

FORGONE HEALTHCARE DURING THE COVID-19 PANDEMIC:

*2020 and 2021 Survey Trends
from 25 Developing Countries*

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Health, Nutrition, and Population (HNP) Discussion Paper

Forgone Health Care during the COVID-19 Pandemic: 2020 and 2021 Survey Estimates from 25 Developing Countries

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This work was supported by the Global Financing Facility for Women, Children, and Adolescents (GFF). This analysis is part of a broader effort by GFF to support its 36 partner countries with financial and technical assistance to protect and promote the continuation of essential health services for women, children, and adolescents during COVID-19.

Abstract: During the first year of the COVID-19 pandemic, health system disruptions, fear of becoming infected with COVID-19, mobility restrictions and lockdowns, and reduced household incomes likely contributed to households forgoing needed health care. Using repeated measures collected with a standardized instrument over two time periods in 25 countries and roughly 63,000 households, this analysis documents how the prevalence of forgone health care and its drivers changed between the early period of the pandemic in 2020 and the first half of 2021. In 2020, in the pooled sample, 17.9 percent of households reported not being able to obtain needed health care. Reported prevalence of forgone care was 15.6 percent in low-income countries (LICs), 17.0 percent in lower-middle-income countries (LMICs), and 20.5 percent in upper-middle-income countries (UMICs) included in the sample. In early 2021, the prevalence of forgone care was lower: 10.3 percent of the households in the pooled sample that reported needing care were not able to obtain it. The prevalence of forgone care was 7.9 percent in LICs, 15.1 percent in LMICs, and 5.3 percent in UMICs. Financial barriers were the main reason households reported for not obtaining needed health care; and among households forgoing care, the share that did so for financial reasons remained similar between the two time periods: 42 percent in 2020 and 45 percent in 2021 (a statistically insignificant change). This study is a comprehensive analysis of the changes in forgone care in low- and middle-income countries. It documents the predominance of financial barriers among those who could not obtain needed health care, especially in low- and lower-middle-income countries as compared to upper-middle-income countries. Given the uneven recovery from the COVID-19 pandemic and the deepening economic crisis due to the Russian invasion of Ukraine, it is likely that financial barriers to obtaining health care will persist and perhaps increase, potentially jeopardizing progress toward achieving universal health coverage.

Keywords: Forgone health care, financial barriers to health care, COVID-19, access to health care.

Disclaimer: The findings, interpretations, and conclusions expressed in the paper are entirely those of the authors, and do not represent the views of the World Bank, its Executive Directors, or the countries they represent.

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PART I – INTRODUCTION

Between January 1, 2020, and December 31, 2021, about 5.4 million COVID-19 deaths were recorded worldwide (WHO 2022a). Yet, recent estimates of excess mortality suggest that between 14.9 and 18.2 million excess deaths could be attributed to the pandemic during this period (Wang et al. 2022; WHO 2022a). Forgone or delayed care—due to health system disruptions (facility closure, insufficient staff, cancellation of elective procedures), fear of becoming infected with COVID-19, mobility restrictions and lockdowns, reduced household incomes, and other reasons—is likely a substantial contributor to this burden of excess deaths.

Several quantitative estimates of forgone care during the COVID-19 pandemic have been published for high-income countries (HICs) (Anderson et al. 2021; Arnault, Jusot, and Renaud 2021; Jiskrova et al. 2021; Park and Stimpson 2021; Smolić, Čipin, and Međimurec 2021; Werner and Tur-Sinai 2021; Werner, Tur-Sinai, and AboJabel 2021). However, for low-income and lower-middle-income countries (LICs and LMICs, respectively), quantitative estimates of the prevalence and changes in forgone care during the pandemic are largely absent from the literature. Some studies, including three pulse surveys conducted by the World Health Organization (WHO) in 2020, 2021, and 2022, reported perceptions of health care providers and administrators regarding disruptions in service provision (WHO 2020, 2021, 2022b; Bullen et al. 2021). While large proportions of key respondents interviewed reported service disruptions, the studies did not provide quantitative estimates of declines in service utilization or in forgone care. A review of the literature on the disruptions of family planning and reproductive health services in low- and middle-income countries found evidence of increased demand, lower utilization, and increased barriers but reported no specific estimates of forgone care (Polis et al. 2022).

Two published studies used administrative data from multiple counties to examine trends in service utilization during the pandemic. Shapira and others (2021) analyzed data from the national health management information systems (HMIS) in eight sub-Saharan African countries and found service disruptions for at least one month in all countries. A study by Arsenault and colleagues (2022) using administrative data from 10 countries (two low-income, six middle-income, and two high-income countries) also found evidence of substantial disruptions during 2020. However, these rich analyses do not offer insights on whether the declines were due to forgone care or lower demand for services during the pandemic. Neither do they capture the reasons behind the observed declines in service utilization.

This study aims at filling the gap in the understanding of forgone care in developing countries. In our earlier work (Kakietek et al. 2022), we provided a systematic cross-country analysis of prevalence and reasons behind forgone health care in the early period of the pandemic (March–June 2020). This paper extends that analysis. Using repeated measures collected with a standardized instrument over two time periods in 25 countries and roughly 63,000 households, our analysis offers unique insights into the changes in prevalence and drivers of forgone care that occurred between 2020 and the first half of 2021.

PART II – METHODS

DATA: HIGH-FREQUENCY PHONE SURVEYS

This study used data from high-frequency phone surveys (HFPS), collected in 25 countries during the COVID-19 pandemic. The HFPS initiative was launched by the World Bank in 2020 to monitor the broad socioeconomic impact of COVID-19 on households. The surveys collected information on a variety of topics, including knowledge and concerns about COVID-19; access to food, health care, education, and social safety nets; changes in employment and income loss; and coping strategies (World Bank 2020).

Our study presents an analysis of two rounds of HFPS data—one from 2020 and one from 2021—from each of the countries. The data were collected between May and August 2020, and between January and June 2021, depending on the country. In nine countries, the sampling frame was drawn from preexisting nationally representative household surveys. In 13 countries, random digit dialing (RDD) was used; and in three countries, samples were selected based on data obtained from phone operators. (See Annex 1 for a description and sample sizes of the surveys included in the sample.)

In all surveys, information was collected from one respondent per household. In the case of countries where the sampling frame was derived from a previous, in-person survey, this was typically the household head. For surveys whose samples were based on RDD or numbers provided by phone operators, a random adult household member was interviewed.

The sample analyzed in the study included 86,643 observations collected from 63,348 unique households across the two waves of data. Twenty-one of the country surveys were designed as panel surveys—where individual households were interviewed multiple times and data could be linked at the household level across survey rounds. For those countries, we were able to create a panel data set that included 23,295 households with information on health needed and accessed as observed in both 2020 and 2021 (46,258 observations). The remaining 40,053 households were only observed in one survey round. For those countries and households, the sample was a repeated cross-section.

OUTCOME MEASURES

All surveys in this analysis included questions on the need for and utilization of health care services. First, the respondents were asked whether any member of their household needed medical care during the recall period (usually 30 days). Second, the respondents were asked if the household member who needed care was able to obtain it.

