartum-Related Deaths?" *International Journal of Gynaecology & Obstetrics* 107 (S1): S89–112. doi:10.1016/j.ijgo.2009.07.010.
- Dickovick, J. T. 2012. Review of *Decentralization in Uganda: Explaining Successes and Failures in Governance*, by Gina M. S. Lambright. *Journal of Politics* 74 (1). doi:10.1017/S0022381611001289.
- Dieleman, M., B. Gerretsen, and G. J. Van der Wilt. 2009. "Human Resource Management Interventions to Improve Health Workers' Performance in Low and Middle Income Countries: A Realist Review." *Health Research Policy and Systems* 7 (7): 1–13. doi:10.1186/1478-4505-7-7.
- Donev, D., L. Kovacic, and U. Laaser. 2013. "The Role and Organization of Health Care Systems." In *Health: Systems—Lifestyles—Policies*. Vol. 1. 2nd ed. Edited by G. Burazeri and L. Zaletel-Kragelj, 3–14. Lage, Germany: Jacobs Verlag.

- Egger, D., and E. Ollier. 2007. "Managing the Health Millennium Development Goals—The Challenge of Management Strengthening: Lessons from Three Countries." Making Health Systems Work, Working Paper no. 8. <https://iris.who.int/handle/10665/70010>.
- Government of Uganda. 2020. Health Sector Development Plan 2020/21–2024/25. Kampala.
- Hofmeyr, G. J., R. A. Haws, S. A. Bergstrom, et al. 2009. "Obstetric Care in Low-Resource Settings: What, Who, and How to Overcome Challenges to Scale Up?" *International Journal of Gynaecology & Obstetrics* 107 (S1): S21–45. doi:10.1016/j.ijgo.2009.07.017.
- Hooijberg, R., and R. E. Quinn. 1992. "Behavioural Complexity and the Development of Effective Managers." In *Strategic Leadership: A Multiorganizational-Level Perspective*, edited by R. L. Phillips and J. G. Hunt, 161–75. Westport, CT: Quorum Books/Greenwood Publishing Group.
- Hufty, M. 2011. "Investigating Policy Processes: The Governance Analytical Framework." In *Research for Sustainable Development: Foundations, Experiences, and Perspectives*, edited by U. Wiesmann and H. Hurni, 403–24. Bern, Switzerland: Geographica Bernensia. Available at SSRN: <https://ssrn.com/abstract=2019005>.
- Janesick, V. J. 2015. "Peer Debriefing." In *The Blackwell Encyclopedia of Sociology*, edited by G. Ritzer. Wiley Online Library. John Wiley & Sons. doi:10.1002/9781405165518.wbeosp014.pub2.
- Jeppsson, A. 2002. "SWAp Dynamics in a Decentralized Context: Experiences from Uganda." *Social Science and Medicine* 55 (11): 2053–60. doi:10.1016/s0277-9536(01)00345-8.
- Lewis, J. I. 2014. "When Decentralization Leads to Recentralization: Subnational State Transformation in Uganda." *Regional & Federal Studies* 24 (5): 571–88. doi:10.1080/13597566.2014.971771.
- Mangham, L. J., and K. Hanson. 2010. "Scaling Up in International Health: What Are the Key Issues?" *Health Policy Planning* 25: 85–96. doi:10.1093/heapol/czp066.
- MoH (Ministry of Health). 2003. *Guidelines on Hospital Management Boards for Referral Hospitals*. Kampala: MoH. <http://library.health.go.ug/health-infrastructure/general-hospitals/guidelines-hospital-boards-management-referral-hospitals>.
- MoH (Ministry of Health). 2005. *Uganda Human Resources for Health Strategic Plan 2005–2020*. Kampala: MoH.
- MoH (Ministry of Health), Health Systems 20/20, and Makerere University School of Public Health 2011. *Uganda Health System Assessment*. Kampala: MoH; Bethesda, MD: Health Systems 20/20, Abt Associates, Inc; Kampala.
- MoH (Ministry of Health). 2013. *Guidelines for Governance and Management Structures*. Kampala: MoH.
- MoH (Ministry of Health). 2015. *Health Sector Development Plan 2015/16–2019/20*. Kampala: MoH.
- MoH (Ministry of Health). 2016. *Investment Case for Reproductive, Maternal, Newborn, Child and Adolescent Sharpened Plan for Uganda 2016/17–2019/20*. Kampala: MoH.
- MoH (Ministry of Health). 2017. *Annual Health Sector Performance Report (AHSPR) Financial Year 2016/17–2017/18*. Kampala: MoH.
- MoH (Ministry of Health). 2018a. *Annual Health Sector Performance Report (AHSPR) Financial Year 2017/18–2018/19*. Kampala: MoH.
- MoH (Ministry of Health). 2018b. *Human Resources for Health Audit Report 2017/18*. Kampala: MoH. <http://library.health.go.ug/human-resources-health/human-resources-health-audit-report-201718>.
- MoH (Ministry of Health). 2018c. *National Health Facility Master List 2018*. Kampala: MoH. <https://health.go.ug/sites/default/files/Signed%20n%20final%20mfl.pdf>.
- MoH (Ministry of Health). 2019a. *Annual Health Sector Performance Report (AHSPR) Financial Year 2018/19–2019/20*. Kampala: MoH.
- MoH (Ministry of Health). 2019b. *Guidelines for Health Centre IV Health Unit Management Committees*. Kampala: MoH. <http://library.health.go.ug/sites/default/files/resources/HUMC%20for%20HC%20IV.pdf>.
- Mukasa, N. 2012. "Uganda Healthcare System Profile: Background, Organization, Policies and Challenges." *Journal of Sustainable Regional Health Systems* 1 (1): 1, 2–10.

- Mukundane, M., A. Nannungi, D. Bataringaya, et al. 2016. "Assessing the Management and Administration in Public Health Facilities of Uganda and the Implications for the Healthcare Service Delivery and Utilization Evidence from the CODES Project." ACODE Policy Research Series no. 77.
- NPA (National Planning Authority) 2015. *Second National Development Plan 2015/16–2019/20*. Kampala: NPA.
- Powell, K. S., and S. Yalcin 2010. "Managerial Training Effectiveness: A Meta-Analysis 1952–2002." *Personnel Review* 39 (2): 227–41. doi:10.1108/00483481011017435.
- Prashanth, N. S., B. Marchal, and B. Criel. 2013. "Evaluating Healthcare Interventions: Answering the 'How' Question." *Indian Anthropologist* 43 (1): 35–50. <https://lib.itg.be/pdf/itg/2013/2013iant0035.pdf>.
- Prashanth, N. S., B. Marchal, T. Hoeree, et al. 2012. "How Does Capacity Building of Health Managers Work? A Realist Evaluation Study Protocol." *BMJ Open* 2 (2). doi:10.1136/bmjopen-2012-000882.
- Pryor, J. L., and C. Guthrie. 2010. "The Private Life of Henri Fayol and His Motivation to Build a Management Science." *Journal of Management History* 18 (4). doi:10.1108/17511341211258774.
- Rockers, P. C., and T. Bärnighausen. 2013. "Interventions for Hiring, Retaining and Training District Health Systems Managers in Low- and Middle-Income Countries." *Cochrane Database of Systematic Reviews* 4. doi:10.1002/14651858.CD009035.pub2.
- Scholz, S., B. Ngoli, and S. Flessa. 2015. "Rapid Assessment of Infrastructure of Primary Health Care Facilities: A Relevant Instrument for Health Care Systems Management." *BMC Health Services Research* 15: 183. doi:10.1186/s12913-015-0838-8.
- Steffl, M. E. 2008. "Common Competencies for All Healthcare Managers: The Healthcare Leadership Alliance Model." *Journal of Healthcare Management* 53 (6): 360–73.
- Tetui, M., A. K. Hurtig, E. Ekirapa-Kiracho, et al. 2016. "Building a Competent Health Manager at the District Level: A Grounded Theory Study from Eastern Uganda." *BMC Health Services Research* 16: 665. doi: 10.1186/s12913-016-1918-0.
- UN (United Nations). 2018. *The 2030 Agenda and the Sustainable Development Goals: An Opportunity for Latin America and the Caribbean*. Santiago: UN.
- Van Rensburg, H. C. J. 2014. "South Africa's Protracted Struggle for Equal Distribution and Equitable Access—Still Not There." *Human Resources for Health* 12: 1–16. doi:10.1186/1478-4491-12-26.
- Wall, T. 2017. "A Manifesto for Higher Education, Skills and Work-Based Learning: Through the Lens of the Manifesto for Work." *Higher Education, Skills and Work-Based Learning* 7 (3): 304–14. doi:10.1108/HESWBL-06-2017-0036.
- Walley, J., J. E. Lawn, A. Tinker, et al. 2008. "Primary Health Care: Making Alma-Ata a Reality." *The Lancet* 372 (9642): 1001–7. doi:10.1016/S0140-6736(08)61409-9.
- West, E. 2001. "Management Matters: The Link between Hospital Organisation and Quality of Patient Care." *Quality in Health Care* 10 (1): 40–48. doi:10.1136/qhc.10.1.40.
- Westera, W. 2001. "Competencies in Education: A Confusion of Tongues." *Journal of Curriculum Studies* 33 (1): 75–88. doi:10.1080/00220270120625.
- Western, S. 2019. *Leadership: A Critical Text*. 3rd ed. Los Angeles: SAGE Publications, Inc.
- WHO (World Health Organization). 2007a. *Building Leadership and Management Capacity in Health*. Geneva: WHO.
- WHO (World Health Organization). 2007b. *Everybody's Business—Strengthening Health Systems to Improve Health Outcomes: WHO's Framework for Action*. Geneva: WHO. <https://iris.who.int/handle/10665/43918>.
- WHO (World Health Organization). 2007c. *Strengthening Management in Low-Income Countries: Lessons from Uganda*. Geneva: WHO. <https://iris.who.int/handle/10665/70014>.
- WHO (World Health Organization). 2011. *Health Systems Observatory: Glossary for Health System*. World Health Organization, Eastern Mediterranean Regional Office.

12 Accountability Mechanisms in Uganda's RMNCAH Service Delivery: Practices, Challenges, and Implications

NATHAN NSHAKIRA, MESHARCH WALTO KATUSIIMEH, AND MOSES ARINAITWE

EXECUTIVE SUMMARY

As part of a commitment to good health for all Ugandans, in 2016, the government of Uganda (GoU) launched an investment case to address reproductive, maternal, newborn, child, and adolescent health (RMNCAH), also called the Sharpened Plan (MoH 2016a). Conditions related to RMNCAH constituted up to 60 percent of the national burden of disease. The Sharpened Plan underscores the principle of accountability, which is essential for good stewardship and management of the health systems and for the attainment of positive health outcomes (WHO 2014). However, there is limited information on the various accountability mechanisms, the challenges they face, and their contributions to improving RMNCAH services in Uganda. This study is part of a collection of RMNCAH studies to aid the government in reviewing the progress made on the commitments in the Sharpened Plan and in preparing for the next investment plan for RMNCAH services. The new plan was published in July 2022, for the period 2022/23–2027/28.

Study objectives

This study assessed the accountability mechanisms in the Uganda health sector and their contribution to improvements in RMNCAH services. The specific objectives were as follows:

- Review the current definition and structuring of accountability mechanisms at the different levels of Uganda's health care system;
- Examine the factors influencing accountability implementation at the different levels of the health care system;
- Describe the relationships and influences between current health accountability processes and results in RMNCAH service delivery and utilization; and
- Generate recommendations for strengthening health accountability and enhancing its specific influence on RMNCAH service delivery, utilization, and results.

Methodology

This cross-sectional study used mixed methods of data collection: (a) interviewing 164 key informants at 23 health facilities, at 8 district offices, and at the national level; (b) reviewing secondary data in print and audiovisual formats; and (c) analyzing selected District Health Information Software version 2 (DHIS2) data for the study districts for the period January 2016 to December 2020. The study used the following definition of *accountability*: “a process where the behavior and performance of the service recipients and accounting agents is evaluated against predetermined standards, and their misdeeds are identified and sanctioned” (Baez-Camargo and Jacobs 2013).

The study adopted and was guided by the accountability triangle framework to describe and analyze accountability relationships among the main actors: the state, represented by elected political leaders at different levels and employed technocrats or health managers who oversee health services; service providers, the frontline health workers who deliver health services; and the citizenry, the direct recipients of services, who include individuals, families, and community groups acting as a collective to represent both individuals’ needs and the common good (Baez-Camargo 2011; World Bank 2004).

Key findings

Key findings include those for accountability mechanisms, health accountability structures, and factors influencing health accountability practice.

Accountability mechanisms

Government mechanisms to guide and enforce health accountability include the following:

- Policies and guidelines for health service delivery;
- Service leadership and management standards—for example, job descriptions with clear roles and responsibilities, performance contracts, and appraisal standards for staff at different levels;
- Planning, budgeting, and service delivery guidelines and processes;
- Systems for coordination of the multiple actors in health accountability processes;
- Service support supervision processes and tools;
- Service monitoring and reporting processes that inform overall sector achievements against set goals; and
- Using media and other electronic communication platforms as channels for accountability engagement and information sharing.

The perceptions of study participants reflect a similar understanding of accountability as documented in the literature review. The study found that although the three core actors in the accountability triangle—citizens, providers, and the state—and their respective roles were clearly articulated, the resources allocated to health accountability in Uganda mostly focused on state and provider accountability mechanisms. There was limited articulation of the accountability roles and relationships between citizen and state actors and between citizen and provider actors, and there was inadequate focus on and resources for making the existing processes functional.

Health accountability structures

The study established that accountability mechanisms at the national level are vested in several ministries, departments, and agencies. The Ministry of Finance, Planning and Economic Development (MoFPED) is responsible for financial oversight of health and RMNCAH budgets and deployment of funds for service delivery. The Office of the Auditor General (OAG) is responsible for monitoring adherence to technical and financial guidelines; the Office of the Prime Minister leads the overall coordination among ministries, departments, and agencies; and the Inspector General of Government (IGG) identifies and sanctions poor performance against set guidelines and misdeeds.

The National Planning Authority (NPA) is responsible for developing comprehensive and integrated development plans for the country and guiding sectors to align their plans to the country's third National Development Plan (NDP III). Parliament allocates and tracks government health expenditures, and the Ministry of Health (MoH) provides overall health sector stewardship, monitoring, supervising, and reporting on health sector plans, processes, and achievements. At the district local government (DLG) level, the district administration staff mirror national accountability entities, with offices responsible for planning, budgeting, technical, and financial management of funds for health and RMNCAH service delivery.

At primary health care facilities and referral hospitals, service providers deliver, monitor, and supervise health services. In the communities, representatives of the citizens in Health Unit Management Committees (HUMCs), members of the Village Health Teams (VHTs), civil society organizations (CSOs), and the citizens themselves voice their needs, account for individual health care, and hold providers and the state accountable for the health services they are expected to deliver.

The study found these gaps and challenges in health accountability mechanisms and practices:

- There are overlaps and limited coordination among the political, administrative, and service delivery accountability structures in the relevant ministries, departments, and agencies (MDAs), and among the actors in DLGs and health facilities, capacity is inadequate to enable in-depth collective engagement and joint action on the identified health accountability issues.
- Some health accountability mechanisms, such as professional health councils and HUMCs, are not fully functional within the health system.
- The social health accountability mechanisms, where citizens engage the state and providers at events, such as barazas, are still informal and delinked from existing health accountability mechanisms in DLGs and MDAs.
- Communities' engagement is limited concerning planning and budgeting, resource appropriation and utilization, and the monitoring and evaluation processes of RMNCAH services.
- Multiple sources of data for health accountability exist, but most of these systems do not work together. Further, there is limited interoperability between data systems relevant to health accountability, such as the DHIS2, the integrated Human Resource Information System (iHRIS), health budget and expenditures tracking systems, and Local Government Performance Assessment (LGPA) data.

