Tracking universal health coverage

2023 global monitoring report

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Foreword

'Leaving no one behind' is a central promise of the 2030 Agenda for Sustainable Development, which recognizes health as a fundamental human right. The best way to fulfil this promise is through universal health coverage (UHC), which means that all people – no matter who they are or where they live – can receive quality health services, when and where they are needed, without incurring financial hardship.

This 2023 UHC Global Monitoring Report is being released on the eve of the High-Level Meeting on UHC at the 78th United Nations General Assembly, reflecting the vital role of national political commitment in the pursuit of UHC. Achieving UHC is no easy feat, but with concrete and coordinated actions, countries can create the conditions in which the right to health is ensured, upheld, and respected for everyone.

This report presents an alarming picture on the state of UHC around the world, even before the COVID-19 pandemic hit. The expansion of health service coverage has largely stalled since the launch of the Sustainable Development Goals in 2015, and financial protection for those who do receive health services has worsened. Based on the most up-to-date data, this report shows that as of 2021, about half the world's population – 4.5 billion people – was not covered by essential health services, and in 2019 about two billion people experienced financial hardship due to out-of-pocket spending on health, including 344 million people living in extreme poverty.

Reaching the goal of UHC by 2030 requires substantial public sector investment and accelerated action by governments and partners, building on solid evidence and reorienting health systems to a primary health care approach, to advance equity in both the delivery of essential health services and financial protection. Achieving UHC also requires modern, fit-for-purpose health information systems that provide timely and reliable data to inform policy design. Such shifts are essential as we continue to respond to and recover from the COVID-19 pandemic's impacts on health systems and the health workforce, and as the challenges posed by deepening macroeconomic, climate, demographic, and political trends threaten to reverse hard-won health gains around the world.

Dr Tedros Adhanom Ghebreyesus
Director-General, World Health Organization

Ajay Banga
President, World Bank Group

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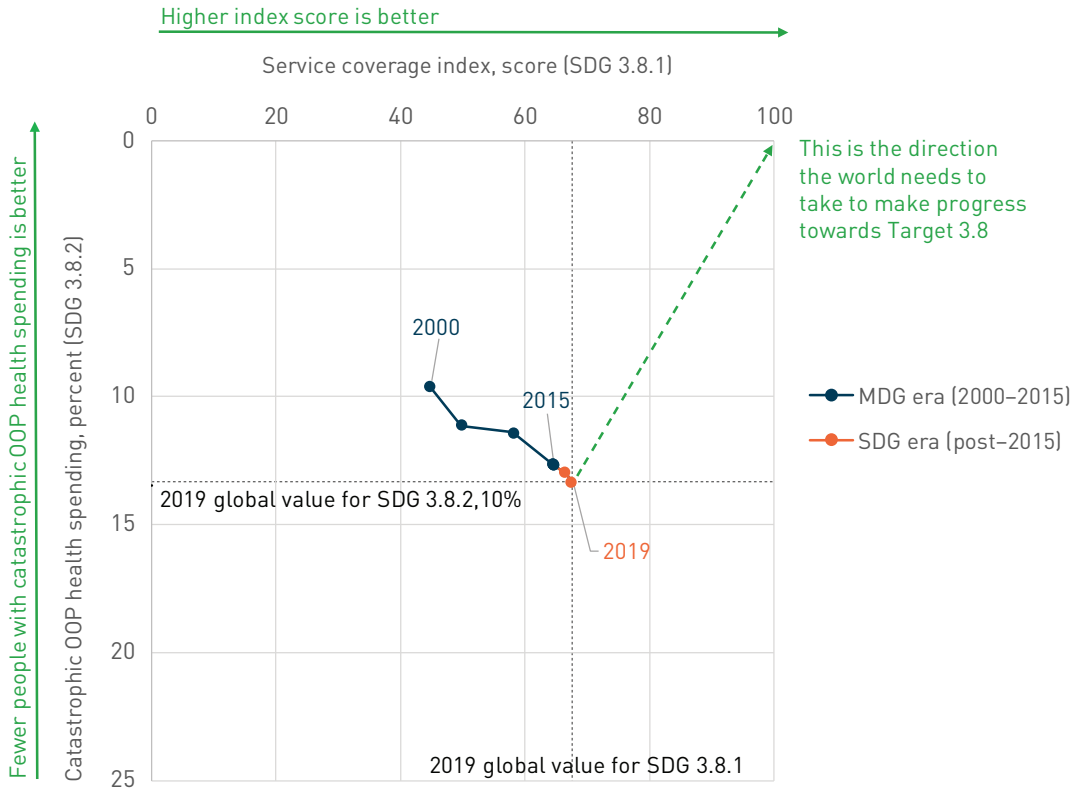
Abbreviations

ANC4+	antenatal care (4+ visits)
ART	antiretroviral therapy
DHS	demographic and health survey
DTP3	diphtheria, tetanus toxoid and pertussis vaccine (3 doses)
GNI	gross national income
GPW13	Thirteenth General Programme of Work
HIC	high-income country
HIV	human immunodeficiency virus
IAEG	Inter-Agency and Expert Group
IQR	interquartile range
ITN	insecticide-treated net
LIC	low-income country
LMIC	lower-middle-income country
MIC	middle-income country
NCDs	noncommunicable diseases
NSO	national statistical office
OOP	out-of-pocket
PHC	primary health care
PPP	purchasing power parity
RHS	reproductive health survey
RMNCH	reproductive, maternal, newborn, and child health
SAE	small area estimation
SCI	service coverage index
SDG	Sustainable Development Goal
TB	tuberculosis
UHC	universal health coverage
UI	uncertainty interval
UMIC	upper-middle-income country
UNICEF	United Nations Children's Fund
UNFPA	United Nations Population Fund
WHO	World Health Organization

Executive summary

The world is off track to make significant progress towards universal health coverage (UHC) (Sustainable Development Goals (SDGs) target 3.8) by 2030 as improvements to health services coverage have stagnated since 2015, and the proportion of the population that faced catastrophic levels of out-of-pocket (OOP) health spending[1] has increased (see Fig. 1).