Households were considered to have forgone care when they reported that a household member needed care and could not access the needed care. Prevalence of forgone care was calculated as the proportion of households that reported a household member not being able to access needed care among households reporting that a household member needed health care.

In addition, in 21 of the countries, respondents who reported not being able to obtain needed care were asked about the main reason behind it. This question was open-ended, and survey enumerators categorized the answers using predefined categories. In this study,

the reasons for forgoing care were grouped into four categories: (1) financial constraints, which included lack of money, lack of health insurance, or lack of transportation; (2) COVID-19-specific reasons, which included fear of COVID-19 and lockdowns or movement restrictions and stay-at-home orders; (3) reasons pertaining to health service supply constraints, which included unavailability of medical staff or appointments, medicine and supply stockouts, health facility closures or facilities restricting treatment to COVID-19 or emergency cases; and (4) all other reasons not included in the above categories (e.g., visiting a traditional healer instead). It is possible, and indeed likely, that the reduced supply of health services and increased financial difficulties for accessing services were also an indirect result of the pandemic. However, the survey data did not allow for a more refined disaggregation. Therefore, the key rationale for the proposed groupings of reported reasons was to separate the reasons that the respondents attributed directly to the pandemic from the more distal ones, where attribution to COVID-19 was less clear. The groupings also help separate demand- and supply-side-related reasons.

To present the information collected in the broader context in which the surveys were carried out, we extracted data on the incidence of COVID-19, the policy responses to the pandemic, and coverage of COVID-19 vaccinations for the countries included in the sample, as well as changes in mobility. The seven-day average of new COVID-19 cases was extracted from the Johns Hopkins University COVID-19 Data Dashboard (Dong, Du, and Gardner 2020). The country policy response was drawn from the Oxford COVID-19 Government Response Tracker Stringency Index (Hale et al. 2021). The percentage of the population that received at least one dose of the COVID-19 vaccine in the countries in the sample was drawn from the WHO COVID-19 vaccination data (WHO 2022c). Information on changes in mobility were extracted from Google’s COVID-19 Community Mobility Reports (Google 2023). For each country, the data were extracted for the month preceding the survey data collection. In addition, we also extracted secondary data on the extent to which the countries in the sample relied on out-of-pocket (OOP) expenditure to finance health and changes in gross domestic product (GDP) growth in the two years covered by the study. OOP expenditure data, as a percentage of total health expenditure, were extracted from the Global Health Expenditure Database (GHED) for the most recent year when the data were available for each country in the sample (WHO 2023). GDP growth data were extracted for 2020 and 2021 from the World Bank’s World Development Indicators database (World Bank 2023).

ANALYSIS

The statistical analysis was descriptive in nature and focused on (1) documenting the extent of reported forgone care, reasons for households forgoing care, and differences in those indicators among countries from different income groups; and (2) examining how forgone care changed between 2020 and 2021.

Household-level data from the 25 countries were pooled into a single data set. Two types of weights were applied in the analysis. First, to correct for the bias resulting from nonrandom ownership of phones, in each survey, sampling weights were developed to adjust for the likelihood of the respondent household owning a phone. In addition, to account for the substantial differences in the population of the various countries included

in the sample, for pooled sample analysis, household sampling weights were adjusted by the country’s population as a proportion of the population of all countries included in the study. Similarly, for country income group estimates, household sampling weights for the observations of each country were adjusted by the country’s population as a proportion of the total population of the countries in that income group included in the study. In this way, each country’s contribution to the average was proportional to its population.

Point estimates were reported for the pooled sample and by country income group. Two sample proportion tests were carried out to compare the difference between the two time periods—2020 and 2021—and differences between country income groups. Significance was reported at the 95 percent and 99 percent confidence levels. For the subset of the surveys that used a panel design, we also calculated the proportion of households that reported needing care and forgoing care in both time periods.

For COVID-19 cases, the COVID-19 Oxford Stringency Index, Google Mobility Index, and the share of the population with at least one COVID-19 vaccination, we used the same calculated population weighted averages for the overall sample and for income groups as in the survey data. Out-of-pocket expenditure and GDP growth were reported as unweighted averages.

PART III – RESULTS

The data set included 86,643 observations from 63,338 unique households from 25 countries. Of these, 48,160 observations were available for 2020 and 38,483 observations were available for 2021 (Table 1). Five of the countries included in the study were LICs, nine were LMICs, and 11 were UMICs. The sample included 13 countries in Latin America and the Caribbean, six in sub-Saharan Africa, four in East Asia and the Pacific, one in Europe and Central Asia, and , one in the Middle East and North Africa. .

Table 1. Sample Characteristics

Country income group	Household observations		Country surveys
	2020	2021	
LICs	13,013 (27.0%)	10,282 (26.7%)	5 (20%)
LMICs	23,328 (48.4%)	13,820 (35.9%)	9 (36%)
UMICs	11,819 (24.5%)	14,381 (37.4%)	11 (44%)
Full sample	48,160	38,483	25

Source: Authors.

Notes: LICs = Low-income countries, LMICs = Lower-middle-income countries, UMICs = Upper-middle-income countries. Data are from High-Frequency Phone Surveys fielded between May 2020 and July 2021.

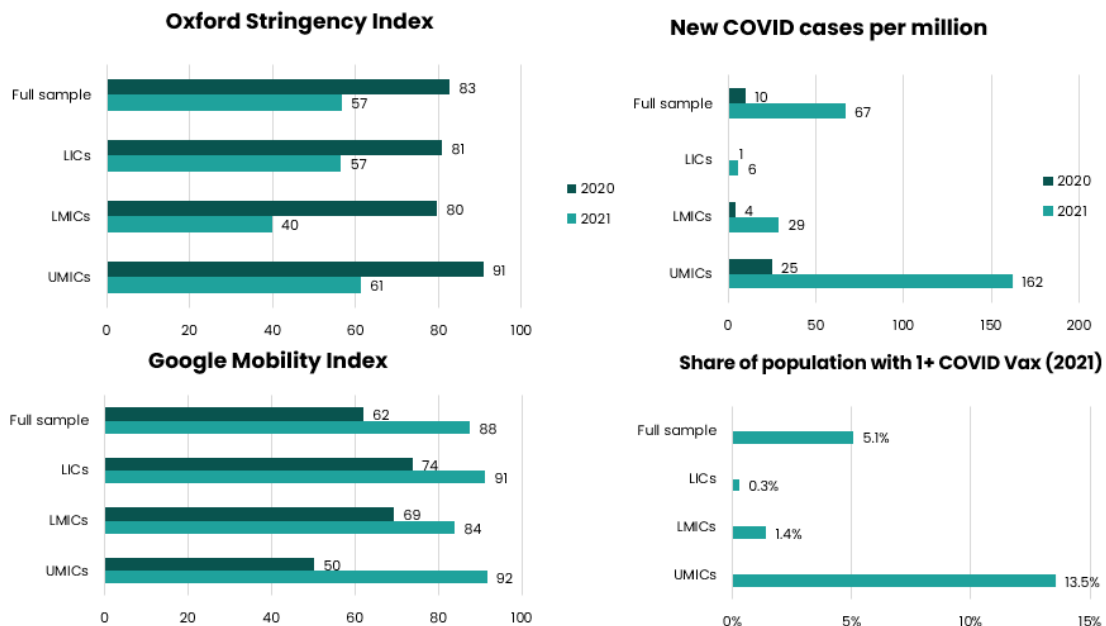
CONTEXTUAL FACTORS: COVID-19 INCIDENCE, POLICY RESPONSE, AND ECONOMIC GROWTH

Figure 1 presents the changes in the Oxford Stringency Index, the Google Mobility Index, COVID-19 incidence (weekly new cases), and the share of population that received at least one dose of the COVID-19 vaccination prior to the 2021 survey collection. The data show that the policy responses became much less stringent in 2021 compared to 2020, with the Oxford Stringency Index declining from 83 to 57 in the full sample, 81 to 57 in LICs, 80