Factors influencing health accountability practice

Factors influencing accountability include (a) a focus on and resources for health accountability that enable accountability processes to function and enable meaningful and effective participation of actors in accountability mechanisms;

(b) the capacity of accountability actors to fulfill their accountability mandates through existing mechanisms; and (c) the availability, accessibility, quality, and utilization of data and information to support actions to strengthen accountability mechanisms.

Relationships between health accountability and RMNCAH services are articulated in three main areas:

- **Nature and purpose of RMNCAH accountability in strategic documents.** The *Health Sector Development Plan (HSDP) 2015/16–2019/20* (MoH 2015a) and the 2016 RMNCAH Sharpened Plan are the core reference documents for health accountability. The Sharpened Plan is acknowledged as an important national-level tool for mobilizing funding and technical support for RMNCAH services. However, planning for RMNCAH services at the district, facility, and community levels is limited to spending the available resources—for example, for primary health care (PHC) grants and results-based financing (RBF)—rather than planning based on identified priorities at each level.
- **Accountability for RMNCAH financing.** The projections for health financing indicate a commitment to improving RMNCAH services, but the projected amounts are largely unmet. The HSDP 2015–20 included a 15 percent allocation to RMNCAH services, translating to a total projection of US\$2.29 billion, a figure slightly above that estimated in the Sharpened Plan (US\$1.92–US\$2.21 billion). However, the government’s allocated budget for RMNCAH services in the period 2016–20 ranged between only 17 percent and 22 percent of the projected need.
- **Accountability in RMNCAH service delivery.** National readiness for support to RMNCAH service delivery is most reflected in (a) a fully developed RMNCAH leadership and coordination mechanism at the MoH’s Maternal and Child Health (MCH) Focal Team and a Technical Working Group (TWG), fully integrated in the MoH structure and budget; (b) a strategic and operational commitment to RMNCAH prioritization in the HSDP, the Sharpened Plan, and the Annual Health Sector Plan, budgets, and reports; and (c) specific prioritization of RMNCAH indicators and targets as core elements in overall health sector monitoring and evaluation. Systems and structures to enable RMNCAH service delivery have gradually improved at the different levels of the health system. However, low stocks of medicine are a common challenge in study districts and nationally.

Recommendations

To strengthen accountability mechanisms and structures, the study recommends the following:

- The MoH should lead other stakeholders to reinforce the centrality of citizen actors in health-related accountability process and in their respective engagements with providers and state actors.
- The MoH should articulate the indicators needed to measure the respective mandates; participation levels; and the impact of citizen, provider, and state actors in health-related accountability.
- The Office of the Prime Minister (OPM), working closely with the MoH, DLGs, and civil society stakeholders, should operationalize and institutionalize accountability structures and processes for all public services between

citizen and state actors at both the subnational and national levels, specifically including their application to health-related accountability.

- The MoH, working closely with DLGs and civil society stakeholders, should refine the mandate and roles of the health subdistrict (HSD) structure with respect to participatory health accountability, ensure sustained operations of this structure in all districts and cities with more than one electoral constituency, and advocate for them to be included in the OPM-led mechanism for public services accountability recommended earlier.
- DLGs, with support from the MoLG and the MoH, should (a) define the mandate and roles of local community structures—for example, local councils (LCs) I, II, and III; VHTs; women councils; and youth councils—related to health accountability, and put this mandate into effect in community development initiatives and services; (b) develop and institutionalize mechanisms for assessing and building the capacity of individual citizens, citizen groups, and community-level structures for effective and sustained engagement in health accountability; and (c) strengthen HUMCs in their contribution to health accountability by involving professionals and managers (including retired officers) with specific accountability experience.
- The OPM, in close collaboration with the Ministry of Information Communication and Technology and National Guidance (MoICT), key MDAs responsible for health accountability, the MoH, and the NPA should strengthen and integrate data systems for health-related accountability—for example, DHIS, iHRIS, the Integrated Financial Management Information System (IFMIS), and LGPA—to regularly generate and disseminate comprehensive information on the different dimensions of health accountability to enable timely management decisions and actions.
- The OPM, in close collaboration with the MoH, the Ministry of Gender, Labor and Social Development (MoGLSD), and DLGs, should (a) establish a mechanism to comprehensively and consistently measure and report on the citizen contribution component of health planning and accountability and (b) create and sustainably operate citizen-controlled and standardized processes for holding elected representatives accountable on health planning, financing, systems operations, and service delivery.

INTRODUCTION

RMNCAH conditions constitute a large proportion of the global burden of disease and are thus a core area of focus in the health-related Sustainable Development Goals (SDGs). The 2030 RMNCAH targets in SDG3 include reducing the global maternal mortality ratio (MMR) to less than 70 deaths per 100,000 live births; reducing child mortality to less than 25 deaths per 1,000 live births; reducing the neonatal mortality rate (NMR) to 12 deaths per 1,000 live births; and ensuring universal access to sexual and reproductive health care services, including for family planning (United Nations 2017).

Uganda has made important progress in advancing toward the achievement of these targets; however, the pace of improvement has been relatively slow and, therefore, unlikely to facilitate the achievement of these global goals. The latest official data show that the MMR declined from 418 deaths per 100,000

live births in 2006 to 336 deaths per 100,000 live births in 2016, while the NMR has stagnated at around 27 deaths per 1,000 live births over the same period, and the unmet need for family planning among married women has decreased slightly in the same period, from 38 percent to 28 percent (UBOS and ICF 2018). This trend underscores the need for (a) the concerted programming of services to address RMNCAH challenges, (b) increased financing to support implementation of high-impact programs, and (c) strengthened accountability mechanisms to ensure that deployed resources generate the expected results and outcomes.

As part of official efforts to improve performance in the achievement of RMNCAH targets, in 2013 the GoU published a strategic plan, *A Promise Renewed: Reproductive, Maternal, Newborn and Child Health Sharpened Plan for Uganda*. Three years later, an updated version of the plan, the *Investment Case for Reproductive, Maternal, Newborn, Child and Adolescent Health Sharpened Plan for Uganda 2016/17–2019/20*, was released (MoH 2016a). The plan was further updated in 2021. The Sharpened Plan articulates the government's commitment to scale up investments in high-impact demand- and supply-side interventions.

Notable commitments in the Sharpened Plan include attaining effective service coverage by addressing seven system bottlenecks;¹ focusing on five strategic shifts to attain accelerated service delivery improvement;² and increasing efficiency and effectiveness in the use of health sector resources by strengthening mechanisms of governance and accountability (MoH 2016a).

This study explores the functionality of accountability mechanisms in the Uganda health sector and their specific contribution to RMNCAH service improvement at a time when the NDP III has been launched and the MoH is in the process of developing a new HSDP as well as finalizing the (latest) updated Sharpened Plan 2020/21–2024/25. The study is based on the premise that whereas accountability is essential for good stewardship of the health system and for the attainment of health outcomes (WHO 2014), there is limited information on the relevant accountability mechanisms in Uganda and their impact on the delivery of RMNCAH services. The findings of the study are intended to inform the GoU's efforts to review progress in realizing the commitments made in the Sharpened Plan.

Uganda health system

The provision of health services for Uganda is decentralized, with subnational entities—districts and HSDs—playing a key role in the delivery and management of health services. Starting from the lowest level in the community, the health service delivery infrastructure consists of health care facilities, VHTs; Health Centers (HCs) IIs, HC IIIs, and HC IVs; and General Hospitals (GHs), all functioning under DLGs; Regional Referral Hospitals (RRHs), which provide services for several DLGs; and National Referral Hospitals (NRHs), which serve the whole country. Each level is responsible for preventive, promotive, and curative services for a designated geographical area and population, with a mandate to refer to the next level if it does not have the services required to address a health problem. All levels in the health system have mutual accountability responsibilities for the service delivery and utilization inputs and outcomes, which cut across the citizens, service providers, and the different institutions of the state.

Study objectives

The specific study objectives were as follows:

- Document and analyze the current definition and structure of accountability mechanisms at the different levels of the Ugandan health system;
- Examine the factors influencing accountability implementation at the different levels of the health care system;
- Describe the specific relationships and influences between current health accountability processes and results and RMNCAH service delivery and utilization; and
- Generate recommendations for strengthening health accountability and enhancing its specific influence on RMNCAH service delivery, utilization, and results.

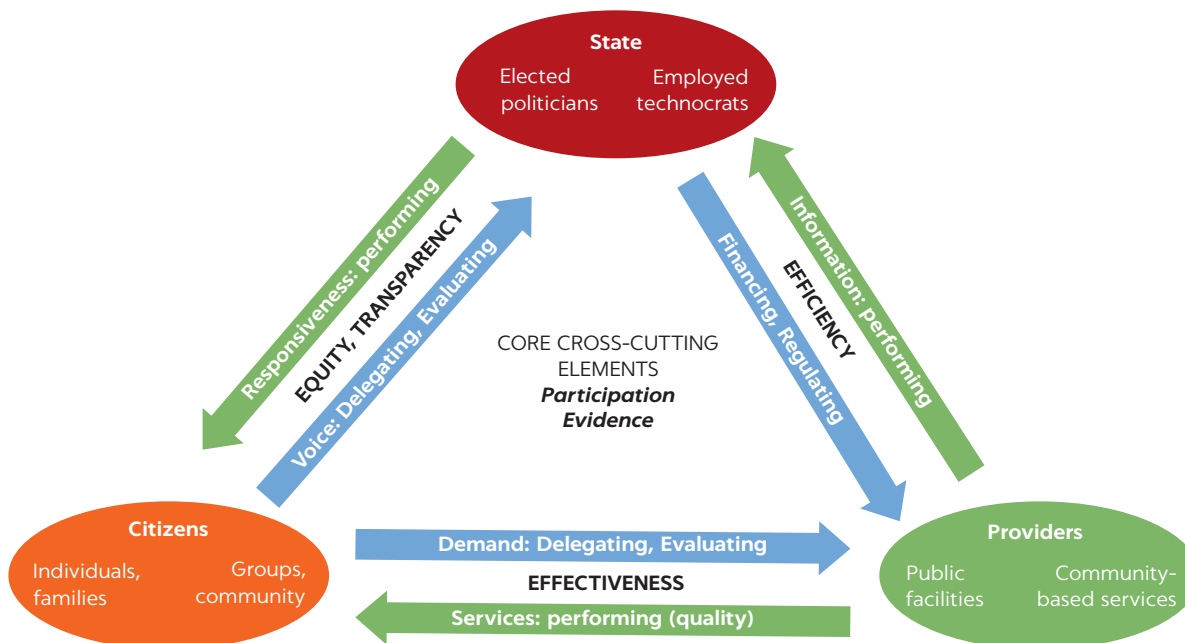
Conceptual framework

There are several definitions of accountability in the service sectors. *Accountability* has been defined as “a relationship between different parties: the party that accounts and is held to account, and the party that holds the other to account” (Stewart 1984, 15). Other definitions include “the procedures and processes by which one party justifies and takes responsibility for its activities” (Emanuel and Emanuel 1996, 229) and “the process where the behavior and performance of service recipients and accounting agents is evaluated against predetermined standards and their misdeeds are identified and sanctioned” (Baez-Camargo and Jacobs 2013).

This study borrows from all these definitions but was guided mainly by the last one. It adopted the analytical framework of accountability relationships described in the 2004 *World Development Report* (World Bank 2004) across three actor categories, as illustrated in the accountability triangle in figure 12.1:

- **The state**, represented by elected political leaders at different levels and employed technocrats or health managers who oversee health services.
- **Service providers**, the frontline health workers who deliver health services; the study focused on health service providers in the public service context, because the public service has one accountability framework, while the private sector has multiple actors and many frameworks.
- **Citizens and clients of services**, the direct recipients of services, that is, individuals and families as well as community groups acting as a collective to represent both individuals' needs and the common good (Baez-Camargo 2011; World Bank 2004).

The framework describes the state's accountability mandate as financing and regulating the provision of services and ensuring the availability and functioning of a health system that is responsive to citizens' needs. Providers are accountable for service provision to the citizens and providing evidence to the state about delivered services. Citizens are likewise accountable for articulating their needs and rights, demanding the fulfillment of their rights and needs by the state, and utilizing available services (and quality improvement as needed therein). These accountability relationships, responsibilities, and factors influencing the functioning of accountability mechanisms, as well as the delivery and utilization of RMNCAH services, are examined in the study. The bidirectional accountability relationships are exemplified by the

FIGURE 12.1**Accountability triangle: Citizen-provider-state relationships**

Source: Adapted from World Bank 2004.

respective arrows, for example, citizens delegating elected leaders to voice their concerns at different levels of government, and the state, in turn, being responsive to the needs and demands of citizens as the beneficiaries of services. The accountability relationship between providers and the state captures the service efficiency dimension of the services, while that between providers and citizens captures the effectiveness dimension. The relationship between citizens and the state covers both the equity and transparency dimensions. Elements that cut across all the points and limbs in the triangle are the participation of all stakeholders and the evidence for all actions and decisions.

METHODOLOGY

This section discusses the study design and sampling procedure; data collection methods, tools, and procedures; data management and analysis; ethical considerations; and study limitations.

Study design

This study used a cross-sectional research design and mixed methods to collect data. Primary qualitative data were collected through 164 key informant interviews (KIIs), as detailed in table 12.1, and secondary information was collected from a literature review of relevant and available documents as well as audio and video recordings made at accountability forums. Quantitative data on RMNCAH service utilization for the period January 2016 to December 2020 were collected from the DHIS2 for the eight sampled study districts.

TABLE 12.1 Categories of primary respondents

CATEGORY	NO.
Facility-level key informants	86
District-level key informants	72
National-level key informants	6
Total key informants	164

Source: This table is original to this publication.

TABLE 12.2 Study districts and health facilities

DISTRICT	FIRST FACILITY	SECOND FACILITY	THIRD FACILITY
Hoima	Kigoroby HC IV	Kabaale HC III	Rwenyawawa HC III
Jinja	Buwenge HC IV	Budondo HC IV	Jinja Central HC III
Kampala	Nsambya Police HC III	Kisugu HC III	Kiruddu GH ^a
Kasese	Bwera GH	Bugoye HC III	Kasese Municipal HC III
Katakwi	Katakwi GH	Toroma HC IV	Aketa HC III
Lira	Ogur HC IV	Anyangatir HC III	Amach HC IV
Luwero	Kalagala HC IV	Bukalasa HC III	Butuntumula HC III
Moyo	Moyo GH	Dufile HC III	Belameling HC II

Source: This table is original to this publication.

Note: GH = General Hospital; HC = Health Center.

a. Although initially included in the sampled health facilities, Kiruddu GH was excluded because it did not provide RMNCAH services.

Sampling procedure

The study districts were purposively selected across all regions of Uganda (table 12.2) based on the following criteria: (a) performance in health services delivery as reflected in the annual District League Table rankings for 2016–20, (b) district experience in using results-based accountability in health services planning and financing, (c) relative representation of public health facilities in the district health system, and (d) length of district existence and thus opportunity to develop health management and accountability systems. Data on service utilization of community and facility services were collected from up to three health facilities in each study district.³

Data collection methods, tools, and procedures

Eight teams, each consisting of five data collection assistants—one team for each district—were trained and deployed to collect and transcribe all data obtained. Assistants were recruited based on their capacity and experience in qualitative data collection, their independence from the respective district health care systems, and their ability to collect data in the main local languages spoken in the selected districts. Three members on each team were retained to support primary data processing, including data coding in Atlas.ti, version 9, software. Primary qualitative data were collected using KII guides that were pretested and refined as part of the training of data collection assistants. Data abstraction from the DHIS2 was based on selected RMNCAH service indicators as listed in table 12.3. The MoH provided authorization for conducting the study at the different levels of the health system.

TABLE 12.3 Data variables extracted from DHIS2

<p>Newborn health</p> <ul style="list-style-type: none"> • Live births • Fresh stillbirths • Macerated stillbirths • Preterm births • Babies born with low birthweight • Mothers initiating breastfeeding within 1 hour of delivery 	<p>Maternal health</p> <ul style="list-style-type: none"> • First ANC attendance, by age group • Fourth ANC attendance, by age group • ANC referrals to and from the facility • Maternity referrals to and from the facility • Deliveries, by age group • Maternal deaths, by age
<p>Family planning</p> <ul style="list-style-type: none"> • New family planning users, by age 	<p>Child health</p> <ul style="list-style-type: none"> • Outpatient attendance, by age and sex • Children immunized, by antigen and sex
<p>Adolescent health</p> <ul style="list-style-type: none"> • Outpatient attendance for persons ages 10–19 years, by sex • Girls immunized with HPV vaccine, by age (9–14 years and 10–19 years) and location. 	