to 40 in LMICs, and 91 to 61 in UMICs. Consistent with these data, mobility increased substantially, with the Google Mobility Index values rising in the full sample from 62 in 2020 to 88 in 2021. Similar to the Stringency Index, the improvements were the most substantial in UMICs. At the same time, the COVID-19 burden increased substantially in 2021 compared to 2020. The average number of new COVID-19 cases per one million inhabitants increased from 10 to 67 in the pooled sample, 1 to 6 in LICs, 4 to 29 in LMICs, and 25 to 162 in UMICs included in the sample. On average across countries in the sample, 5.1 percent of the population had been vaccinated against COVID-19 prior to the 2021 survey, and this ranged from 0.3 percent in LICs to 1.4 percent in LMICs and 13.5 percent in UMICs.

Out-of-pocket health expenditure accounted for about 38 percent of total health spending in the full sample, with the lowest proportion in UMICs (32 percent), higher in LICs (36 percent), and highest in LMICs (45 percent) (Figure 2). The WDI data show that the average economy in the full sample contracted by 5.0 percent in 2020, with growth resuming in 2021. The greatest declines in 2020 took place in the UMICs included in the sample (8.4 percent decrease on average); they were smaller in LMICs (4.5 percent decrease), with LICs recording low but positive growth (1.6 percent increase on average). Economic growth resumed in 2021, with the highest growth in UMICs (8.2 percent on average), lower in LMICs (5.9 percent), and the lowest growth in LICs (3.4 percent).

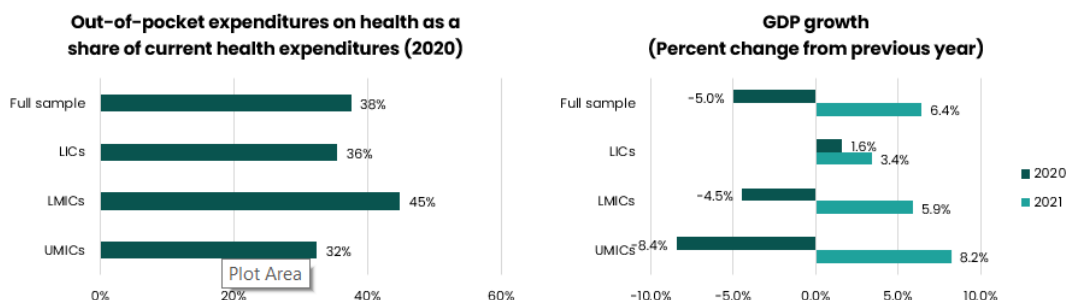
Figure 1. Changes in Oxford Policy Stringency Index, COVID-19 Incidence, and COVID-19 Vaccination Share



Data sources: Hale et al. 2021 (Oxford Stringency Index); Google 2023 (Google Mobility Index); Dong, Du, and Gardner 2020 (New COVID-19 cases per million); and WHO 2022c (Share of Population with 1+ Vaccination in 2021).

Notes: LICs = Low-income countries, LMICs = Lower-middle-income countries, UMICs = Upper-middle-income countries.

Figure 2: Out-of-Pocket Expenditure on Health, as Percentage of Total Current Health Expenditure and GDP Growth



Data sources: WHO 2023 (Out-of-pocket expenditures) and World Bank 2023 (GDP growth).

Notes: LICs = Low-income countries, LMICs = Lower-middle-income countries, UMICs = Upper-middle-income countries.

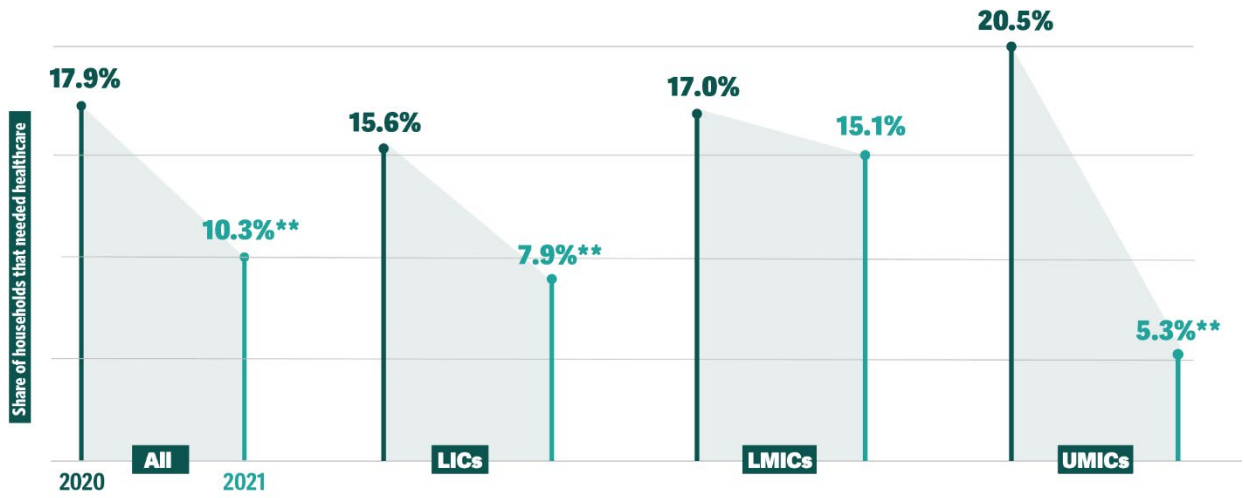
PREVALENCE OF FORGONE HEALTH CARE

In 2020, in the pooled sample, 17.9 percent of households reported not being able to obtain health care when needed (Figure 3). Reported prevalence of forgone care was 15.6 percent in LICs, 17.0 percent in LMICs, and 20.5 percent in UMICs included in the sample. The difference in rates of forgone care was not significant between LICs and LMICs but was statistically significant for LICs compared to UMICs, and for LMICs compared to UMICs (Table 2; See Annex 2 for 95 percent confidence intervals).

In 2021, the prevalence of forgone care was lower—only 10.3 percent of households in the pooled sample that reported needing care also reported not being able to access it. The difference between 2020 and 2021 was statistically significant for the pooled sample.

The prevalence of forgone care was 7.9 percent in LICs (a 7.8 percentage point decline compared to the 2020 data), 15.1 percent in LMICs (a 2.0 percentage point decline compared to the 2020 data), and 5.3 percent in UMICs (a 15.3 percentage point decline compared to the 2020 data). Within 2021, the difference in rates of forgone care was statistically significant for LICs compared to LMICs, LMICs compared to UMICs, and LICs compared to UMICs. The declines in the reported prevalence of forgone care between 2020 and 2021 were statistically significant for LICs and UMICs but not for LMICs (Table 3).

Figure 3: Forgone Care: Percentage of Households That Did Not Access Needed Care as Share of All Households That Needed Care, 2020 and 2021



Source: Authors' calculations.

Notes: LICs = Low-income countries, LMICs = Lower-middle-income countries, UMICs = Upper-middle-income countries.

** $p < 0.01$.

Table 2: Forgone Care and Reasons behind Forgone Care in 2020 and 2021, in the Pooled Sample and by Country Income Group

Variable	Country group	2020	2021	Diff (PP)
<i>Forgone care</i>				
	Pooled sample (%)	17.9	10.3	-7.6 **
	LICs (%)	15.6	7.9	-7.8 **
	LMICs (%)	17.0	15.1	-2.0
	UMICs (%)	20.5	5.3	-15.3 **
<i>Reason for forgoing care</i>				
Financial reasons	Pooled sample (%)	42.0	45.1	3.1
	LICs (%)	58.4	41.2	-17.2
	LMICs (%)	59.2	72.6	13.4 *
	UMICs (%)	14.9	20.7	5.8
COVID-19-related reasons	Pooled sample (%)	17.3	6.4	-10.9 **
	LICs (%)	5.0	3.8	-1.2
	LMICs (%)	17.9	10.0	-7.9 **
	UMICs (%)	24.6	4.6	-20.0 **
Health care supply constraints	Pooled sample (%)	30.7	39.9	9.2 *
	LICs (%)	31.9	44.7	12.8
	LMICs (%)	12.3	9.5	-2.8
	UMICs (%)	48.0	66.4	18.5 **
Other reasons	Pooled sample (%)	10.0	7.8	-2.2
	LICs (%)	5.0	5.8	0.8
	LMICs (%)	10.5	8.0	-2.5
	UMICs (%)	12.5	8.9	-3.6

Source: Authors' calculations.

Notes: PP = percentage point. LICs = Low-income countries, LMICs = Lower-middle-income countries, UMICs = Upper-middle-income countries. Data are from High-Frequency Phone Surveys fielded between May 2020 and July 2021. Sample is restricted to households reporting some health care need during the survey's recall period. The prevalence of forgone care is the proportion of households that report needing care but not accessing needed care. Financial reasons include lack of money and lack of transportation. COVID-19-related reasons include fear of COVID-19 and movement restrictions. Supply reasons include lack of medical personnel, lack of supplies/medication, and facility being closed/full.

Large sample z-tests of proportion equality between each income group combination are indicated by stars, with * $p < 0.05$, ** $p < 0.01$.

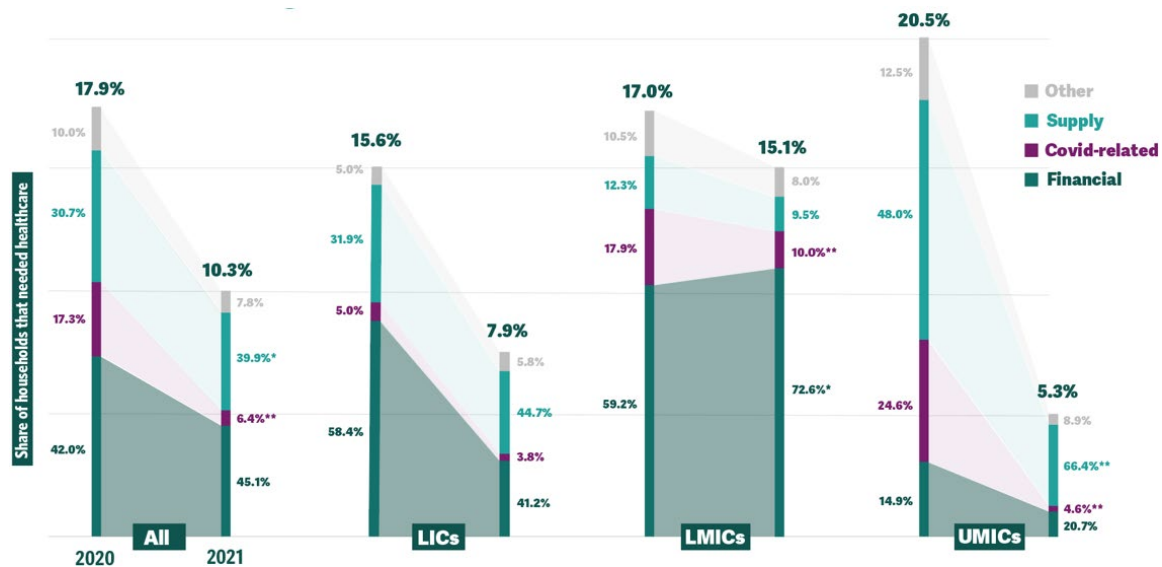
REASONS BEHIND FORGONE HEALTH CARE

In 2020, in the pooled sample, 42.0 percent of the households reporting forgoing care stated that it was due to financial reasons; 30.7 percent reported reasons related to the supply of health services (unavailability of medical staff and appointments, shortage of supplies/tests, unavailability of medication/drugs, facilities only treating emergencies or COVID-19

cases, long waiting periods); and 17.3 percent reported that it was due to reasons related directly to COVID-19 (fear of COVID-19, lockdowns and movement restrictions) (Figure 4 and Table 2).

Financial reasons were more commonly reported in LICs and LMICs (58.4 percent and 59.2 percent, respectively) than in UMICs (14.9 percent). The difference between LICs and LMICs was not statistically significant; the differences between LICs and UMICs and LMICs and UMICs were statistically significant. Reasons related to the supply of health services were reported by 31.9 percent of households in LICs, 12.3 percent in LMICs, and 48.0 percent in UMICs. The differences between all country income groups were statistically significant. The reasons related to COVID-19 were reported more frequently in UMICs (24.6 percent) than in LICs and LMICs (5.0 percent and 17.9 percent, respectively). These differences were statistically significant for LICs compared to LMICs and LICs compared to UMICs; the difference between LMICs and UMICs was not statistically significant.

Figure 4: Reasons for Forgone Care (as a Share of Households That Needed Care), 2020 and 2021



Source: Authors' calculations.

Notes: LICs = Low-income countries, LMICs = Lower-middle-income countries, UMICs = Upper-middle-income countries.

* $p < 0.05$, ** $p < 0.01$.