Source: This table is original to this publication.

Note: ANC = antenatal care; DHIS2 = District Health Information Software Version 2.1; HPV = human papillomavirus infection.

Data management and analysis

Primary qualitative data were analyzed by extracting key content according to predetermined (inductive) and emerging (deductive) themes using Atlas.ti. Data extracted from DHIS2 were analyzed using Microsoft Excel and presented as tables and graphs. The secondary data obtained through text extraction from documents and other records were clustered and analyzed manually as a direct complement to the primary data.

Ethical considerations

The study protocol, which outlined processes for ensuring informed consent, confidentiality, and privacy during study implementation, was approved by the National HIV/AIDS Research Committee (Reference no. ARC 219) and registered with the Uganda National Council of Science and Technology.

Study limitations

A key limitation in this study was reliance on secondary data for measurement and analysis of RMNCAH service outputs and outcomes. The main source of such data for this study was the DHIS2 database of the MoH. Gaps in data accuracy and completeness in the database affected the analysis and interpretations in this study. Efforts to address these gaps included consultations with data managers to validate specific figures and extraction of data on additional linked indicators to enable triangulation.

The original intention of the study was to collect all primary data through physical interaction with the respondents. However, restrictions to minimize COVID-19 transmission prevented such face-to-face interactions during study implementation. Virtual methods such as telephone calls and online conferencing platforms were used to conduct all planned KIIs. This issue limited researchers' ability to observe nonverbal cues and inhibited the smooth flow of ideas and conversation. An effort was made, through the training of data collectors and during data cleaning and analysis, to synthesize general ideas and, where necessary, researchers consulted with interviewees to confirm issues that were unclear.

The original study design included data collection through in-depth interviews with health service users and focus group discussions with community members. However, both data categories were not collected because of the restrictions related to COVID-19 prevention. It was not possible to use virtual means to reach the intended respondents. Consequently, the current study results do not reflect the perspectives of service users and the general community.

FINDINGS

Findings included those related to the definitions of health accountability, the accountability structures and mechanisms in the health system, and the factors influencing accountability implementation.

1. Definitions of health accountability

The study found multidimensional understandings of the definition of accountability in general and health accountability in particular. Respondents perceived general accountability as (a) compelling planning and budgeting for specific priority problems; (b) investing money and other resources in interventions that address the health care system and community health needs; (c) institutionalizing systems for follow-up to ensure translation of the financial investments into actual public services; (d) delivering the planned services to the intended users; and (e) availability of a clear trail, delineation, and quantification of outputs and outcomes from the health care service delivery processes.

In addition to the previously mentioned stakeholder definitions for general accountability, two unique perspectives were included in the definition for health accountability, namely, (a) professional standards as defined and emphasized in each field of health professional practice and (b) the cross-cutting importance of ethics in the overall process of health care delivery and in health improvement research. The reasons given for why health accountability is important include ensuring the sustained flow of needed inputs into the required services; the commitment of health managers and workers, including users, to proper stewardship and responsibility for the services offered and obtained; and learning from the successes and failures to improve service delivery and outcomes.

2. Accountability structures and mechanisms in the health system

The GoU has established comprehensive accountability mechanisms for the health sector and structures to implement them at the national, DLG, and community levels. This section describes these mechanisms and structures, stakeholders' perceptions of them, and the challenges or gaps therein.

The government mechanisms used to drive and enforce health accountability at both the national and subnational levels include (a) policies and guidelines for health service delivery; (b) service leadership and management standards, job descriptions with clear roles and responsibilities, performance contracts, and appraisal standards for staff at different levels; (c) planning, budgeting, and service delivery guidelines and processes; (d) systems for the coordination of the multiple actors in health accountability processes; (e) support supervision processes and tools; and (f) service monitoring and reporting processes to inform overall sector achievements against set goals. A cross-cutting mechanism is the

use of media and other digital or nondigital communication platforms as channels for accountability engagement and information sharing.

National-level accountability structures and mechanisms

At the national level, the mechanisms of health sector accountability in Uganda are vested in five main centers, each with its own mandates, roles, and responsibilities:

1. Financial accountability oversight: The key MDAs that constitute the government accountability sector at the national level include (a) the MoFPED, (b) the OAG, and (c) the IGG (MoFPED 2017a). The MoFPED issues guidelines for financial planning and implementation of government programs to improve the productivity and quality of health and life of the population and leads in the development of annual national budgets and mid-term expenditure frameworks. The OAG is responsible for monitoring adherence to these guidelines; and the IGG identifies and sanctions poor performance against technical and financial guidelines and misdeeds. Another national-level entity that has been established for enhancing health accountability to improve service delivery is the Medicines and Health Service Delivery Monitoring Unit in the Office of the President (MoH, Health Systems 20/20, and MakSPH 2012).

Under these MDAs, the government has instituted several public financial management reforms to improve accountability and the use of public resources as a basis for improved service delivery. These reforms include the enactment of the Public Finance Management Act of 2015 (Republic of Uganda 2015); a strengthened policy framework for macroeconomic management; enhanced management and reporting of public expenditure through the Treasury Single Account; and the roll out, upgrading, and use of an IFMIS (MoFPED 2018a).

2. Sectoral leadership, stewardship, and monitoring for results: The MoH has the overall mandate for technical and financial leadership and stewardship of the health sector (MoH 2015a). It leads in the development and publication of the 5-year *Health Sector Development Plan* as well as the *Annual Health Sector Plan* and budgets. Other nonstate actors at the national level, such as health development partners and private not-for-profit providers, also contribute to the broader framework of health sector accountability. Within the MoH, the Health Policy Advisory Committee serves as the multistakeholder forum for mutual accountability, while thematic health sector working groups help coordinate accountability on overall planning, budgeting, and management of deployed resources for health (MoH 2013). Monitoring and reporting of health services is carried out using population surveys, expenditure tracking surveys, and various reporting systems—for example, the Health Management Information System, expenditure tracking assessments, and results-based financing reporting.

3. Intersectoral coordination: The OPM, as the overall lead in government business, coordinates monitoring and evaluation of the implementation of government policies and programs (OAG 2017). These functions are carried out by the Prime Minister’s Delivery Unit (MoH 2019a) and the OPM Monitoring and Evaluation Department. The LGPA system was also instituted in 2017 to enhance efficiency in local government operations through the annual assessment of adherence to budgeting and accountability requirements (OPM 2020).

4. Development planning: The NPA is mandated to produce comprehensive and integrated development plans for the country, elaborated as long- and medium-term vision plans; for example, Vision 2040 outlines the long-term aspirations of the country. The 5-year NDP was instituted in 2010 to guide medium-term planning for all central government MDAs and the DLGs. The NPA is also responsible for ensuring adherence of sectoral annual plans to the overall strategic direction as set out in the NDPs (Republic of Uganda 2015), which it does by issuing certificates of compliance before sectoral plans and budgets are approved for government financing.

5. Resource appropriation and tracking: Parliament exercises the roles of (a) allocating and appropriating all government expenditures, (b) tracking accountability for government expenditures, and (c) providing social accountability to the electorate it represents (Parliament of Uganda 2016), where social accountability is the process by which citizens are engaged to hold politicians, policy makers, and public officials accountable for the services that they receive. Parliament works through committees responsible for oversight for each sector, including the health sector, and other functions of the executive.

Across all these structures and mechanisms are the relevant information management systems that generate data for accountability analysis and reporting. These include the IFMIS for tracking government spending, the LGPA system, the iHRIS, and the DHIS2. These systems contribute different strands of accountability data and information that help provide in-depth understanding of the different dimensions of accountability. This work is complemented by the existing commitment to the principle of open government, based on the 2011 e-governance policy goals:

- More personalized and accessible services that are easy for the community to use (*service delivery*);
- Improved processes within and between agencies, leading to lower costs and improved services (*internal efficiency*); and
- Easier interaction so that people can understand and contribute to policy making and other governance issues (*community participation*) (MoICT 2011).

Mechanisms for open-government implementation include publishing information on public notice boards and through the print media; public accountability forums, such as budget conferences and community barazas; and electronic sharing of information. The MoFPED has a budget website with in-depth financing information on local governments and central government MDAs (www.budget.go.ug). Similarly, the MoH, like other central government sectors, operates a website (www.health.go.ug) where accountability-related information is regularly posted.

Gaps and challenges related to the mandates of national accountability structures

Gaps and challenges related to the mandates of the national accountability structures included coordination across actors in health accountability, clarity on the accountability mandate and on capacity, opportunities for in-depth accountability engagement, existing structures and processes, and measurement and data consolidated.

Coordination across actors in health accountability. Despite the existence of national accountability structures, study respondents and the reviewed

literature indicate that there are overlaps and poor coordination among the key actors—OPM, NPA, and the MoFPED. Their separate and different accountability mechanisms face challenges of coordination, with duplication of effort, inefficiency, and ineffectiveness (MoFPED 2017a; Nxumalo et al. 2018). These challenges underscore the need to clearly define roles and relationships among the respective agencies and to invest in strengthening coordination mechanisms that consider the perspective of the three fundamental stakeholders: the state, providers, and citizens (Cleary, Molyneux, and Gilson 2013).

Clarity on the health accountability mandate and on capacity. Clarity is lacking on both the health accountability mandate and the capacity needed to fulfill it for key state actors: (a) health professional councils, elected individuals representing constituencies and special interest groups in Parliament, (b) district and lower local governments, and (c) the HSDs. The relevant accountability functions in this respect include (a) strategic and operational health planning, (b) monitoring and supervision of different aspects of health service delivery and management, and (c) quality improvement implementation.

Opportunities for in-depth accountability engagement. Opportunities are insufficient for in-depth engagement. For example, performance reviews—between central and local government actors—are mainly restricted to the transmission of reported data and information.

Existing structures and processes. Existing structures to enable periodic and in-depth engagement of state actors with provider and citizen actors are limited. For example, National Health and RMNCAH Assemblies and OPM-led barazas (a) are not consistently and universally functional, (b) provide limited voice and meaningful participation for provider and citizen actors, and (c) are not adequately decentralized to enable meaningful action recommendations and practical follow-through on their implementation.

Measurement and data consolidation. There is limited investment in in-depth and frequent measurement—which should occur at least once a year—of the state-citizen accountability link and its contribution to RMNCAH services. There is also limited consolidation of data regarding health accountability to enable the generation of a comprehensive picture of health accountability status, performance, gaps, and improvement opportunities. For example, the health financing information available in the IFMIS is not routinely linked to the deployment and actual presence of health workers in service delivery, yet it is captured in the iHRIS. Therefore, linkage of these information systems would enable better interpretation of service delivery processes and results, as captured in the DHIS2.

District, local government, and community structures and mechanisms

Accountability structures and mechanisms included district administration, HUMCs, VHTs, and others.

District administration. Uganda introduced its decentralization policy in 1997 under the Local Government Act of 1997, which has since undergone four amendments. The rationale for this policy was to devolve political and administrative control of services, including health services, to the level (districts and subcounties) where they are delivered, thereby improving accountability and effectiveness and promoting the ownership of government programs at these levels.

The accountability structures at the DLG closely mirror those at the national level, with technical officers at local governments representing sectors as well as finance and planning functions. Examples in this respect include (a) the finance team under the chief financial officer, which ensures that MoFPED guidelines are disseminated and followed by the district administration, subcounties, and facilities; (b) the management team under the chief administrative officer, which is the overall coordinator of government programs and resources at the local government level; (c) the District Planning Unit, which translates NPA guidance to the DLG level; (d) the District Local Government Council, which is the political representation of the electorate and citizens; and (e) the District Health Department, under the district health officer (DHO), who is responsible for health service stewardship and accountability at the DLG level as the overall leader of the District Health Team and the broader District Health Management Team, which includes representatives of key nongovernment actors in health.

The HSD structure is the main mechanism for the management and supervision of the PHC system and the lowest level of a consolidated health referral system (MOH 2020). However, the role of this structure in health governance and accountability has not been fully elaborated and operationalized and, thus, remains largely inactive. Accountability performance of district systems is assessed annually in the OPM-led LGPA process. Table 12.4 presents the LGPA scores of the seven study districts on overall and health sector performance between 2017 and 2020.

The data in table 12.4 show inconsistent performance of accountability in most of the study districts. Of all the districts, only Jinja and Katakwi exhibited consistent improvement in both the overall and health scores in the LGPA between 2017 and 2019, while Luwero had stagnant scores on both parameters, and Kasese showed improvement in the overall scores only. Moyo, Hoima, and Lira also improved in overall LGPA scores but from 2017 to 2018 only. A similar trend was recorded in the health scores for Moyo district. However, the LGPA health scores for Hoima dropped from 2017 to 2018 and in 2020. A similar trend was recorded in Lira from 2017 to 2019.

HUMCs. The health facilities and VHT members have HUMCs and hospital boards at their respective levels (MoH 2019b). The HUMCs have members from

TABLE 12.4 Study districts' overall and health sector scores on the LGPA, 2017–20

DISTRICT	OVERALL SCORES				HEALTH SCORES			
	2017	2018	2019	2020	2017	2018	2019	2020
Hoima District	54%	79%	56%	45%	79%	34%	54%	43%
Jinja District	59%	66%	81%	34%	32%	90%	79%	32%
Kasese District	48%	63%	64%	25%	73%	62%	41%	24%
Katakwi District	31%	52%	77%	29%	48%	70%	94%	32%
Lira District	54%	56%	52%	46%	80%	69%	58%	58%
Luwero District	75%	65%	76%	44%	74%	50%	72%	15%
Moyo District	45%	69%	63%	18%	71%	73%	59%	29%
Top Score	77%	85%	91%	72%	90%	96%	98%	91%
Average Score	56%	61%	67%	32%	54%	64%	68%	35%

Sources: OPM 2018, 2019, 2020, 2021.

Note: Kampala district is not included in the LGPA because it is directly managed by the central government. LGPA = Local Government Performance Assessment.

both the facility staff and the community, and their purpose is to safeguard citizens' interests as they work with providers to ensure quality service provision by facilities. They also ensure or participate in health education and awareness-raising sessions, community-level health planning and review meetings, and public forums for accountability engagement—via media, online, and barazas, for example. However, evidence from the available literature identified several constraints to the effectiveness of such committees, including (a) limited citizen awareness about their existence and roles (ISER 2018); (b) mistrust among HUMC members, health facility staff, and community members (Goodman et al. 2011); and (c) the limited capacity and experience of HUMC members (Gurung et al. 2018; Kajungu, Lukwago, and Tumushabe 2015).

VHTs. The VHTs are acknowledged as a multidirectional mechanism for health accountability at the community level. VHTs serve as agents and advocates for community needs and concerns; participate in the delivery of various basic health information and services to the community; mobilize, refer, and accompany community members to health facilities; and coordinate implementation of various community-based activities related to RMNCAH. However, their contribution to health system functioning and accountability is not systematically mainstreamed, documented, and reported. For example, only 17% of the community-level service delivery by VHTs in FY 2019/20 is reflected in the MoH information system (MoH 2020).

Other mechanisms. The service-user-to-provider engagement in accountability during the process of health care is the most ubiquitous health accountability mechanism. This accountability approach is proclaimed and promoted in the Uganda Patients Rights and Responsibilities Charter (MoH 2019c). Other mechanisms for linking citizens and providers to ensure health accountability include CSOs that advocate for better service provision on behalf of citizens (to both service providers and the state), client satisfaction surveys, and the Patient Charter (Dickinson 2016; Fozzard and Foster 2001). Citizens also have the mandate to elect leaders and representatives whom they feel can voice their socioeconomic concerns and ensure quality services. The renewed government commitment to use the parish as the nexus for local development planning and implementation through the Parish Development Model (MoFPED 2021) constitutes a vital point of leverage for ensuring that health is a core development concern and an accountability focus from the grassroots upward.