In 2021, financial constraints were still the most commonly reported reason for forgoing care. In the pooled sample 45.1 percent of households reported forgoing care due to financial reasons—roughly the same proportion as in 2020 (a 3.1 percentage point difference that was not statistically significant) (Table 3). Compared to 2020, in 2021 a higher proportion of households in the pooled sample reported forgoing care due to reasons related to the supply of services (39.9 percent—a 9.2 percentage point increase that was statistically significant at the 5 percent level). In contrast, a substantially lower proportion of respondents in the pooled sample reported forgoing care due to reasons directly related

to COVID-19 (6.4 percent compared to 17.3 percent in 2020—a 10.9 percentage point decline that was statistically significant).

The frequency of reporting financial reasons behind forgone care remained high in LICs (41.2 percent) and LMICs (72.6 percent), with a significant increase by 13.4 percentage points in LMICs and a statistically insignificant decline of 17.2 percentage points in LICs, compared to 2020. As in 2020, financial reasons behind forgone care were reported less frequently in UMICs (20.7 percent; an increase of 5.8 percentage points, which was not statistically significant).

The percentage of households reporting forgoing care for reasons related to the supply of services was 44.7 percent in LICs (an increase of 12.8 percentage points compared to 2020), 9.5 percent in LMICs (a decrease of 2.8 percentage points), and 66.4 percent in UMICs (an increase of 18.5 percentage points). The difference between 2020 and 2021 was statistically significant only in UMICs.

In contrast, the proportion of households reporting forgoing care due to reasons directly related to COVID-19 declined in LMICs (10.0 percent—a statistically significant 7.9 percentage point decline) and UMICs (4.6 percent—a statistically significant 20.0 percentage point decline). This proportion remained low in LICs—3.8 percent (a decline of 1.2 percentage points compared to 2020; the difference was not statistically significant).

Table 3. Changes in Forgone Care and the Reasons, 2020 to 2021

	Prevalence (percent)				Difference (percentage point)		
	All countries	LICs	LMICs	UMICs	LIC vs LMIC	LIC vs UMIC	LMIC vs UMIC
	2020						
<i>Forgone care</i>	17.9	15.6	17.0	20.5	1.4	4.9**	3.5*
<i>Reason for forgone care:</i>							
Financial barriers	42.0	58.4	59.2	14.9	0.8	-43.5**	-44.3**
COVID	17.3	5.0	17.9	24.6	12.8**	19.6**	6.8
Supply constraints	30.7	31.9	12.3	48	-19.6**	16.0*	35.7**
Other	10.0	5.0	10.5	12.5	5.5	7.5*	2.0
	2021						
<i>Forgone care</i>	10.3	7.9	15.1	5.3	7.2**	-2.6*	-9.8**
<i>Reason for forgone care:</i>							
Financial barriers	45.1	41.2	72.6	20.7	31.4**	-20.5*	-51.8**
COVID	6.4	3.8	10	4.6	6.2	0.9	-5.3**
Supply constraints	39.9	44.7	9.5	66.4	-35.2**	21.7*	56.8**
Other	7.8	5.8	8	8.9	2.2	3.1	0.9

Source: Authors' calculations.

Notes: LIC = Low-income country, LMIC = Lower-middle-income country, UMIC = Upper-middle-income country. Data are from High-Frequency Phone Surveys fielded between May 2020 and July of 2021. Sample is restricted to households reporting some health care need during the survey's recall period. The prevalence of forgone care is the proportion of households that report needing care but not accessing needed care. Financial reasons include lack of money

and lack of transportation. COVID-19-related reasons include fear of COVID-19 and movement restrictions. Supply reasons include lack of medical personnel, lack of supplies/medication, and facility being closed/full. Large sample z-tests of proportion equality between 2020 and 2021 are indicated by stars, with * $p < 0.05$, ** $p < 0.01$.

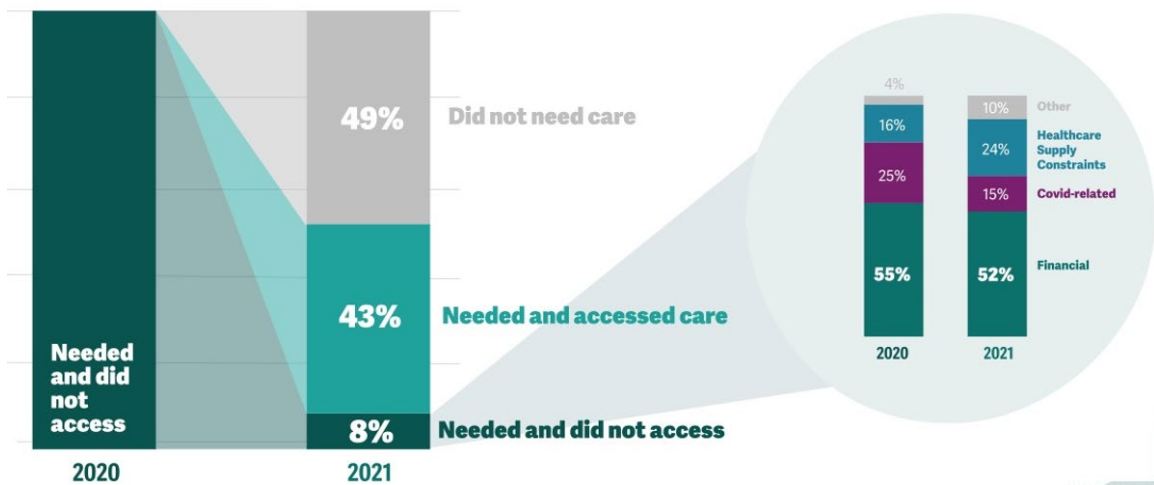
SUBSAMPLE OF HOUSEHOLDS WITH REPEATED MEASURES

As noted above, repeated measures were available for a subset of the surveys—23,129 households in 21 countries. The prevalence of forgone care in this subsample, as well as differences between 2020 and 2021, were comparable to the full sample. In the subsample, 13.9 percent households reported they could not access needed care in 2020, and 8.2 percent reported that they could not access needed care in 2021 (Figure 5 and Table 4).

Among the households that reported forgoing care in 2020, only 7.8 percent reported that they could not access care again in 2021; 43.0 percent of the households that reported forgoing care in 2020 and needing care again in 2021 reported that they were able to access care in 2021; and 49.1 percent of the households that reported forgoing care in 2020 reported that they did not need care in 2021.

Among the small group of households that reported not being able to access care they needed both in 2020 and 2021, over half said that it was because of financial reasons in both time periods (55.4 percent in 2020 and 51.9 percent in 2021). Consistent with the trend in the overall sample, the percentage of households in this small group that reported they could not access services due to fear of COVID-19, movement restrictions, or other pandemic containment policies declined from 25.3 percent in 2020 to 14.8 percent in 2021, and the percentage reporting forgoing care due to supply-side challenges increased from 15.7 percent in 2020 to 23.5 percent in 2021.

Figure 5. Prevalence and Reasons for Forgone Care in Subsample of Households with Repeated Measures (N = 23,129)



Source: Authors' calculations.