Gaps and challenges related to district-based health accountability

Gaps and challenges related to district administration accountability structures include the following:

- Ambiguity exists in the roles of the citizens and how to engage with and influence service providers and the state in health accountability.
- The accountability engagement responsibilities and schedules that link providers, HUMCs, and citizens have not been fully clarified and adequately integrated into routine plans, budgets, monitoring, and reporting at health facilities.
- There is no mechanism for structured and sustained assessment and development of the health accountability capacity of staff and managers in health facilities, of HUMC members, or of the respective institutional enablers of accountability at this level.
- The unique capacities and experiences of specific community members, such as retired health professionals and retired senior civil servants, have not been fully explored to support HUMCs and their health accountability roles.

- Available structures and processes, such as barazas and radio shows, are used to respond to crises rather than for structured and consistent health promotion and service performance accountability.
- The citizen-provider interaction in the health care process has not been fully leveraged to enable consistent and comprehensive service quality accountability. Citizen-provider health accountability is mainly activated by crisis situations and problem solving rather than by routine health review and improvement planning.
- There is limited articulation of the accountability indicators for the provider-citizen interaction, either in planning for health or in specific contributions to service quality.
- The quality of available accountability data is poor; there is inadequate capacity to process and fully use the available data; and the support systems for electronic data processing are limited.
- There is limited linkage between the service data that is routinely available in the information systems relevant to health accountability, such as the DHIS, iHRIS, IFMIS, and LGPA. Interoperability across such data systems would enhance linked analysis and action decisions for improvement.

Gaps and challenges related to community accountability structures

The following gaps and challenges were noted:

- There is no structured and enforceable opportunity for in-depth accountability interaction between citizens and the state—the executive government and elected leaders. This interaction is largely limited to the election process every 5 years.
- The role of existing community structures—LC Is, LC IIs, and LC IIIs, VHTs, women councils, and youth councils—in health accountability has not been clarified in regulations and promoted for universal and consistent utilization.
- Limited attention is paid to citizens' health accountability responsibilities and how to respond to them—for example, whether through planned preventive practices and promotion of household health, sustainable household health financing, and so on.
- Citizens' contribution to health accountability, how it impacts personal and community health and well-being, and how it influences available health services have not been defined and monitored.
- There is inadequate capacity of citizen and provider actors to effectively engage in health accountability activities; most citizens have limited capacity to appreciate and apply written or displayed health accountability information, such as client charters, funding releases, work plans, and service reports.
- There is no sustainable mechanism for assessing and developing the capacity of individual citizens, citizen groups, and community-level structures for effective and sustained engagement in health accountability.
- There are limited formal structures to enable and encourage all service users to provide direct and immediate feedback on service use experiences.
- Current accountability processes are largely driven by supply-side considerations with limited representation of and attention to demand-side and citizenry perspectives.
- The existing structures and processes to enable periodic and in-depth engagement of state actors with provider and citizenry actors, such as National Health and RMNCAH Assemblies and OPM-led barazas, are not consistently and universally implemented. They currently provide limited meaningful

participation of provider and citizen actors and are not adequately decentralized to enable meaningful action recommendations and practical follow-through on their implementation.

- There are no citizen-controlled and standardized processes, such as citizen notice boards, community-controlled barazas, community-held cell phones for calls and text messaging for holding elected representatives—members of Parliament and local government councilors—accountable for health stewardship.
- There are power imbalances between the citizenry and the state that hamper a practical and enforceable accountability relationship.
- There are no mechanisms or indicators in place to comprehensively and consistently measure and report on citizen contributions to health accountability (such as individual service users or through citizen-based advocacy, community structures, and so on).

3. Factors influencing accountability implementation

The factors influencing the implementation of accountability mechanisms in the health care system include (a) the area of focus of resources for health accountability, which determines which accountability processes are fully and effectively run and which actors are meaningfully and effectively engaged (ideally all three linkages—state-provider, provider-citizen, and citizen-provider—should be given equal focus and adequate resources); (b) the capacity of accountability actors to fulfill their accountability mandates through the existing mechanisms; and (c) the availability, accessibility, quality, and utilization of necessary data and information. These three factors are discussed briefly in the following subsections.

Focus of health accountability interventions

A key reason for the focus on specific accountability mechanisms is past experience of benefits or sanctions related to such mechanisms, such as RBF reporting. The content, focus, and purpose of health accountability, and specifically RMNCAH accountability, have been clearly articulated in national strategic documents, such as the NDP III, HSDP, and the Sharpened Plan. These documents have been disseminated to national-level institutions and DLGs to ensure that the state and provider actors in the accountability triangle are conversant with the need and rationale for accounting for the resources and implementation of interventions to achieve sector goals. However, to date, the focus of accountability mechanisms and the resources to implement them have been on the state-provider mechanisms—policies and guidelines for health service delivery, service planning and management standards, support supervision processes and tools, and monitoring and reporting on the services delivered. The state-citizen and provider-citizen mechanisms are still weak and inadequately resourced.

Capacity of accountability actors

The capacity of health accountability actors—the state, providers, and citizens—enables them to contribute meaningfully to accountability processes as mandated. The current capacity of health professionals was deemed by respondents to be inadequate to fulfill their accountability responsibilities within the health care planning, management, service provision, and reporting processes. This inadequacy was perceived at different levels of the health system. Several study

respondents reported that their formal and on-job-training does not adequately cover accountability issues, as exemplified by this statement from a facility staff:

Our nurses, laboratory technicians, doctors, and midwives are trained in medical schools, and those things of accountability were not part of the syllabus.

Despite this constraint, key informants mentioned some enablers that have helped build their capacities in accountability processes: (a) working in groups or teams with people of different capacities and experiences, thus facilitating learning and encouragement from one another; (b) regular and sustained accountability engagements, such as HUMCs; and (c) previous good accountability experiences that motivate the actors. One district official remarked,

We have review meetings every quarter, and we talk about the performance of the health facility as a HUMC, but also to the political wing. But also there are dialogues held in different communities, to know how our services have impacted the people and the gaps where we need to improve. That helps to keep accountability growing.

Availability, access, and utilization of necessary data and information

There was recognition consistent across all respondent categories that many of the accountability actions depend on availability and accessibility, timeliness and accuracy of key data, and data processing to generate a complete health accountability picture and inform action planning. Considering the participants' perspectives in the definition of health accountability discussed earlier, data and information are most available on financing, service delivery, and service outputs. Notable in this respect were data about service delivery problems that often trigger health accountability demands, such as the misuse of resources (money, medicine), occurrences or surges in specific diseases, and the deaths of mothers and children at health facilities or in the community. As noted by one facility staff,

It is my responsibility to collect data and to use it. When I meet a pregnant mother who has come for the second [antenatal care] visit and does not have Hepatitis B and HIV tests on the card, this wakes me up and I will ask myself, "What happened during the first visit?" This will prompt me to explore more.

Data and information about the health care system is largely restricted to the health workforce and health supplies. There are national-level strategic plans, but only limited information about the health plans for the subnational levels and the linkage between multiyear strategic plans and annual work plans at the different levels. Similarly, data and information on health outcomes is largely restricted to national-level periodic demographic and health surveys, which have limited subnational analysis, application, and linkage with health service outputs.

There is a notable effort to ensure access to available data by the different stakeholders through the public release of financial disbursements and service output reports. However, the displayed data are limited in analysis and difficult to interpret and translate into meaningful actions. Additionally, although the National Information Technology Survey 2017/18 reported high use of electronic media in transactions between government and citizens, only 17 percent of individuals who had interacted with any MDAs are aware of government or public services and information available online. Only 6 percent of those aware of e-government services have ever used such services (NITA 2018). The study

noted that many of the websites for districts and central government MDAs are poorly developed, irregularly updated, and largely underused.

Relationships between accountability and RMNCAH services

The study established that RMNCAH indicators and services are critical elements in health accountability in Uganda, especially with respect to three accountability dimensions: (a) in overall health sector strategic planning and coordination, (b) in budgeting and financing for health services, and (c) in health service delivery and reporting. It found that a range of RMNCAH service elements are key in the definition and measurement of health accountability and that RMNCAH-related issues and concerns are a common trigger and driver for accountability processes. Indeed, RMNCAH is a centerpiece in both multiyear and annual health plans and budgets, in the mobilization and disbursement of health financing, and in the systems for health service delivery.

The four main elements in accountability are adopted here to reflect the illustrated linkages between accountability and RMNCAH services: (a) the central place of RMNCAH in health planning, (b) the commitment to financing health in general and RMNCAH services in particular, (c) the systems in place to enable adequate and equitable delivery of health care that includes the full package of RMNCAH services, and (d) the evidence (data and information) that RMNCAH services reach the people who need them.

RMNCAH in health sector strategic planning and coordination

Vision 2040, the NDP III, the HSDP, and the Sharpened Plan are core reference documents that outline the “what” and “how” of health accountability, specifically for RMNCAH. All these strategic documents underscore and track RMNCAH-specific indicators, together with general health systems management indicators that have a direct bearing on RMNCAH service delivery.

Of the 20 health outcome indicators in the NDP III, 8 are RMNCAH specific and 4 are RMNCAH relevant. Similarly, 22 of the 41 results indicators for the HSDP are RMNCAH specific, including all 6 impact indicators, 10 of the 16 outcome indicators, and 6 of the 19 output indicators. The Sharpened Plan further pledges specific social accountability measures, such as Citizen Report Cards and the Community Scorecard (MoH 2016a), and commits to addressing two key gaps in accountability: (a) absence of a mechanism to track VHT performance in service support and (b) inadequate financial tracking—that is, irregular and often delayed efforts to generate National Health Accounts—and limited capture and reporting of resource flows at the district level. Respondents at the national level acknowledged that the Sharpened Plan has served as an important tool for mobilizing funding and technical support for RMNCAH services. One national key informant stated,

The Sharpened Plan was very clear in terms of mobilizing resources. It noted the unmet needs in reproductive health services and went further to show the geographical gaps in coverage with funded services. It was clear on what finances were actually required for us to get good results.

However, the macro-level programming and accountability commitments articulated in current plans, such as the HSDP and the Sharpened Plan, have not been fully operationalized at the district, health facility, and community levels. Planning for RMNCAH services at the district, facility, and community levels is largely limited to deciding how to spend allocated resources from the central

government, such as the PHC grant, RBF, and other support programs, but does not include what the district has determined is the actual resource need. For example, there is contention at the service delivery level (DLGs) about how to use the 30 percent PHC nonwage grant mandated for health promotion, disease prevention, and hygiene and sanitation with respect to (a) eligible activities to be included under each of the stated target components for this allocation, (b) the cadres of staff responsible to carry out the activities, and (c) the allocation of responsibility to manage and account for this allocation.

Accountability for RMNCAH financing

Health-financing projections at the national level reflect a commitment to RMNCAH services but remain largely unmet. The projected health financing need, as reflected in the HSDP 2015/16–2019/20, includes a 15 percent allocation to RMNCAH services, translating to a total amount of US\$2.29 billion over the 5-year period. Similarly, the projected need for RMNCAH services in the Sharpened Plan ranges from US\$1.9 billion for the middle best-buy, or most efficient, scenario, to US\$2.1 billion for the comprehensive and universal service coverage scenario. However, the government allocated budget over the 2016–20 period covered just 17–22 percent of this projected HSDP need.

Further, the allocation of the national and health sector budgets consistently reflects limited prioritization of health and, more specifically, PHC, the elements of which are most supportive to RMNCAH services. Government investment in health services from 2016 to 2020 shows an increasing trend in absolute amounts over time, but the proportion of national budget allocations to health and specific health components that bolster RMNCAH remained below the HSDP financing targets of 10–15 percent, as shown below in table 12.5. The allocation to PHC was 18–25 percent of the health sector budget, yet the bulk of RMNCAH services were delivered as part of the PHC package.

Accountability in RMNCAH service delivery

Findings related to accountability in RMNCAH service delivery included leadership and coordination mechanisms; infrastructure; human resources; the supply chain system; accountability for service delivery results; maternal, newborn, and adolescent health; stillborn births; and reproductive health and rights.

Leadership and coordination mechanisms. At the national level, RMNCAH is fully integrated into the MoH structure, with a MCH Focal Team and a TWG taking leadership of national planning and budgeting for the relevant service areas. Key stakeholder institutions, such as the health professional councils and associations, have been included in the technical aspects of RMNCAH service

TABLE 12.5 National budget allocation relevant to RMNCAH services (UGX billions)

LINE ITEM	2015/16	2016/17	2017/18	2018/19	2019/20
Overall national budget	23,972.25	26,360.45	29,008.54	32,702.82	40,487.90
Health budget	1,301.01	1,854.28	1,878.96	2,367.76	2,595.38
% allocation to health	5.4	7.0	6.5	7.2	6.4
Allocation of health budget to PHC	319.16	337.57	343.23	538.64	552.21
% health allocation for PHC	24.5	18.2	18.3	22.7	21.3
Allocation of health budget to NMS supplies	218.61	237.96	237.96	276.96	396.17
% health allocation for NMS	16.8	12.8	12.7	11.7	15.3

Source: MoFPED 2016, 2017b, 2018b, 2019, and 2020.

Note: NMS = National Medical Stores; PHC = primary health care; RMNCAH = reproductive, maternal, newborn, child, and adolescent health.

packaging, supervision, evaluation, and health workforce capacity development. However, they make a limited contribution to accountability monitoring and assurance with respect to actual service delivery and results or to medium- and long-term planning for necessary system changes, for example, in training, deployment, and certification of specific health professionals.

At the subnational level, managers of RMNCAH services are an integral component of overall DLG administration and management and of specific health sector management mechanisms at the district and municipal health offices. For example, the position of assistant DHO responsible for MCH was created at the local government level as further evidence of government commitment and institutional capacity for RMNCAH support. Supervision and monitoring of health service delivery, including RMNCAH services, is conducted at all levels of the health system in a hierarchical manner: central government to DLGs, DLGs to primary health facilities, and facilities to community.

Comprehensive, evaluative monitoring assessments include the Health Facility Quality Assessment Program and the annual LGPA conducted by the OPM. That annual assessment, which began in 2017, is based on 86 indicators covering DLG capacity in budget and accountability (10 indicators), cross-cutting systems (25 indicators), education sector management (18 indicators), health sector management (18 indicators), and water sector management (15 indicators) (OPM 2020).

Infrastructure. The HSD is a key subnational structure in RMNCAH management and accountability support, but it has not been fully functionalized to realize this potential.

The 2021 elections provided for 272 rural and 60 urban constituencies that constitute legitimate HSDs, with the potential to contribute to RMNCAH accountability strengthening by establishing HC IVs, which should provide comprehensive emergency obstetric and neonatal care. However, the functionality of HC IVs, as measured by their capacity to offer cesarean section and blood transfusion, is only 51 percent (MoH 2020). To address this infrastructure challenge, 81 health facilities are being remodeled and equipped under the Uganda Reproductive, Maternal and Child Health Services Improvement Project to upgrade and enable them to deliver basic emergency obstetric and neonatal care. Further, in November 2021, the MoH launched the Emergency Medical Services Policy, which it intends to operationalize as a critical support system for referrals, including for RMNCAH, from the community level up to NRHs.

Human resources for RMNCAH. Another area of notable progress is in staffing public health facilities at different levels. The reported positions filled compared to staffing norms for June 2020 was 75 percent for GHs, 90 percent for HC IVs, 81 percent for HC IIIs, and 56 percent for HC IIs (MoH 2021). Staffing levels for key cadres involved in providing RMNCAH services show an upward trend since 2010 (table 12.6).

TABLE 12.6 National staffing rates in government health services, 2015–20

CADRE	OCTOBER 2015	DECEMBER 2016	JUNE 2018	JUNE 2020
Medical physicians	72.2%	57.5%	62.6%	54.8%
Clinical officers	100.0%	100.6%	103.9%	95.9%
Nurses	83.1%	87.0%	100.2%	77.6%
Midwives	76.0%	79.6%	94.0%	100.0%
Anesthetic staff	29.7%	28.9%	29.9%	32.9%

Sources: MoH 2015b, 2017a, 2018a; and 2021.