Table 4. Prevalence and Reasons for Forgone Care in Subsample of Households with Repeated Measures (N = 23,129)

Panel A	N	%
Households with repeated measures	23,129	
Needed care in 2020 as a share of all households with repeated measures	7,542	
Forwent care in 2020 as % of households that needed care in 2020	1,046	13.9
Needed care in 2021 as a share of all households with repeated measures	8,052	
Forwent care in 2021 as % of households that needed care in 2021	662	8.2

Panel B	N	%
Forwent care in 2020 and did not need care in 2021 as % of households that forwent care in 2020	514	49.1
Forwent care in 2020, needed care in 2021, and was able to get care in 2021 as % of households that forwent care in 2020	450	43.0
Forwent care in 2020 and 2021 as % of households that forwent care in 2020	82	7.8

Panel C	%	%
Reason for forgoing care as % of households forgoing care in 2020 & 2021	2020	2021
Financial	55.4	51.9
COVID-19	25.3	14.8
Health care supply constraints	15.7	23.5
Other	3.6	9.9

Source: Authors' calculations.

Notes: Data are from High-Frequency Phone Surveys fielded between May 2020 and July of 2021. Financial reasons include lack of money and lack of transportation. COVID-19-related reasons include fear of COVID-19 and movement restrictions. Supply reasons include lack of medical personnel, lack of supplies/medication, and facility being closed/full.

DISCUSSION

The COVID-19 pandemic has highlighted the dearth of real-time information on utilization of essential health services, forgone care, health expenditure, and financial protection, and underlined the need to invest in routine data collection and national health management information systems (HMIS). As the pandemic spread around the world, there were concerns that it could dramatically impact the use of health services and increase the levels of forgone care. However, in many countries, the HMIS were weak and unable to produce real-time data on the utilization of essential health services. In this context, phone-based surveys were used to supplement the data from HMIS and capture additional information that is not collected through administrative data collection systems.

The analysis presented above is the most comprehensive analysis of trends in forgone health care in low- and middle-income countries during the COVID-19 pandemic published to date. It shows that the prevalence of forgone care declined between mid-2020 and early 2021. Early in the pandemic in 2020, 17.9 percent of the households in the countries included in the study reported not being able to access the care they needed. In the first half of 2021, this proportion declined to 10.3 percent. The reductions in forgone care were the smallest in LMICs and largest in UMICs.

The declines were most likely due to two factors: the loosening of the restrictive policy measures (e.g., lockdowns and stay-at-home orders) and the beginning of the rollout of COVID-19 vaccines in early 2021. Indeed, the percentage of respondents reporting forgoing care due to COVID-19-related reasons declined in the pooled sample from 17.3 percent in 2020 to 6.4 percent in 2021. The declines were the most pronounced in UMICs, where forgoing care due to fear of getting COVID-19 or lockdown measures was reported by 24.6 percent of respondents in 2020 but by only 4.6 percent of respondents in 2021. The declines were associated with reductions in the COVID-19 Stringency Index, which dropped from 83 in 2020 to 57 in 2021 in the pooled sample and from 91 in 2020 to 61 in 2021 in UMICs included in the analysis. They were also associated with increases in mobility, with the Google Mobility Index rising in the overall sample from 62 to 88, and the greatest increases observed in UMICs (from 50 in 2020 to 92 in 2021). Similarly, the rollout of COVID-19 vaccines was faster in richer countries and in the months in 2021 when survey data were collected, 13.5 percent of the population was vaccinated with at least one dose of a vaccine in UMICs, 1.4 percent in LMICs, and only 0.3 percent in LICs included in the sample.

Interestingly, the declines in forgone care were also accompanied by substantial increases in COVID-19 incidence in the pooled sample and in all country income groups. This suggests that fear of COVID-19 declined despite increases in COVID-19 cases, perhaps indicating that the populations became more used to the disease itself, especially as more treatment options became available, and with the discovery and rollout of vaccines. However, the extant literature does not provide a robust basis to confirm this hypothesis, and changes in the fear of COVID-19 during the pandemic have not been well documented. One unpublished study examined monthly trends in reported fear of COVID-19 in North America and in Europe and showed that it increased substantially between March and April 2020, but then declined sharply between April and June 2020 and remained steady through August 2020 (Martens et al. 2020). In contrast, a longitudinal survey of working adults from Japan showed increase in the fear of COVID-19 in the same period (March–August 2020) (Hidaka et al. 2021). We found no studies documenting overtime trends in reported fear or concern about COVID-19 in developing countries.

While the prevalence of forgone care declined during the timeframe of our study, financial constraints remained the most reported reason behind it. The percentage of households forgoing care that reported this was due to financial reasons remained virtually unchanged in the overall sample (42.0 percent in 2020 and 45.1 percent in 2021). This finding is consistent with a large body of literature documenting persistent financial barriers to accessing care in low- and middle-income countries. However, it should be noted that the published studies—and the data collection instruments used in the flagship population-based household surveys such as the Demographic Health Survey (DHS) or the Multi-Indicator Cluster Survey (MICS)—usually do not provide information about whether the households that reported financial barriers were able to obtain care (i.e., by borrowing or selling assets, limiting nonhealth consumption) or had to forgo using health care they needed.

In our study, financial barriers were more commonly reported in both time periods in LICs and LMICs, compared to UMICs. This may be because of the overall higher income levels but also likely because prepayments and financial protection mechanisms are better

developed in UMICs (Anjorin et al. 2022). The GHED data presented above show that out-of-pocket expenditure as a percentage of the overall health expenditure was the lowest in UMICs included in the study (32 percent on average, compared to 36 percent in LICs and 45 percent in LMICs). This inequitable impact of financial barriers on forgone care is particularly worrying given the uneven economic recovery from the pandemic. The recent Poverty and Shared Prosperity Report by the World Bank (2022a) showed that, as COVID-19 subsided, richer countries have been able to recover at a faster pace than poorer ones. WDI data presented above show that, while the economic contraction was the deepest in the UMICs included in the study (where GDP declined by 8.4 percent, on average in 2020), the recovery in UMICs was also the strongest (with GDP growth of 8.2 percent in 2021, on average, compared to 5.9 percent in LMICs and 3.4 percent in LICs). With the macroeconomic impact of the Russian invasion of Ukraine, the recovery in poorer countries will likely continue to be slow, financial hardships will persist for large proportions of households and, likely, so will forgone care due to financial reasons.

Data on trends in forgone care during the pandemic are extremely limited. As of the writing of this manuscript, no published studies have reported trends in forgone care in developing countries. One study by Giannouchos and others (2022) examined trends in the United States and found that the prevalence of reported forgone care declined between August and December 2020 by more than a third (from 41.3 percent to 27.8 percent, respectively). Another US study of a large sample of Medicare beneficiaries showed the overall rate of forgone health care was the highest in the summer of 2020 (20.8 percent), declining in the fall of 2020 (7.8 percent) and declining further in the winter of 2021 (6.5 percent) (Tsuzaki 2022). Our findings are consistent with the declines in reported forgone care in both studies.

Overall, the literature on forgone care in low- and middle-income countries is limited, and there are virtually no published studies comparing the levels of forgone care across regions or income groups. One study provided a comparison of forgone care for noncommunicable disease due to financial reasons in 18 countries, spanning low-, middle-, and high-income countries (Murphy et al. 2020). Like the analyses presented above, it showed that forgoing care due to financial reasons was more common in poorer countries. Two cross-country regional studies have been published—one on Africa and one on the Americas. The study on Africa, which provided a synthesis of data from 20 countries spanning 2008 and 2009 (Abiola et al. 2011) showed prevalence of forgone care ranging from 35 percent in Ghana to 80 percent in Zimbabwe. The estimates are substantially higher than in our study, most likely because they combined forgoing health care and forgoing medicines, and because of the different recall period (12 months, compared to 30 days in this study). The study on the Americas, which synthesized various survey data collected between 2008 and 2018, reported that forgone care for any health services was 29.3 percent in an average country (Bascolo Houghton, and Del Riego 2020). It needs to be noted that the study combined estimates of care that were needed but not sought, with care that was sought but was not considered appropriate. A number of single-country studies from Africa and Asia have reported the prevalence of forgone care, using different methodological approaches (e.g., vignettes, approaches based on reported health expenditure), which make producing reliable cross-country comparisons challenging (Mebratie et al. 2014; Bonfrer and Gustafsson-Wright 2017; Gabani and Guinness 2019; for a fuller discussion of this literature see Kakietek et al. 2022).

Even fewer published studies examine overtime changes in forgone care in low- and middle-income countries. One recent study reported changes in forgone care in Thailand between 2011 and 2019 (Vongmongkol et al. 2021). Of note is that the overall prevalence of forgone care was low—below 3 percent in the study sample, which is consistent with our data for countries from the East Asia and the Pacific region. The authors argue that this was mostly due to relatively well-developed financial protection mechanisms. This is supported by the data showing that only a negligible percentage of respondents reported forgoing care because of financial reasons (e.g., only 1.1 percent of respondents reported forgoing outpatient visits in 2011, 2.7 percent in 2013, 2.5 percent in 2015, 2.2 percent in 2017, and 1.1 percent in 2019).

Our analysis has focused on trends in forgone care at the country level, to shed light on heterogeneity in trends and drivers of forgone care among different country income groups. In addition, albeit limited, the data we used provided a unique opportunity to examine the changes in forgone care overtime at the household level. The analysis of the subset of the surveys that had repeated measures showed that only a very small proportion—less than 10 percent—of households that reported forgoing care in 2020 also reported forgoing care in 2021. This suggests that forgone care in the households included in the sample was not symptomatic of chronic lack of access to health services. In fact, over 40 percent of the households that reported not being able to access services in 2020 and that needed health services in 2021 were able to access them. This is likely due to the overall declining prevalence of forgone care, thanks to improvements in the epidemiological situation and the lifting of policy restrictions. On the other hand, our data show that more than half of the households in the small group experiencing chronic lack of access to needed health services were forgoing care due to financial reasons.

It is also worth noting that, while the proportion of households in the group reporting forgoing care due to COVID-19 declined substantially from 25 percent in 2020 to 15 percent in 2021, consistent with the general trend seen in the overall sample, those households faced other barriers related to the supply of health services that led them to forgo needed health care. This in turn suggests that some households and populations forgo care for multiple and complex reasons, and addressing only some of those reasons may not improve health care utilization.

The number of households not able to access care in both 2020 and 2021 was small: only 82 out of 3,585 households needing care in both time periods. Therefore, drawing general conclusions based on the results from repeated households is not warranted. Nevertheless, the results indicate that a thorough overtime study of forgone care at the household level is needed to better understand its temporal dynamics, with a focus on both the extent and the reasons behind chronic lack of access to health services in developing countries.

One of the limitations of this study is that it relies on data collected by phone. Only households with a phone were included in the sample, which might have introduced a bias, especially by underrepresenting poorer households without a phone. It is unlikely, however, that the mode of data collection was a source of significant bias for two reasons. First, cellphone penetration in the countries included in the sample is very high. According to the 2020 International Telecommunication Union (ITU) World Telecommunication/ICT Indicators Database, 106 per 100 people in our sample countries had mobile cellular subscriptions on average (World Bank 2022b). Second, as described in the methods

section, sampling weights were used to minimize potential selection bias. An analysis using HFPS data from African countries demonstrated that the weighting procedures successfully minimized the selection bias in the phone surveys for a wide range of indicators (Ambel Mcgee, and Tsegay 2021).

Forgone care analyzed in this paper is based on self-reports. While this is the standard for measuring forgone care, some authors have argued that alternative methods, such as vignettes (Mebratie et al. 2014) or imputations based on reported health expenditure (Gabani and Guinness 2019), may be more valid. Such alternative measures, however, are more difficult to administer and require judgement calls from the researchers (e.g., in establishing thresholds of minimal health expenditure that qualify as forgone care or for which conditions reported through vignettes a respondent should have sought care), and there is no empirical evidence showing that such measures perform better than those based on self-reports.

Another limitation is that forgone care was measured at the household level by asking one respondent, who often was the household head, to provide responses on behalf of the entire household. While the nonrandom selection of the respondent might have introduced bias, in an earlier analysis of labor market indicators derived from phone surveys, Kugler and others (2021) found little evidence of differences that reported employment outcomes or trends over time are affected by the oversampling of household heads.

Finally, it is possible that COVID-19 has affected household need to use health services. Studies have reported decreased incidence of other infectious diseases, and the pandemic might have also reduced morbidity associated with road injuries or exposure to air pollution (Qiu et al. 2022; Venter et al. 2021; Yasin, Grivna, and Abu-Zidan 2021). Our study focused on forgone care as a proportion of households reporting needing services. Therefore, changes in reported need do not affect the results presented above. However, future analyses should explore further change in reported need for health care during the pandemic.

CONCLUSIONS

This study provides a comprehensive analysis of the changes in forgone care in low- and middle-income countries during the COVID-19 pandemic. It has two key conclusions.

First, the analysis of the World Bank high-frequency surveys has demonstrated that phone surveys with simple and standardized measures could, at scale, be a cost-effective way to improve the measurement and reporting of forgone care and financial protection for better and more up-to-date monitoring of the progress toward universal health coverage.

Second, the results show that, while the prevalence of forgone care declined in the overall sample between 2020 and 2021, it was uneven among country income groups, with large declines in LICs and UMICs but little change in LMICs. Moreover, the analysis shows that even in 2021, large proportions of the population—about 10.8 million households in 2020 and 7.2 million in 2021 in the 25 countries included in the study—could not obtain the health care services they needed. It also shows that factors such as fear of COVID-19 and policy restrictions made relatively small contributions to forgone care, especially in LICs and LMICs. Furthermore, while the drivers directly related to the pandemic improved with

the rollout of COVID-19 vaccines and the lifting of lockdowns and other policy restrictions, substantial numbers of households were not able to access health services for other reasons, especially due to financial constraints. Given the uneven recovery from the COVID-19 pandemic and the deepening economic crisis due to the Russian invasion of Ukraine, it is likely that financial barriers to accessing care will persist and perhaps increase, slowing progress toward achieving universal health coverage. This in turn suggests that comprehensive approaches that address both supply-side and demand-side determinants are needed to preserve the progress made toward achieving universal health coverage in low- and middle-income countries.