The December 2019 abstract on government employees shows that these essential cadres are still inadequate for the country, with only 22,294 critical health professionals, such as physicians, nurses, midwives, clinical officers, and anesthetists, in government service (MoPS 2019). The number of physicians, nurses, and midwives translates to 0.46 per 1,000 people, much lower than the 4.45 recommended by the World Health Organization (WHO) as the “SDG index threshold” (WHO 2016). The total number of nurses in government service, as of December 2019, was 12,713; for midwives, it was 5,353. These numbers represent 86 percent and 53 percent, respectively, of the targets set in the *RMNCAH Sharpened Plan*. Staffing trends in the study districts are presented in table 12.7. They reflect a mixed picture, with dramatic improvements in some districts (for example, Moyo and Katakwi); stagnation in others (for example, Jinja and Kasese), and decline in others (for example, Lira and Hoima).

Supply chain system for RMNCAH. Availability of medicines was mentioned as a vital aspect of health accountability and is a key component of RMNCAH services, especially for child care and family planning services at health facilities and at the community level. A key indicator in all strategic planning documents and health sector reports is the availability of tracer commodities, which include RMNCAH-specific commodities. This is also a commonly used indicator for CSO monitoring of health accountability and health improvement advocacy. District- and facility-level respondents reported that low medicine stocks are a challenge, and this is corroborated by the *Annual Health Sector Report*, which records the frequent stock-outs of RMNCAH-specific supplies and a broader range of tracer essential supplies. One district key informant stated,

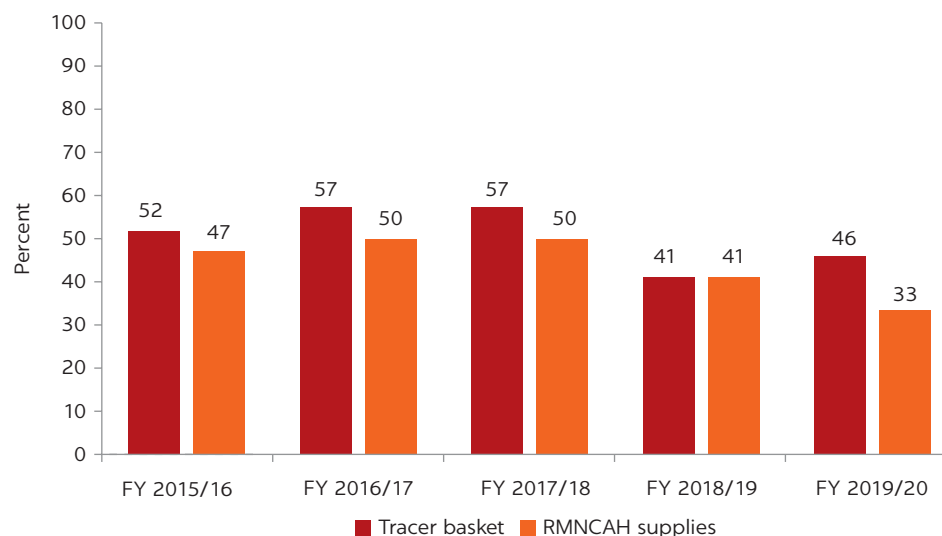
Last year we had shortfalls for some good months of long-term family planning methods and Fansidar for the pregnant mothers. We had to score poorly because National Medical Stores failed to deliver the drugs on time. In December, they delivered two cycles instead of the conventional three, which left a very big gap . . . From December to April we did not have all essential commodities and supplies for RMNCAH services.

Figure 12.2 presents a snapshot of the 5-year trend from FY 2015/16 to 2019/20.

TABLE 12.7 Staffing trends in the study districts

DISTRICT	APRIL 2015	DECEMBER 2016	JUNE 2018	JUNE 2020
Hoima	70.4%	62.6%	65.0%	63.0%
Jinja	94.7%	84.9%	92.5%	93.4%
Kasese	70.2%	63.5%	70.2%	82.6%
Katakwi	51.8%	59.8%	65.9%	74.6%
Lira	90.5%	100.3%	85.3%	4.5%
Luwero	76.8%	83.6%	87.3%	90.7%
Moyo	59.0%	82.1%	93.9%	97.9%
All districts	67.2%	70.9%	74.6%	74.0%
National total	68.9%	72.9%	75.7%	78.0%

Sources: MoH 2015b, 2017a, 2018a, 2021.

FIGURE 12.2**Percentage of health facilities with uninterrupted essential supplies, FY 2015/16 to 2019/20**

Sources: MoH 2016b, 2017b, 2018b, 2019a, 2020.

Accountability for service delivery results. The health of children and mothers is central to the tracking of health and development, as reflected in the SDG indicators and targets. The *World Health Statistics Overview 2019* includes 43 SDG indicators on health; 12 of them are specific to RMNCAH (WHO 2019). However, it is notable that many of the RMNCAH indicators do not have explicit global targets for 2030, which may compromise investment in and measurement of action in these areas of service. Examples include child nutrition status, childhood immunizations, skilled birth attendance, adolescent pregnancy rate, and met family planning needs. Given the importance of RMNCAH in improving the overall quality of life of the population, Uganda has set targets for RMNCAH indicators in all its strategic documents, including Vision 2040, NDP III, and HSDP. Uganda is also a signatory to other global commitments, such as Family Planning 2030. Every Newborn Action Plan, the global targets and strategies for Ending Preventable Maternal Mortality, all of which are aligned with the Global Strategy for Women's, Children's and Adolescents' Health (2016–30).

The national *Annual Health Sector Report* includes the District League Table, which ranks districts based on performance tied to 14 indicators: (a) 6 coverage indicators, 5 of them on RMNCAH services; (b) 5 quality indicators, 3 of them on RMNCAH services; and (c) 4 management indicators, all of them relevant to RMNCAH-related accountability (1 on human resources, 3 on reporting). Trends in RMNCAH service delivery outputs show modest improvements over the past 5 years as evidenced by primary data extracted from the DHIS2 for the different service areas discussed as follows.

Adolescent health. Vaccination against the human papilloma virus (HPV) to prevent cervical cancer was the consistently reported indicator in the DHIS2 that was used to reflect trends in adolescent services. Coverage with the second vaccination dose in the study districts increased from an average of 9 percent in 2016 to 15 percent in 2018 and then declined in 2019 to 13 percent. The coverage in 2020 was much lower, below 1 percent in all study districts except for three

(2 percent in Hoima; 1 percent in Jinja and Kampala). The dominant delivery of HPV vaccination in the study districts is school based and largely restricted to the child health days' campaigns conducted in April and October of each year. This finding may explain the "crash" in service coverage in 2020, linked to the COVID-19 response restrictions.

Adolescent attendance in outpatient department services, disaggregated in DHIS2 starting in 2020, reflects high attendance by both female and male patients, at 90 percent and 61 percent, respectively. This finding constitutes a major opportunity to expand HPV coverage and other adolescent health services if they are integrated into the routine health facility services, and it also reflects the importance of data in health accountability from the perspective of determining plans and budgets to address key health concerns in the population.

Maternal and newborn health. The trend of women starting antenatal care attendance in the first trimester in the study districts showed an average improvement of 10 percentage points between 2016 and 2020. However, the rate declined in Kampala by about the same margin (9 percentage points) over the same period. There were large variations in Katakwi and Obongi, which may reflect data quality gaps and the need for further research into the cause for these outliers; for Obongi, it may reflect the impact of large refugee populations on both service delivery and data quality.

Stillborn births. The trend in stillbirths at health facilities showed a steady decline in most study districts—generally in line with the national target. The rate in Hoima district was consistently higher but then steadily declined between 2018 and 2020. The situation in Kikuube district (carved from Hoima in July 2018) became worse over the study period.

Reproductive health and rights. Respondents highlighted two main components of reproductive health and rights that are of interest in health accountability: (a) family planning use and (b) sexual and gender-based violence (SGBV). Accountability interest with respect to family planning included provision of services to all in need, availability of methods that fit the choice of individuals, and addressing the social barriers to family planning access by women (for example, husbands) and adolescents (for example, sexual partners, parents, other family members). The reported provision of family planning services, as extracted from DHIS2, reflects an average increase of 21 percentage points for new users ages 20–49 years across the study districts from 2016 to 2020, and of 7 percentage points among women younger than age 20 years for the same period.

In relation to SGBV, the issues raised include awareness and responses to its presence; priority attention to health care as an important first step in the response process; availability of such needed services in health facilities; and the trend of reduction in such cases, attributed to increased awareness, mobilization for action, and active support systems. One district key informant commented,

There is CSO engagement in accountability. Like today, we are in the 16 days of activism campaign launch . . . sponsored by a CSO. One of the items on the agenda was accountability on the rate of gender-based violence cases. They gave us a lot of cases on gender-based violence in the district, and if the CSOs had not organized such an engagement, it means perhaps the report would have remained silent. Do you know that?

RECOMMENDATIONS

Based on the findings of this study, the following are proposed as recommendations for strengthening accountability in the health system and should be addressed by the MoH in collaboration with the different government and nongovernment actors in health accountability at the national, district, and community levels.

Engage all actors in health accountability

Given the importance in engaging all health actors as defined in the accountability triangle in health accountability, the MoH should lead a participatory process involving all key stakeholders to accomplish the following:

- Reinforce the centrality of citizen actors in the health-related accountability process and their respective engagements with the providers and state actors;
- Articulate key indicators to measure the respective mandates, participation, and impact of citizen, provider, and state actors in health-related accountability.

Address gaps in accountability mechanisms

Given the gaps in the existing accountability mechanisms, especially regarding the roles of citizens as actors in accountability, the following should be pursued:

- The OPM, working closely with the MoH, DLGs, and civil society stakeholders, should operationalize and institutionalize accountability structures and processes for all public services between citizen and state actors at the subnational and national levels and their specific applications to health-related accountability.
- The MoH, working closely with DLGs and civil society stakeholders, should refine the mandate and roles of the HSD structure with respect to participatory health accountability, ensure sustained operations of this structure in all districts and cities with more than one electoral constituency, and advocate for it to be included in the OPM-led mechanism for public services accountability recommended earlier.
- DLGs, with support from the MoLG and the MoH, should define the mandate and roles of local community structures—LC Is, LC IIs, and LC IIIs; VHTs; women councils; and youth councils—related to health accountability. They should operationalize this mandate in community development initiatives and services; develop and institutionalize mechanisms for assessing and developing the capacity of individual citizens, citizen groups, and community-level structures for effective and sustained engagement in health accountability; and strengthen HUMCs in their contribution to health accountability by including professionals and managers (including retired officers) with specific accountability experience.

Enhance data generation and utilization in accountability

- The OPM, in close collaboration with the MoICT, key MDAs responsible for health accountability, the MoH, and the NPA, should strengthen and

integrate data systems for health-related accountability—from DHIS, iHRIS, IFMIS, and LGPA—to regularly generate and disseminate comprehensive information on the different dimensions of health accountability to enable timely management decisions and actions.

- The OPM, in close collaboration with the MoH, the MoGLSD, and DLGs, should establish a mechanism to comprehensively and consistently measure and report on citizens' contribution to health planning and accountability and to create and sustainably operate citizen-controlled and standardized processes for holding elected representatives accountable on health planning, financing, systems operations, and service delivery.

Suggestions for further research on health accountability

- A follow-up study to define and assess the understanding and participation of citizens in health accountability is suggested. This study could build on the community-level elements initially planned as part of this study but not implemented because of the restrictions related to COVID-19 pandemic control.
- Implementation research is also recommended on capacity development in relation to different dimensions of health accountability and its contribution to health systems strengthening and health service delivery in general and to RMNCAH services in particular.

NOTES

1. The seven bottlenecks of focus are aligned to the WHO six health system strengthening blocks, with additional consideration of community ownership and demand generation.
2. The five strategic shifts of focus are (a) emphasizing evidence-based, high-impact solutions; (b) increasing access for high-burden populations; (c) geographical focusing and sequencing; (d) addressing the broader context; and (e) ensuring mutual accountability.
3. At the time of data collection, two of the study districts, Hoima and Moyo, had been recently subdivided to create new districts. Data on RMNCAH services were collected from the new districts of Kikuube and Obongi to capture experiences over the period of study focus when they were still under Hoima and Moyo districts, respectively, and the service and accountability transitions since they became new districts.

REFERENCES

- Baez-Camargo, C. 2011. "Accountability for Better Healthcare Provision: A Framework and Guidelines to Define, Understand, and Assess Accountability in Health Systems." Working Paper Series no. 10. Basel Institute of Governance, Basel.
- Baez-Camargo, C., and E. Jacobs. 2013. "Social Accountability and Its Conceptual Challenges: An Analytical Framework." Working Paper Series no. 16. Basel Institute on Governance, Basel.
- Cleary, S. M., S. Molyneux, and L. Gilson. 2013. "Resources, Attitudes and Culture: An Understanding of the Factors That Influence the Functioning of Accountability Mechanisms in Primary Health Care Settings." *BMC Health Services Research* 13. doi:10.1186/1472-6963-13-320.
- Dickinson, H. 2016. "From New Public Management to New Public Governance: The Implications for a 'New Public Service.'" In *The Three-Sector Solution: Delivering Public Policy in Collaboration with Not-For-Profits and Business*, edited by J. Butcher and D. Gilchrist, 41–60. Canberra: ANU Press.

- Emanuel, E. J., and L. L. Emanuel. 1996. "What Is Accountability in Health Care?" *Annals of Internal Medicine* 124 (2): 229–39. doi:10.7326/0003-4819-124-2-199601150-00007.
- Fozzard, A., and N. Foster. 2001. *Changing Approaches to Public Expenditure Management in Low-income Aid Dependent Countries*. Helsinki: United Nations University World Institute for Development Economics Research.
- Goodman, C., A. Opwora, M. Kabare, and S. Molyneux. 2011. "Health Facility Committees and Facility Management—Exploring the Nature and Depth of Their Roles in Coast Province, Kenya." *BMC Health Services Research* 11: 229. doi:10.1186/1472-6963-11-229.
- Gurung, G., S. Derrett, P. C. Hill, and R. Gauld. 2018. "Nepal's Health Facility Operation and Management Committees: Exploring Community Participation and Influence in the Dang District's Primary Care Clinics." *Primary Health Care Research and Development* 9: 492–502. doi:10.1017/S1463423618000026.
- ISER (Initiative for Social and Economic Rights). 2018. *Citizen Participation in Local Government Service Delivery Processes in Uganda*. Kampala: ISER.
- Kajungu, D., D. Lukwago, and G. Tumushabe. 2015. *Assessing Public Expenditure Governance in Uganda's Health Sector: The case of Gulu, Kamuli, and Luweero Districts: Application of an Innovative Framework*. ACODE Policy Research Series no. 69. Kampala: ACODE.
- MoFPED (Ministry of Finance, Planning and Economic Development). 2016. *National Budget Framework Paper Fiscal Year 2017/18–2021/22*. Kampala: MoFPED.
- MoFPED (Ministry of Finance, Planning and Economic Development). 2017a. *Accountability Sector Strategic Investment Plan 2017/18–2019/20*. Kampala. <https://www.finance.go.ug/publication/accountability-sector-strategic-investment-plan-201718---201920>.
- MoFPED (Ministry of Finance, Planning and Economic Development). 2017b. *National Budget Framework Paper Fiscal Year 2018/19–2022/23*. Kampala: MoFPED.
- MoFPED (Ministry of Finance, Planning and Economic Development). 2018a. *Uganda Public Financial Reform Strategy 2018–2023*. Ministry of Finance, Planning and Economic Development (accessed April 13, 2022), <https://www.finance.go.ug/publication/uganda-public-financial-management-reform-strategy>.
- MoFPED (Ministry of Finance, Planning and Economic Development). 2018b. *National Budget Framework Paper Fiscal Year 2019/20–2023/24*. Kampala: MoFPED.
- MoFPED (Ministry of Finance, Planning and Economic Development). 2019. *National Budget Framework Paper Fiscal Year 2020/21–2024/25*. Kampala: MoFPED.
- MoFPED (Ministry of Finance, Planning and Economic Development). 2020. *National Budget Framework Paper Fiscal Year 2021/22–2025/26*. Kampala: MoFPED.
- MoFPED (Ministry of Finance, Planning and Economic Development). 2021. "Ministerial Statement on the Parish Development Model." Kampala: MoFPED.
- MoH (Ministry of Health). 2013. *Guidance for Governance and Management Structures*. Kampala, Uganda: Government of Uganda, Ministry of Health.
- MoH (Ministry of Health). 2015a. *Health Sector Development Plan 2015/16–2019/20*. Kampala.
- MoH (Ministry of Health). 2015b. *Human Resources for Health Bi-Annual Report, October 2014–March 2015*. Kampala: MoH. <http://library.health.go.ug/human-resources-health/human-resources-health-bi-annual-report-improving-hrh-evidence-decision-1>.
- MoH (Ministry of Health). 2016a. *Investment Case for Reproductive, Maternal, Newborn, Child and Adolescent Health Sharpened Plan for Uganda 2016/17–2019/20*. Kampala: MoH. https://www.globalfinancingfacility.org/sites/gff_new/files/Uganda-Investment-Case.pdf.
- MoH (Ministry of Health). 2016b. *Annual Health Sector Performance Report Fiscal Year 2015/16*. Kampala: MoH.
- MoH (Ministry of Health). 2017a. *Human Resources for Health Audit Report: Improving HRH Evidence for Decision Making*. Kampala: MoH. <http://library.health.go.ug/human-resources-health/human-resources-health-audit-report-2017>.
- MoH (Ministry of Health). 2017b. *Annual Health Sector Performance Report Fiscal Year 2016/17*. Kampala: MoH.