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ANNEX 1: DESCRIPTION AND SAMPLE SIZES OF SURVEYS INCLUDED IN SAMPLE

Country	Sample frame	Panel or repeated cross-section	Income group	Region	2020 Sample		2021 Sample	
					Month	Sample size	Month	Sample size
Argentina	RDD	P	Upper-middle income	Latin America & Caribbean	June	1,001	June	1,216
Bolivia	RDD	P	Lower-middle income	Latin America & Caribbean	June	670	May	1,272
Burkina Faso	Previous survey	P	Low income	Sub-Saharan Africa	June	1,968	April	1,998
Cambodia	Previous survey	CS	Lower-middle income	East Asia & Pacific	May	700	March	378
Colombia	RDD	P	Upper-middle income	Latin America & Caribbean	June	1,000	June	1,221
Costa Rica	RDD	P	Upper-middle income	Latin America & Caribbean	May	801	June	805
Dominican Republic	RDD	P	Upper-middle income	Latin America & Caribbean	May	807	June	1,205
Ecuador	RDD	CS	Upper-middle income	Latin America & Caribbean	June	1,025	May	1,352
El Salvador	RDD	P	Lower-middle income	Latin America & Caribbean	June	804	June	818
Ethiopia	Previous survey	P	Low income	Sub-Saharan Africa	June	3,058	April	1,982
Guatemala	RDD	P	Upper-middle income	Latin America & Caribbean	May	806	June	1,207
Honduras	RDD	P	Lower-middle income	Latin America & Caribbean	June	807	July	1,021
Iraq	Nonsurvey list	CS	Upper-middle income	Middle East & North Africa	August	1,621	June	1,627
Malawi	Previous survey	P	Low income	Sub-Saharan Africa	June	1,729	May	1,540
Mexico	RDD	P	Upper-middle income	Latin America & Caribbean	June	2,109	June	2,625
Mongolia	Previous survey	P	Lower middle income	East Asia & Pacific	May	1,333	June	1,046
Nigeria	Previous survey	P	Lower-middle income	Sub-Saharan Africa	June	1,820	January	1,706
Paraguay	RDD	P	Upper-middle income	Latin America & Caribbean	June	715	June	1,076
Peru	RDD	P	Upper-middle income	Latin America & Caribbean	June	841	June	1,212
Philippines	Nonsurvey list	P	Lower-middle income	East Asia & Pacific	August	9,448	May	2,122
St. Lucia	RDD	CS	Upper-middle income	Latin America & Caribbean	May	1,093	June	835
Sudan	Nonsurvey list	P	Low income	Sub-Saharan Africa	June	4,032	March	2,662
Uganda	Previous survey	P	Low income	Sub-Saharan Africa	June	2,226	March	2,100
Uzbekistan	Previous survey	P	Lower-middle income	Europe & Central Asia	June	1,533	June	1,535
Vietnam	Previous survey	P	Lower-middle income	East Asia & Pacific	June	6,213	March	3,922

Source: Authors' calculations.

Notes: RDD = Random digit dialing; P = Panel; CS = Cross-section.

ANNEX 2: FORGONE CARE AND ITS REASONS, 2020 AND 2021

	Percent of households that did not access care (as share of households that needed health care)		Reasons for forgone care (as share of households not accessing care)							
			(i) Financial		(ii) COVID		(iii) Supply		(iv) Other	
2020										
All countries	17.9	[16.5,19.2]	42.0	[37.1,46.9]	17.3	[14.4,20.3]	30.7	[26.5,35.0]	10.0	[6.5,13.5]
LICs	15.6	[12.8,18.4]	58.4	[47.4,69.4]	5.0	[3.3,6.6]	31.9	[21.2,42.6]	5.0	[0.4,9.6]
LMICs	17.0	[14.8,19.3]	59.2	[49.4,68.9]	17.9	[12.6,23.2]	12.3	[6.4,18.2]	10.5	[2.8,18.2]
UMICs	20.5	[18.5,22.5]	14.9	[1,19.9]	24.6	[19.0,30.2]	48.0	[41.4,54.6]	12.5	[8.2,16.8]
2021										
All countries	10.3	[9.2,11.4]	45.1	[40.4,49.8]	6.4	[4.3,8.5]	39.9	[34.3,45.5]	7.8	[4.5,11.1]
LICs	7.9	[5.8,9.9]	41.2	[25.4,57.1]	3.8	[-2.3,9.8]	44.7	[24.4,65.0]	5.8	[-5.2,16.8]
LMICs	15.1	[13.0,17.2]	72.6	[66.5,78.7]	10.0	[7.3,12.7]	9.5	[4.2,14.8]	8.0	[5.5,10.5]
UMICs	5.3	[4.5,6.0]	20.7	[16.7,24.8]	4.6	[1.6,7.6]	66.4	[61.5,71.4]	8.9	[4.4,13.3]

Source: Authors' calculations.

Notes: LICs = Low-income countries, LMICs = Lower-middle-income countries, UMICs = Upper-middle-income countries. Data are from High-Frequency Phone Surveys fielded between May and August of 2020. Sample is restricted to households reporting indicating some health care need during survey's recall period. The prevalence of forgone care is the proportion of households that report needing care but not accessing needed care. Financial reasons include lack of money and lack of transportation. COVID-19-related reasons include fear of COVID and movement restrictions. Supply reasons include lack of medical personnel, lack of supplies/medication, or facility being closed/full. Confidence intervals shown in brackets.

During the first year of the COVID-19 pandemic, health system disruptions, fear of becoming infected with COVID-19, mobility restrictions and lockdowns, and reduced household incomes likely contributed to households forgoing needed health care. Using repeated measures collected with a standardized instrument over two time periods in 25 countries and roughly 63,000 households, this analysis documents how the prevalence of forgone health care and its drivers changed between the early period of the pandemic in 2020 and the first half of 2021. In 2020, in the pooled sample, 17.9 percent of households reported not being able to obtain needed health care. Reported prevalence of forgone care was 15.6 percent in low-income countries (LICs), 17.0 percent in lower-middle-income countries (LMICs), and 20.5 percent in upper-middle-income countries (UMICs) included in the sample. In early 2021, the prevalence of forgone care was lower: 10.3 percent of the households in the pooled sample that reported needing care were not able to obtain it. The prevalence of forgone care was 7.9 percent in LICs, 15.1 percent in LMICs, and 5.3 percent in UMICs. Financial barriers were the main reason households reported for not obtaining needed health care; and among households forgoing care, the share that did so for financial reasons remained similar between the two time periods: 42 percent in 2020 and 45 percent in 2021 (a statistically insignificant change). This study is a comprehensive analysis of the changes in forgone care in low- and middle-income countries. It documents the predominance of financial barriers among those who could not obtain needed health care, especially in low- and lower-middle-income countries as compared to upper-middle-income countries. Given the uneven recovery from the COVID-19 pandemic and the deepening economic crisis due to the Russian invasion of Ukraine, it is likely that financial barriers to obtaining health care will persist and perhaps increase, potentially jeopardizing progress toward achieving universal health coverage.

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