- MoH (Ministry of Health). 2018a. *Human Resources for Health Audit Report 2017–2018*. Kampala: MoH. <http://library.health.go.ug/human-resources-health/human-resources-health-audit-report-201718>.
- MoH (Ministry of Health). 2018b. *Annual Health Sector Performance Report Fiscal Year 2017/18*. Kampala: MoH.
- MoH (Ministry of Health). 2019a. *Annual Health Sector Performance Report Fiscal Year 2018/19*. Kampala: MoH.
- MoH (Ministry of Health). 2019b. *Guidelines to the Local Government Planning Process: Health Sector Supplement*. Kampala: MoH. <http://library.health.go.ug/leadership-and-governance/guidelines/guidelines-local-government-planning-process-health-sector>.
- MoH (Ministry of Health). 2019c. *Uganda Patient Rights and Responsibilities Charter: June 2019*. <http://library.health.go.ug/monitoring-and-evaluation/quality-assurance-improvement/patients-rights-and-responsibilities>.
- MoH (Ministry of Health). 2020. *Annual Health Sector Performance Report 2019/20*. Kampala: MoH. <http://library.health.go.ug/human-resources-health/performance-management/annual-health-sector-performance-report-financial-0>.
- MoH (Ministry of Health). 2021a. *HRH Audit Report 2019/20*. Kampala.
- MoH, Health Systems 20/20, and Makerere University School of Public Health. 2012. *Uganda Health System Assessment 2011*. Kampala: MoH; Bethesda, MD: Health Systems 20/20, Abt Associates. <https://health.go.ug/docs/hsa.pdf>.
- MoICT (Ministry of Information and Communication Technology). 2011. *National Electronic Government (e-Government) Policy Framework*. Kampala: MoICT. https://ict.go.ug/wp-content/uploads/2019/12/National_E-Government_Policy_Framework_2011-2.pdf.
- MoPS (Ministry of Public Service). 2019. *Government Employees Abstract, 2019*. Kampala: MoPS.
- NITA Uganda. (National Information Technology Authority). 2018. *National Information Technology Survey 2017/18 Report*. Kampala: NITA/CIPESA.
- Nxumalo, N., L. Gilson, J. Goudge, B. Tsofa, S. Cleary, E. Barasa, and S. Molyneux. 2018. "Accountability Mechanisms and the Value of Relationships: Experiences of Front-Line Managers at Subnational Level in Kenya and South Africa." *BMJ Global Health* 3. doi:10.1136/bmjgh-2018-000842.
- OAG (Office of the Auditor General). 2017. *Value for Money Audit Report on the Reliability of the Government Annual Performance Report Produced by the Office of the Prime Minister (Focus on the Health and Agriculture Sectors)*. Kampala: OAG.
- OPM (Office of the Prime Minister). 2018. *Local Government Performance Assessment—2017 National Synthesis Report*. Kampala: OPM.
- OPM (Office of the Prime Minister). 2019. *Local Government Performance Assessment—2018 National Synthesis Report*. Kampala: OPM.
- OPM (Office of the Prime Minister). 2020. *Local Government Performance Assessment—2019 National Synthesis Report*. Kampala: OPM.
- OPM (Office of the Prime Minister). 2021. *Local Government Performance Assessment—2020 National Synthesis Report*. Kampala: OPM.
- Parliament of Uganda. 2016. *Parliament of Uganda Strategic Plan 2016/17–2019/20*. Kampala.
- Republic of Uganda. 2015. *Public Finance Management (Amendment) Act*. Kampala.
- Stewart, J. D. 1984. "The Role of Information in Public Accountability." In *Issues in Public Sector Accountability*, edited by A. Hopwood and C. Tomkins, 13–34. Oxford: Philip Allen.
- UBOS (Uganda Bureau of Statistics) and ICF. 2018. *Uganda Demographic and Health Survey 2016*. Kampala: UBOS; Rockville, MD: ICF.
- United Nations. 2017. *Resolution Adopted by the General Assembly, A/RES/71/313 July 6, 2017*. New York.
- WHO (World Health Organization). 2014. *Health Systems Governance for Universal Health Coverage: Action Plan*. Geneva: WHO. <https://www.who.int/publications/i/item/WHO-HSS-HSF-2014.01>.

WHO (World Health Organization). 2016. *Health Workforce Requirements for Universal Health Coverage and the Sustainable Development Goals*. Geneva: WHO. <https://www.who.int/publications/i/item/9789241511407>.

WHO (World Health Organization). 2019. *World Health Statistics Overview 2019: Monitoring Health for the SDGs, Sustainable Development Goals*. Geneva: WHO. <https://www.who.int/publications/i/item/9789241565707>.

World Bank. 2004. *World Development Report 2004: Making Services Work for Poor People*. Washington, DC: World Bank.

VI **Lessons learned**

13 Lessons Learned from Implementing the RMNCAH Operational Research Program

The following lessons were learned during the implementation of the Reproductive Maternal, Newborn, Child, and Adolescent Health Operational Research Program in Uganda and could help guide the design and implementation of similar future projects:

- **Creating a National Advisory Committee provided critical strategic direction and ensured sectoral ownership of the program design and implementation.** The RMNCAH Operational Research (OR) program established the National Advisory Committee, consisting of representatives RMNCAH Operational Research, the Ministry of Health (MoH), development partners, civil society, academia, and front-line practitioners, to provide technical guidance on the design and implementation of the program studies. The expertise of advisory committee members provided timely, context-specific guidance to the researchers, from conceptualization to completion of their respective studies. Furthermore, the involvement of top management from MoH on the committee, particularly the director general of Clinical Services and the commissioner for Maternal and Child Health Services, ensured that study topics would be aligned with the priority research needs of the sector and also facilitated the process of securing clearances for researchers to access the Health Management Information System as well as to conduct interviews at the district and subdistrict levels. The MoH leadership and management also mobilized relevant MoH technical working groups to review the draft research reports and ensured the incorporation of preliminary study findings in ongoing policy dialogues, particularly the update of the reproductive, maternal, newborn, child, and adolescent health (RMNCAH) Sharpened Plan for 2020/21–2024/25.
- **Leveraging an extensive network of in-country and external experts helped ensure and enhance the quality of the studies.** The 12 studies supported and the extensive technical reviews across each stage of their progress, from proposal development to finalization of manuscripts for publication, necessitated an impressive roster of technical reviewers. Therefore, the secretariat of the OR program the World Bank, put together a team of RMNCAH experts consisting of its staff, in-country experts, including faculty from the Makerere University School of Public Health (MakSPH), and MoH technical personnel. In addition, the 23 researchers served as peer reviewers for the studies, assessing them in general and

providing technical input where needed. The wide and multilayered mix of RMNCAH experts introduced new perspectives to the technical reviews that enriched the quality of the research proposals and reports.

- **Engaging a national university to coordinate the training, logistics, and data collection activities of research teams proved essential for successful implementation and completion of the studies.** The 12 studies of the OR program were simultaneously implemented by teams of researchers in various districts across Uganda. Due to the limited capacity within the World Bank to adequately coordinate logistics for the team of researchers for each of the studies, it engaged MakSPH through a competitive-bidding process to oversee implementation of the studies. With extensive experience in public health research, MakSPH houses a research grants management unit accustomed to coordinating large-scale studies. It also has a pool of professionals in the various priority research areas of the OR program who facilitated refresher training sessions for researchers, a network of district-based stakeholders who helped the respective research teams mobilize key informants and arrange interviews, a network of at least 200 research assistants across the country who supported data collection and analyses, and basic resources for simultaneously transporting and supervising research teams to conduct fieldwork. The school also has information and communication technology platforms and digital tools and experience for remote learning that facilitated virtual training of researchers, data collection, and progress reviews and validation meetings in the midst of COVID-19 restrictions. MakSPH's comparative advantages and existing research capacity helped to promptly resolve implementation challenges researchers faced and generally filled the gaps in areas where the World Bank lacked sufficient capacity.
- **Collecting credible research data through virtual methods can be viable but there are limitations.** Soon after the National HIV/AIDS Research Committee (NARC) approved all the research proposals for implementation, the World Health Organization declared the outbreak of COVID-19 in March 2020. In that same month, the pandemic rapidly reached Uganda, and the government imposed restrictions on travel and public gatherings to impede transmission of the coronavirus. The response to the pandemic necessitated the amendment of all approved research protocols to adopt methods that would mitigate the risks of COVID-19 transmission. All the amended protocols and risk management plans were reviewed and approved by NARC and the Uganda National Council of Science and Technology. Adapting to the new context, all studies incorporated virtual means of data collection, which included telephones, video-guided communications, and internet-based conferencing platforms, such as Zoom and Skype. These virtual methods were effective in collecting data from key informants who had internet connectivity and access to telephones. However, these technologies were more difficult to use more broadly for focus group discussions and also made it a bit more challenging to build a rapport with respondents, assess their nonverbal cues, and more thoroughly probe. These limitations notwithstanding, all the studies successfully leveraged the virtual methods of data collection, with only two studies noting the need for follow-up fieldwork to substantiate and further validate findings.
- **Adapting the research design to the existing circumstances in short order was essential for successful implementation of the OR program.** Another key aspect for successful implementation of the OR program during the

pandemic hinged on quick adaptation of the program design to allow for the inclusion of district-based facilitators to mobilize research participants and schedule data collection activities across several districts. District facilitators worked with the investigators and research assistants to accomplish invaluable tasks:

- Mobilize and prepare lists of eligible district- and facility-level personnel (for example, health workers and members of the Health Unit Management Committees and Village Health Teams) from which the participants were selected;
 - Develop schedules and collect contact details (for example, telephone, Skype addresses) of all the selected participants who confirmed interviews, and notify the research teams;
 - Obtain sealed, written informed consent forms from the participants, and send them to the research team; and
 - Follow up with the selected participants to ensure that interviews were successfully conducted.
- **Recruiting researchers should be conducted quickly and efficiently to speed initiation and delivery of the final products.** The approach used to recruit researchers was long and strenuous because of the multiple steps in the screening, short-listing, and final selection processes. The method of reviewing and selecting applications should in future studies be simplified to utilize program resources more efficiently. In particular, such efforts should consider a four-step process of advertising the positions, short-listing candidates, interviewing the finalists, and hiring those most qualified. Steps such as requesting short-listed candidates to submit draft study protocols, though useful in understanding researchers' interpretation of the research question, also prolonged the hiring process. The draft protocols can be prepared and internally reviewed after hiring, which would also provide more time for researchers' to adequately conceptualize and refine the protocols.

APPENDIX A

Summary of the Key Findings and Recommendations of the Studies

SERVICE DELIVERY

Chapters 1–6 discussed findings and recommendations related to reproductive, maternal, newborn, child, and adolescent health (RMNCAH) service delivery.

1. Assessment of the Functionality of Health Center IV Facilities in Uganda and Suggestions for Improvement, by Simon Muhumuza and Anthony Begumisa

Aims and methods: This study aimed to determine the level of functionality of Health Center (HC) IV facilities across Uganda. It sought to identify the key challenges to these facilities' health service delivery and solicited stakeholders' perspectives on how to ensure sustained improvement in the delivery of RMNCAH services at the facilities. The study used a mixed-methods approach to collecting data—including key informant interviews, a review of relevant literature, and a retrospective analysis of data on HC IV facilities using District Health Information Software version 2 (DHIS2). The study assessed the functionality of all 204 HC IVs in Uganda across two main dimensions: (a) their ability to deliver on seven signal functions of comprehensive emergency obstetric and newborn care (CEmONC) and (b) their performance on each of the World Health Organization health system building blocks.

Findings: The study found that there remains weak delivery of CEmONC services to address the major causes of maternal and neonatal deaths in Uganda, which cluster around labor and delivery management and include hemorrhage, obstructed labor, complications of abortion, birth asphyxia, trauma, and sepsis. Of the 204 HC IV facilities assessed, only half (103) provided all seven signal functions assessed. This finding indicates that functionality of the HC IVs still falls short of the 60 percent target outlined in the Health Sector Development Plan for 2015/16–2019/20.

A review of performance by signal function showed that all HC IVs provided the following signal functions: parenteral uterotonic drugs, parenteral antibiotics, manual removal of the placenta, and removal of uterine products. However, there were variations in capacity to deliver basic neonatal resuscitation, cesarian sections, and blood transfusions; only 51 percent of facilities were capable of these services. On the health system building blocks, the study noted significant constraints across all pillars, underscoring the key challenges Uganda faces in bolstering its health system to effectively deliver health services.

Recommendations: The study authors recommend that the Ministry of Health (MoH) do the following:

- Improve training, mentorship, supervision, and financial and logistical support for HC IV management (including in-charges and members of the Health Unit Management Committees [HUMCs] and District Health Management Teams [DHMTs]).
- Harmonize systems for data collection in the health sector and streamline monitoring and evaluation processes across donor- and government-financed programs.
- Increase investments in underperforming signal functions.
- Increase the availability of blood and blood products, including investments in blood storage capacities.
- Finalize and implement key policies on health sector staffing norms and the delivery of emergency medical services.

2. Review of the RMNCAH Referral Pathway in Rural and Urban Settings in Uganda, by Gorrette Nalwadda

Aims and methods: The study examined referral pathways to the provision of RMNCAH services, enablers or key challenges to effective RMNCAH referrals, and options for enhancing performance of the referral pathway. The study used a mixture of quantitative and qualitative methods to collect data in four regions (Bushenyi, Kampala, Pallisa, and Gulu) from pregnant women, mothers of children younger than age five, female and male adolescents receiving RMNCAH services, and health workers at RMNCAH care points in 10 rural and urban facilities.

Findings: The study found that while the MoH has developed guidelines for the referral of cases along a sequential chain of health care levels, in practice, referrals occurred in an ad hoc manner, and some referrals were unnecessary.

Enablers: The enabling factors identified included the appropriate use of referral tools, notably, referral notes; patients' ability to pay for services or the provision of financial programs to assist needy patients; the availability of performance-based incentives to improve the delivery of services; strong accountability mechanisms; enhanced community advocacy through Village Health Teams; and the use of digital platforms, such as the web-tracking referral system piloted in the Kampala Capital City Authority.

Challenges: Challenges to effective referral pathways included inadequate financing for system improvements; a shortage of health personnel, equipment, essential medicine and supplies (including blood products), and ambulances at each level of care; weak coordination among health facilities (referring and receiving); and poor training and sensitization of stakeholders across the referral continuum on available guidelines and procedures.

Recommendations: The study author recommends that the MoH do the following:

- Increase investments to strengthen the referral pathway, including emphasis on training staff; formalizing and promoting widespread sensitization on the referral pathway; and making available essential medicines, supplies, and commodities at the designated levels of care.
- Provide standard guidance for designated authorities and their alternates to fill in and sign referral notes.

- Strengthen interfacility collaboration, including providing clarity on referral networks, enhancing the capacity of national dispatch centers, and exploring the use of digital platforms to facilitate real-time information-sharing between referring and receiving facilities.

3. Assessment of the Implementation of Maternal and Perinatal Death Surveillance and Response in Uganda, by *Symon Peter Wandiembe and Paul Mubiri*

Aims and methods: The study sought to assess progress on the implementation of maternal and perinatal death surveillance and response (MPDSR) at different levels of health care delivery. It also sought to assess health workers' perceptions regarding the role and contribution of MPDSR, to identify factors that affect the uptake and sustainability of MPDSR at the health facility level, and to propose strategies for improving and sustaining MPDSR in Uganda. The study was qualitative and gathered data on markers of institutionalization through document reviews and interviews with health workers from 17 health facilities purposively sampled from 13 districts.

Findings: Overall, the study found that districts and health facilities have made notable progress toward institutionalizing the MPDSR process, with most facilities at an advanced stage of implementation. MPDSR has helped enhance the reporting of maternal deaths, although progress on reporting perinatal deaths has been marginal, and the quality of the reviews is still inadequate. At the time, more than 66 percent of cases of maternal deaths were reviewed, whereas only 10 percent of cases of perinatal deaths were reviewed. One reason for this discrepancy was the limited staff capacity to report on both, with priority given to maternal deaths. Further, MPDSR has helped improve knowledge and the behavior of health care workers, although adherence to the national guidelines and the review process was inconsistent and needed to be better standardized and enforced.

Enablers: The study identified several enablers of successful implementation of MPDSR, including strong political commitment at the national, district, and facility levels; health workers' personal initiative and proactivity; and regular review meetings, including the availability of funding to facilitate the meetings.

Challenges: Barriers to MPDSR implementation included limited financing; limited inclusion of community actors in the discussion of review findings; lack of health worker training on MPDSR; poor data quality; and the persistence of a punitive culture, which curtails open discussion of failures and remedies.

Recommendations: The study authors recommend the following, among other actions:

- Increase government financing for MPDSR implementation.
- Enhance multistakeholder engagement, including community engagement, in the review and resolution of the findings.
- Reinforce capacity building for all stakeholders.
- Strengthen accountability measures (support supervision) to ensure follow-through on response actions.

4. Coverage, Delivery Approaches, and Utilization of Adolescent-Friendly Health Services Related to Sexual and Reproductive Health in Uganda and Factors Influencing Their Expansion, by *Nicolette Nabukeera-Barungi and Peter Elyanu*

Aims and methods: The study examined the accessibility of adolescent-friendly health services (AFHS) across the dimensions of coverage, delivery approaches, utilization, and enablers or hindrances. The study used a cross-sectional, mixed-methods approach and collected data using a review of relevant literature, a review of health facility records in the DHIS2, key informant interviews (KIIs), in-depth interviews (IDIs), and focus group discussions (FGDs).

Findings: The study estimated AFHS coverage to be between 17 percent and 71 percent, depending on the tools and criteria used by existing studies. Based on the MoH's own approach, which uses the presence of a youth corner in public health facilities, coverage is assessed to be 71 percent, but the study notes that this estimation is potentially misleading, because youth corners do not provide comprehensive services. The study underscores a lack of standardized operational tools and frameworks to uniformly assess AFHS coverage in Uganda and highlights the shortcomings of inferring coverage from studies conducted by partners using differing metrics. At the same time, it found that the minimum standards defined in the national policy are unrealistic in Uganda.

Analysis of DHIS2 data for 132 health facilities showed that adolescents using youth corners were significantly more likely to be first-time condom users and to use intrauterine devices and Microgynon contraceptives, as compared with those in health facilities without youth corners. However, the study also notes that given Uganda's limited resources, it would be best to shift from dedicated AFHS programs to adolescent-responsive delivery approaches, where provision of AFHS is integrated into overall health care delivery. The study also identified enablers and challenges of AFHS delivery.

Enablers: Four broad factors were found to enable effective AFHS: (a) the availability, timely dissemination, and sensitization of updated guidelines on AFHS; (b) an effective and well-resourced national HIV/AIDS program; (c) sustained advocacy for and prioritization of AFHS in sectoral policies and strategic plans; and (d) adequate and effective training of health care workers, teachers, religious leaders, and other important interlocutors on adolescent and sexual and reproductive health (SRH).

Challenges: Challenges include limited funding for AFHS, the stigma associated with sex education for adolescents and the sociocultural impediments to the provision of SRH services for youth, socioeconomic disparities limiting AFHS access for adolescents in nonurban settings, and inadequate numbers of health workers and community resource persons trained in the provision of AFHS.

Recommendations: The study authors recommend the following:

- Increase domestic funding and sustain donor partner engagement for AFHS.
- Adopt minimum AFHS standards that are realistic in Uganda's context.
- Standardize tools for evaluating AFHS in line with national policy.
- Improve multisectoral coordination at the national and district levels to ensure the systematic rollout of AFHS.
- Promote efficient AFHS delivery models.
- Adopt appropriate channels for sensitizing youth and communities on AFHS.
- Increase the engagement of vulnerable youth—particularly girls—in the use of available AFHS.

5. Factors Contributing to RMNCAH and Family Planning Outcomes among the Batwa, Benet, and Ik in Uganda, by Elizabeth Kwagala and Miriam Gesa Mutabazi

Aims and methods: The study assessed maternal and newborn health (MNH) and family planning outcomes among three historically marginalized (indigenous) groups in Uganda: the Batwa, the Benet, and the Ik. It aimed to identify the causes of disproportionately poor RMNCAH outcomes among these groups and to propose recommendations for addressing the sociocultural barriers to service use and delivery. The study used a cross-sectional exploratory approach, based on a literature review, IDIs, KIIs, and analysis of data from the DHIS2.

Findings: The study identified six primary barriers to health service use among the three indigenous groups: (a) relatively higher levels of poverty, which inhibited the ability to access services; (b) poor quality of existing health facility infrastructure, coupled with poor treatment (perceived or real) of ethnic minorities by service providers; (c) the relative remoteness of the regions, making it difficult to physically access facilities; (d) community distrust of health providers and “outsiders” and lack of competent interlocutors to provide culturally sensitive training; (e) pervasive and powerful influence of sociocultural practices, which impeded the adoption of modern methods; and (f) a paucity of reliable and updated data on the level of RMNCAH coverage in indigenous groups, limiting efforts to better target interventions.

On family planning, the study found that low usage of modern contraceptive methods is attributable to several causes: (a) the desire for large numbers of children related to high infant mortality rates and the fear of extinction, (b) male dominance in households and males’ traditional resistance to modern methods of family planning, (c) poorly tailored family planning counseling for indigenous groups, (d) lack of privacy at health facilities, (e) limited knowledge of available culturally appropriate family planning methods, and (f) fear of side effects.

Recommendations: The study authors recommend that the MoH do the following:

- Enhance community engagement programs, with a view toward building long-term, trust-based relationships.
- Provide resources for renovating health facilities and upgrading equipment for better family planning services.
- Introduce maternity waiting homes in the three indigenous communities to reduce delays in accessing appropriate MNH care and family planning services.
- Train health personnel on sociocultural sensitivities and enforce penalties for poor service delivery.
- Promote the generation and use of disaggregated district-level and community-level data in partnership with the Uganda Bureau of Statistics to better understand and compare RMCNAH outcomes within these groups and to better target interventions.

More broadly, the study authors also recommend that MoH work in collaboration with other sectors to adopt a multisectoral approach to reversing the poor outcomes for these groups. Key areas for collaboration include resettlement of indigenous communities (particularly the Batwa), provision of key infrastructure in health and education, and improved transportation and connectivity.

6. Factors Influencing the Use of Modern Family Planning Methods among Sexually Active Individuals in Uganda, by Xavier Nsabagasani

Aims and methods: The study aimed to (a) assess the contextual, sociocultural, religious, gender, and human rights factors that explain the use of family planning among sexually active women and men, including adolescents, in 10 districts across Uganda; (b) examine the sociocultural, religious, gender, and human rights factors that explain the nonuse of family planning among this population; and (c) identify ways to improve the uptake and use of modern family planning methods by this population.

Findings: The study found that factors contributing to the use of modern family planning methods included (a) availability of donor financing to train service providers and to provide free family planning commodities to users; (b) sensitization of women who seek family planning and other health services, such as HIV care and immunization, on the available methods, benefits, and side effects; (c) increasing economic hardship, driving or forcing couples or partners to seek the use of modern family planning methods as a way to limit the number of children; and (d) urbanization and a growing labor market without maternity and paternity leave and no affordable and reliable child care. Factors accounting for the nonuse of modern family planning methods included (a) frequent stockouts of family planning commodities; (b) the lack of effective solutions to address concerns about side effects; (c) individuals' and couples' continued preference for a large number of children (particularly in rural settings) in line with socio-cultural norms; (d) the lack of consensus between couples on the use of family planning and on the choice of methods; (e) the sociocultural and religious emphasis on the traditional methods of family planning and concerns about side effects of modern family planning; and (f) moral concerns about the introduction of contraceptives rather than encouraging abstinence.

Recommendations: The study recommends that the MoH, working in partnership with other sectors, should do the following:

- Incorporate individual rights into modern family planning access and use within legislation and policies to improve service delivery.
- Improve the availability of different modern family planning methods, as well as support approaches for effective use of traditional family planning methods, to improve the overall success of contraception.
- Strengthen partnerships with religious and cultural leaders to develop and disseminate accurate, culture-appropriate, and practical information on facts and misperceptions about family planning, as well as the socioeconomic and health benefits of family planning.
- Spearhead the mainstreaming of family planning aspects into other relevant national policies and programs, such as the livelihood programs for young women and out-of-school adolescents, to harness the country's demographic dividends in line with its third National Development Plan.
- Lobby the Ministry of Finance, Planning and Economic Development to increase funding for modern and traditional family planning services and to ensure that program managers and district local government leaders prioritize and implement them.

HEALTH WORKFORCE

Chapter 7 discussed findings and recommendations related to the health workforce.

7. Factors Affecting Health Workers' Ability to Reduce Peripartum and Postnatal Morbidity and Mortality in Uganda, by Jolly Beyeza-Kashesya and Olivia Nakisita

Aims and methods: The study assessed the enablers of and hindrances to effective peripartum and postnatal service delivery in 6 selected districts and 19 health facilities at all levels. The study was cross-sectional and used a qualitative approach, namely KIIs, IDIs, and FGDs, to collect data from MNH policy makers and program managers, health facility workers, and service clients.

Findings: The study identified six enablers of service delivery: (a) the effective translation of the updated national policies and guidelines on MNH service delivery and their dissemination to lower levels of care; (b) strong health facility leadership, combined with providers' positive and proactive work ethic and an organizational culture of accountability; (c) availability of skilled health personnel and an adequate number of midwives, medical officers, and nurses in line with staffing norms; (d) the availability of essential inputs, particularly medicine, supplies, and equipment; (e) appropriate infrastructure, accommodation for critical health personnel, and reliable utilities; and (f) complementary financing through development partners to fill resource gaps. Factors hindering the delivery of services included (a) inadequate financing for service delivery; (b) weak leadership and management skills at the facility level; (c) limited practical training in the core medical curriculum on the management of MNH complications; (d) limited options for continuous professional development, especially in the specialized field of MNH; (e) inexperienced staff and inadequate mentorship and support supervision for newly appointed personnel; and (f) low remuneration and motivation of staff, poor health worker attitudes, and fatigue due to excessive workloads.

Recommendations: Among the study authors' recommendations are the following:

- Enhance training and routine professional development of health personnel in technical as well as in managerial fields.
- Adopt innovative approaches to health financing, including the option to mainstream successful models of performance-based financing programs.
- Increasing investments in emergency medical services, particularly in emergency obstetric and newborn care.
- Improve remuneration of staff and enhanced packages, including nonmonetary incentives, such as the provision of accommodations, for medical personnel.
- Strengthen the health workforce in number and competence by recruiting skilled personnel in maternity units and engaging senior practitioners and experts in MNH to provide on-the-job mentorships and support supervision.
- Improve the physical work environment for MNH by expanding maternity and postnatal wards and equipping them with the essential facilities to adequately accommodate the growing number of clients.

FINANCING

Chapter 8 discussed the findings and recommendations related to financing.

8. Situation Analysis of Results-Based Financing for RMNCAH Services in Uganda, 2014–21, by Chrispus Mayora, Aloysius Ssenyonjo, and Elizabeth Ekirapa-Kiracho

Aims and methods: This study aimed to identify, describe, and assess selected national results-based financing (RBF) programs, emphasizing their design, implementation, target population, and service packages. It examined the extent to which these programs have been consistent with the National Results Based Financing Framework and assessed their impact on RMNCAH services. It also explored the factors that facilitated or constrained RBF implementation, identified key lessons learned, and proposed recommendations. The study used case studies and a mixed-methods data collection approach, involving a review of published and unpublished literature, a synthesis of quantitative data for project evaluations, and KIIs with national- and subnational-level RBF stakeholders.

Findings: The study found that overall, RBF programs had a positive impact on the delivery of essential RMNCAH services, particularly in antenatal care visits, deliveries by skilled attendants, postnatal care, postpartum family planning, referrals, immunization, outpatient care, nutrition services, and structural quality. RBF also enhanced facility management capacity and the culture for data generation and use, as well as increased staff motivation, responsiveness to clients, and teamwork.

Enablers: The increased utilization of RBF was attributed to public awareness campaigns, cost reductions, and system capacity enhancements. Successful implementation of RBF programs was attributed to several factors, including (a) enhanced organizational and institutional capacity, (b) strong local ownership, (c) stakeholder engagement, (d) the use of existing structures and tools, (e) the adoption of a “learning-by-doing” approach, (f) increased provider autonomy and decision-making capacity, and (g) teamwork.

Challenges: The challenges identified included persistent (a) *delays in the payment of funds* to participating facilities among both supply- and demand-side programs; (b) inadequacies in health system inputs; (c) *discrepancies in targeting* of beneficiary populations, leading to mixed views on whether the targeted populations received the essential services; and (d) a *scarcity of vouchers*, which created a “black market” and undermined the objectives for providing low-cost services to vulnerable populations.

Recommendations: The study authors call on the MoH to do the following:

- Strengthen health system governance as a foundation for optimizing the impact of RBF programs.
- Support regional teams, districts, and facilities to adopt the use of digital technology and platforms to expedite the requisitioning, approval, and disbursement of RBF funds to beneficiaries.
- Improve MoH’s methodology and evidence base for targeting beneficiaries, provide for routine monitoring of progress to assess achievement of intended program objectives, and embed processes for course correction.
- Undertake periodic capacity assessments of RBF providers to identify and address capacity gaps.

The study also reinforced the importance of institutionalizing RBF in the health sector and proposed that implementers draw on lessons learned to enhance performance and avert pitfalls.

HEALTH INFORMATION SYSTEMS

Chapters 9 and 10 discussed the findings and recommendations related to health information systems.

9. Assessing the Quality of Birth and Death Registration and the Vital Statistics System in Uganda, by Simon Kasasa and Joseph Akuze

Aims and methods: The study aimed to (a) establish the current performance in coverage, completeness, timeliness, and accuracy of civil registration in Uganda; (b) assess the status of the national vital statistics system; (c) document factors that impact the performance of the civil registration system; (d) document lessons learned while implementing the civil registration system; and (e) establish existing opportunities and capacities in terms of linkages and technologies that are currently being used in civil registration. The study utilized a cross-sectional design and mixed methods for data collection, including desk review, stakeholders' engagement meetings, KIIs, IDIs, FGDs, and analysis of data from the DHIS2 and the Mobile Vital Records System (MVRS).

Findings: The study found that despite the increased efforts over the past decade to improve civil registration and vital statistics (CRVS) in Uganda, the system faces significant challenges that impede effective data collection and analysis. As a result, the coverage of CRVS, particularly for birth and death registration, is low—with only 30 percent of births registered and less than 10 percent of deaths registered. Furthermore, issues of completeness remain, with critical information often missing from birth and death registration forms. The existing laws and guidelines, while useful, are also sometimes contradictory, and regulations—to ensure compliance with birth and death registration requirements—are rarely enforced, thereby worsening the timeliness of reporting. Fees are additional barriers to the timely certification (after registration) of births. In spite of the challenges, the study noted that the provision of donor financing to support CRVS, through organizations such as UNICEF and the World Bank, has helped improve birth and death reporting, and the launch of innovative platforms, such as the MVRS, is helping digitize birth and death registration. Furthermore, the increasing desire for birth certificates for notable events (such as registration for academic examinations) is creating an incentive for citizens to get births certified despite the fees.

Recommendations: The study authors recommend that the National Identification and Registration Authority (NIRA) do the following:

- Clarify the roles of key CRVS stakeholders, in line with the Registration of Persons Act 2015, and effectively engage them to improve coordination of registration of vital events.
- Enhance the interventions designed to increase birth and death registration at the subdistrict levels, particularly at the community level.
- Identify a strategy for ensuring sustained implementation and financing of CRVS interventions beyond the limited scope of donors, including the

Uganda Reproductive, Maternal, and Child Health Services Improvement Project (URMCHIP), scheduled to conclude by December 2023.

- Intensify the efforts to transition to an electronic process for data notification and registration, provide training in improved data capture at points of care, sensitize communities to when and how to register births and deaths, and complete the scale-up of MVRS to lower-level facilities as envisioned.
- Sustain dialogue on ensuring interoperability across the various data platforms that collect CRVS, including DHIS2, the Civil Registration Information Management System, and the Uganda Bureau of Statistics database.

Furthermore, it is recommended that NIRA explore options for eliminating or reducing the fees associated with birth certification, especially for poor households and persons.

10. Enablers, Deterrents, Lessons Learned, and Recommendations Concerning the Use of the RMNCAH Scorecard at the District and Health Facility Levels in Uganda, by Richard Kibombo and Samuel K. Kayabwe

Aims and methods: This study assessed the rollout of the RMNCAH Scorecard in eight purposively selected districts in Uganda, focusing on the following dimensions: (a) strategies adopted by the MoH for the rollout of the scorecard; (b) the level of adoption and use of the scorecard at the district and facility levels; (c) the primary enablers and challenges of scorecard implementation; and (d) recommendations for increasing scorecard use. The study used a cross-sectional, qualitative design. Document reviews, KIIs, and semi-structured interviews were utilized to collect data from relevant MoH and implementing partner officials at the national level, district health information system managers, health facility managers, data officers, and other key stakeholders.

Findings: In general, there was positive feedback—especially at the district level—on the usefulness of the RMNCAH Scorecard. Its utility is in providing concise and simple information, presented on a visual schematic of red-yellow-green, on performance and progress toward sectoral targets, which helped managers in decision-making. However, the reliance on implementing partners to roll out the scorecard not only minimized local government ownership and the quality of training delivered but also resulted in variations in its use across districts. Furthermore, limited MoH support supervision, coupled with inadequate financing, resulted in minimal follow-through on the cascade approach, which required that trained district-level personnel also trained facility-level implementers. Hence, while all eight districts studied were using the scorecard, only three of them had information on how many health services facilities had been trained and had adopted the scorecard. In fact, in the facilities, personnel tended to have minimal appreciation for the scorecard and reported that it created the additional administrative burden of monitoring and tracking RMNCAH performance, amid broader competing demands. Also, while electronic data access and real-time decision-making were important aspects of the scorecard rollout strategy, these features were not fully realized because—for the most part—only biostatisticians had the requisite training and skills to generate the reports. Furthermore, HCs, particularly the HC IIIs, lacked the necessary infrastructure (that is, computers and reliable internet) to readily generate and use the scorecard data.

These constraints limited the usefulness of the scorecard and impacted general appreciation for its use.

Recommendations: Moving forward, the study recommended that the MoH

- take on greater ownership and accountability for the rollout of the scorecard and, over the long-term, adequately finance and sustain it;
- draw on lessons learned from the implementation thus far to refine the scorecard, update its training modules to align with updates to the Sharpened Plan, and better communicate (especially at the facility level) the value proposition of the scorecard as compared with the existing results-tracking mechanisms;
- better integrate the scorecard into other results-tracking mechanisms for RMNCAH to both minimize the administrative burden and achieve greater resource efficiency;
- provide for routine “refresher” training—perhaps linked to other service delivery training—to ensure that new and existing users remain abreast of refinements to the tool;
- prepare and disseminate information on the level of scorecard use in all districts and facilities;
- provide the necessary infrastructure (for example, computers, tablets, internet) and resources to ensure that scorecard data can be readily generated, including possibly through telephone applications.

LEADERSHIP AND GOVERNANCE

Chapters 11 and 12 discussed the findings and recommendations related to leadership and governance.

11. Factors Affecting the Functioning of District- and Community-Level Structures for Governance and Management of RMNCAH Services in Uganda, by Hizaamu Ramadhan and Flavia Nakayima Miiro

Aims and methods: The objectives of this study were to establish the current governance and management structures in Uganda’s health system; assess the formation, membership, competencies, and functioning of these structures at the community level; describe enabling or hindering factors for the functioning of these structures; understand stakeholder perspectives on these structures; and provide recommendations for improvements. The study was a cross-sectional design and used a combination of literature reviews, KIIs, and FGDs to collect data simultaneously from purposively selected documents, managers, providers, and users of RMNCAH services. It focused on 10 districts in Uganda that were implementing the RBF program, funded through URMCHIP.

Findings: The study noted that all districts had in place functioning health sector governance and management structures. The enrollment of these districts in the RBF program under URMCHIP had helped, because the existence of governance and management structures was a *precondition* for admittance. Further, the program had helped instill a stronger sense of accountability for core RMNCAH outcomes and had also enhanced the performance of HUMCs.

Enablers: Enablers of good governance and management at the district and facility levels included adequate and routine training of managers and representatives of hospital boards and health committees; consistent and high-quality

support supervision and mentorship to people in leadership and governance roles; and appointment of hospital in-charges who have a combination of technical, leadership, and entrepreneurial competencies.

Hindrances: Hindrances included political patronage in decision-making and in the composition of governance structures; weak, inconsistent, and inadequate training for persons in governance and managerial roles; limited funding for ensuring the sustained provision of resources for the coordination of governance mechanisms, especially at the governance level (for example, executive committees, HUMCs, and hospital boards); and the lack of standardized indicators for routinely assessing the performance of governance and management structures.

Recommendations. To improve governance in the health sector, the study authors recommend that the MoH and the Ministry of Local Government do the following:

- Develop robust and standardized training as well as governance and management competency frameworks to guide the provision of continuous professional development for all personnel in managerial roles.
- Train and establish a team of master coaches and mentors at the Regional Referral Hospitals, comprising District Health Teams, DHMTs, and retired professionals, to provide routine supervision and on-the-job mentoring to the district- and lower-level health sector governance and management structures.
- Increase the budgetary allocation for capacity building of health sector governance and management structures at the district and lower levels as well as provide salary increments for health workers who attain higher qualifications.

12. Accountability Mechanisms in Uganda’s RMNCAH Service Delivery: Practices, Challenges, and Implications, by Nathan Nshakira, Mesharch Walto Katusiimeh, and Moses Arinaitwe

Aims and methods: The objectives of this study were to review the current definition and structure of accountability mechanisms throughout Uganda’s health care system, examine the factors influencing accountability implementation, describe the relationship between current accountability processes and RMNCAH outcomes, and propose recommendations for strengthening health accountability. The study was cross-sectional and used mixed methods to collect data from literature reviews, interviews with key informants at all levels, and data from the DHIS2.

Findings: Using an accountability framework recognized by the World Bank, the study authenticated the three primary actors in the “accountability triangle”: (a) the state or government, (b) service providers, and (c) citizens, or beneficiaries of services. The study found that while the roles and interrelationships among these three actors are generally understood, stronger emphasis remained on the accountability relationship between the state and the service provider, with limited formalized accountability for citizens either as beneficiaries or as advocates. *Limited citizen engagement* harms service quality, as reflected in low demand for services as well as in poor user satisfaction.

Three additional gaps were identified by the study. There was *limited coordination in accountability structures*—political, administrative, and service delivery—among the relevant ministries, departments, and agencies; local

governments; and health facilities. Similarly, the linkages between effective community mechanisms, such as *barazas*, and the formal institutional health accountability structures were weak. As a result, even well-performing community-based mechanisms did not engage beneficiaries in the planning, budgeting, and monitoring processes, leading to weak ownership and accountability. Finally, the system had a *multiplicity of health data sources* that did not “speak to each other,” creating significant administrative burdens in generating and evaluating health programs.

Recommendations: The study authors recommend the following measures:

- The Office of the Prime Minister (OPM) and the MoH should work with local governments and civil society stakeholders to institutionalize accountability structures and processes for all public services (especially in health) between citizen and state actors at the subnational and national levels.
- The MoH should define indicators to measure mandates, participation, and impact of citizens, as well as providers and state actors, in health-related accountability.
- The OPM in close collaboration with other relevant ministries should integrate data systems for health-related accountability to facilitate real-time data analysis and decision making at all levels.

APPENDIX B

Roles of Key Stakeholders in the RMNCAH Operational Research Program

Note: The following text is reproduced verbatim from the original terms of reference for the initiation of the Reproductive, Maternal, Newborn, Child, and Adolescent Health Operational Research (OR) Program in Uganda in 2018.

ADVISORY COMMITTEE

An Advisory Committee of RMNCAH experts will be established to provide support and advice for the OR program. Members will include representatives from the Ministry of Health, Sweden, the World Bank, relevant development partners, and academia. These members will be chosen for their expertise or background in RMNCAH programming, policy, research, and funding. They are not expected to be directly linked to the implementation of the studies supported by the program.

The committee will (a) not exercise direct executive functions, (b) be quorate when four or more members are present, and (c) meet at least once a year. The members will elect a chairperson in the first meeting. The World Bank will serve as the secretariat to the committee. Minutes and recommendations will be prepared after each committee meeting by the secretariat.

In summary, the committee's responsibilities will be to

- Provide technical inputs for the development and implementation of the RMNCAH OR program and workplan.
- Facilitate the links and coordination between the OR program and other RMNCAH research activities in Uganda.
- Act as a source of advice on issues where the World Bank or study teams seek guidance.
- Advise on the dissemination and application of research findings to improve RMNCAH implementation.

THE WORLD BANK

Because the OR program is funded through a Bank Executed Trust Fund (BETF), the World Bank will be the implementer of the program and will be accountable for the research deliverables. In addition to providing administrative and operational services for the program, the World Bank will have the fiduciary

obligation to ensure that trust fund resources are used in a manner consistent with the terms laid out in the administration agreement. The responsibilities of the World Bank will be to

- Prepare the operational research workplan in consultation with the MoH, Sweden, academia, and other relevant country stakeholders.
- Prepare the program concept note and completion notes.
- Ensure the quality of the OR at inception (review of the program concept note), during implementation (review of the interim research deliverables, provision of just-in-time feedback), and at completion (review of the final products), using World Bank internal quality assurance mechanisms.
- Develop the terms of reference and request for proposal (RFP).
- Ensure that the RFP is publicly announced and applications are transparently and objectively evaluated.
- Recruit and manage consultants and researchers.
- Where appropriate, participate in selected studies in close cooperation with country counterparts and local researchers.
- Manage the BETF in accordance with World Bank policies, including fulfilling all fiduciary and reporting requirements.
- Provide Sweden with annual progress reports in line with the agreed-on results framework for the OR program.

SWEDEN

Representatives of Sweden will work closely with the World Bank team to provide inputs for the design and implementation of the OR program. As a member of the Advisory Committee, Sweden will have all the roles of a committee member. Because this program is being implemented through a BETF, the World Bank will have final decision-making authority. Sweden will also have access to the Donor Center, which provides donors with daily updated financial information about BETF and Recipient Executed Trust Funds, as well as IFC- and MIGA-managed funds. As a donor, Sweden can also access different reports on trust funds, including trust fund financial reports, audit reports, and progress reports.

RESEARCHERS AND CONSULTANTS

While the World Bank will retain overall responsibility, it will contract and partner with competent researchers to execute the OR program, giving preference to researchers from Ugandan institutions, including academia, research organizations, and civil society organizations, with OR capacity. Where appropriate, international researchers will be recruited to complement local researchers. The researchers will be recruited based on the World Bank's *Corporate Procurement Policy and Procedures Manual* (November 1, 2014), either as individual consultants or firms. The responsibilities of the researchers will be detailed in their respective Terms of Reference (TORs) and contracts but will broadly include the following:

- Develop the more-detailed OR protocols and tools based on the TORs or RFPs prepared by the World Bank.

- Obtain the necessary Institutional Review Board clearances.
- Carry out the fieldwork, and prepare the field report.
- In collaboration with the World Bank, carry out the necessary analyses, and prepare the final OR study report.
- Help disseminate the study findings in the country.
- Adhere to the terms and conditions of the contracts in execution of the assignments.

ECO-AUDIT

Environmental Benefits Statement

The World Bank Group is committed to reducing its environmental footprint. In support of this commitment, we leverage electronic publishing options and print-on-demand technology, which is located in regional hubs worldwide. Together, these initiatives enable print runs to be lowered and shipping distances decreased, resulting in reduced paper consumption, chemical use, greenhouse gas emissions, and waste.

We follow the recommended standards for paper use set by the Green Press Initiative. The majority of our books are printed on Forest Stewardship Council (FSC)–certified paper, with nearly all containing 50–100 percent recycled content. The recycled fiber in our book paper is either unbleached or bleached using totally chlorine-free (TCF), processed chlorine-free (PCF), or enhanced elemental chlorine-free (EECF) processes.

More information about the Bank’s environmental philosophy can be found at <http://www.worldbank.org/corporateresponsibility>.



In Uganda, conditions in reproductive, maternal, newborn, child, and adolescent health (RMNCAH) remain the primary drivers of morbidity and mortality, accounting for 60 percent of years of life lost. The high burden of these conditions can be attributed to a poor quality of care resulting from inadequate financial, human, and material resources compounded by weak multisectoral coordination. Moreover, the country's high population growth rate and a young population imply that RMNCAH service delivery will continue to dominate health sector reforms—even with the increasing prevalence of noncommunicable and infectious diseases.

Over the past two decades, Uganda has focused on improving the quality of RMNCAH service delivery, leading to declines in the maternal, infant, and under-five mortality ratios and the increased use of modern contraception among married women. However, the neonatal mortality and teenage pregnancy rates have stagnated, and the low civil registration of births and deaths remains challenging.

Investing in Reproductive, Maternal, Newborn, Child, and Adolescent Health in Uganda: What Have We Learned, and Where Do We Go from Here? comprises 12 studies conducted as part of the RMNCAH Operational Research Program drafted between 2019 and 2021 and finalized and disseminated in October 2022 across 45 districts of Uganda with funding from Sweden and the World Bank. These studies underscore important lessons learned and offer suggestions for enhancing the delivery of RMNCAH interventions. Each chapter represents one study and discusses service delivery, the health workforce, financing, health information systems, and governance and leadership. Two appendixes summarize key findings and recommendations and explain the roles of key stakeholders in the RMNCAH Operational Research Program.



MAKERERE UNIVERSITY
SCHOOL OF PUBLIC HEALTH



THE REPUBLIC OF UGANDA
MINISTRY OF HEALTH



ISBN 978-1-4648-1993-3



SKU 211993