Fig. 1. Estimates of UHC service coverage index (SDG 3.8.1) and catastrophic out-of-pocket health spending (SDG 3.8.2, 10% threshold), 2000–2019



Note: The global UHC service coverage index refers to the global population-weighted score of an index of selected essential services; higher scores indicate more service coverage. Catastrophic OOP health spending refers to the global population-weighted incidence rate of catastrophic health spending, defined as the proportion of the population with household out-of-pocket health expenditure exceeding 10% of the household budget (consumption or income); the lower the incidence, the better.

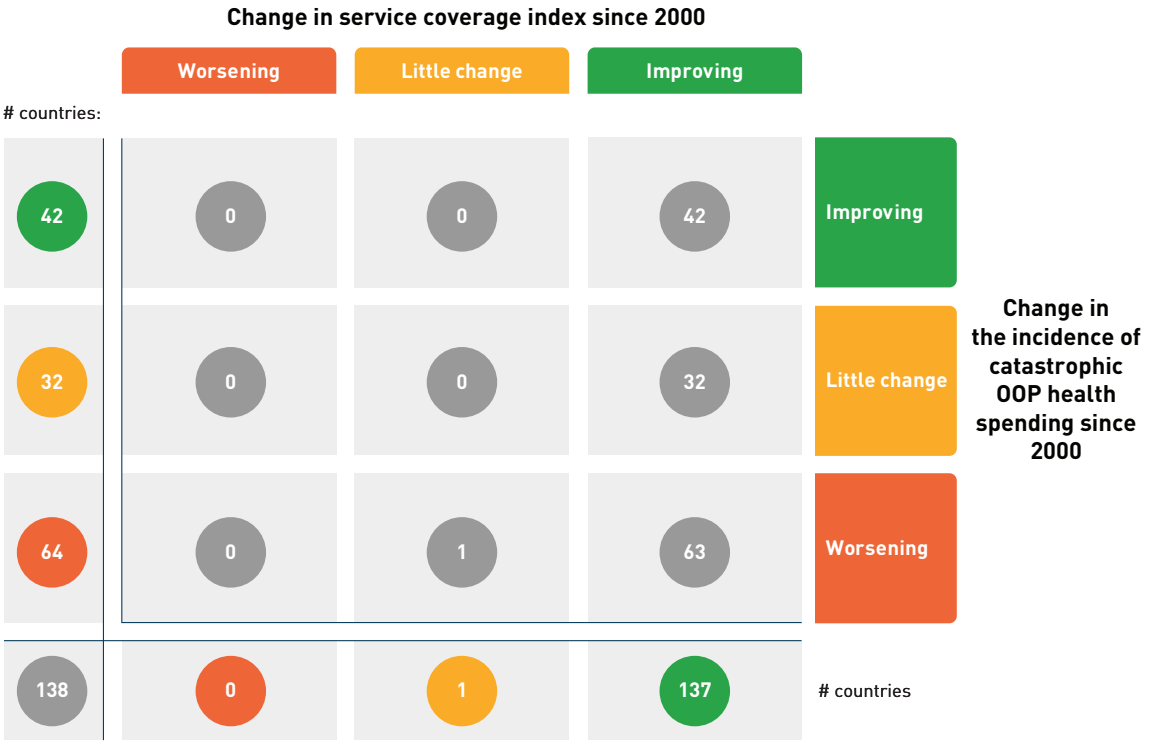
Sources: SDG indicator 3.8.1, WHO global service coverage database *(1); SDG indicator 3.8.2,* Global database on financial protection assembled by WHO and the World Bank *(2,3).*

[1] Defined as OOP health spending exceeding 10% of their household budget (SDG indicator 3.8.2 at the 10% threshold).

Very few countries have managed to improve service coverage and reduce catastrophic OOP health spending. Improvements in service coverage were seen in nearly all countries since 2000, while catastrophic spending worsened or saw little change in most countries (see Fig. 2). Since 2000, only 42 of the 138 countries with available data for the same years for both UHC indicators achieved an expansion of service coverage, while reducing their respective share of the population incurring catastrophic OOP health spending. Moreover, the majority of countries (108/194) experienced worsening or no significant change in service coverage since the launch of the SDGs in 2015.[2]

Compared to countries with higher income levels, low-income countries (LICs) and lower-middle-income countries (LMICs) saw the most significant improvements in the UHC service coverage index (UHC SCI) since 2000 and experienced the largest increases in catastrophic OOP health spending. While there was substantial regional variation in SDGs 3.8.1 and 3.8.2 levels when the SDGs era began in 2015, all regions have since shown the same pattern of stagnating service coverage and worsening financial hardship. The causes of this lack of progress vary by region and country, and addressing them requires context-specific policies.

Fig. 2. Categories of change in SDG indicators 3.8.1 and 3.8.2 for 138 countries since 2000



Notes: Analysis only includes the 138 countries with at least two reported data points for SDG 3.8.2 since 2000; annualized rate of change based on the available periods for each indicator, for SDG 3.8.2, the median minimum year was 2004, and the median maximum year was 2017; for SDG 3.8.1, all years 2000–2021 were available for all countries.

Thresholds are based on average annualized rate of change to define change: worsening financial hardship (>0.1), no change (-0.1–0.1); improving financial hardship (<-0.1), worsening service coverage (<-0.1), no change (-0.1–0.1); improving service coverage (>0.1).

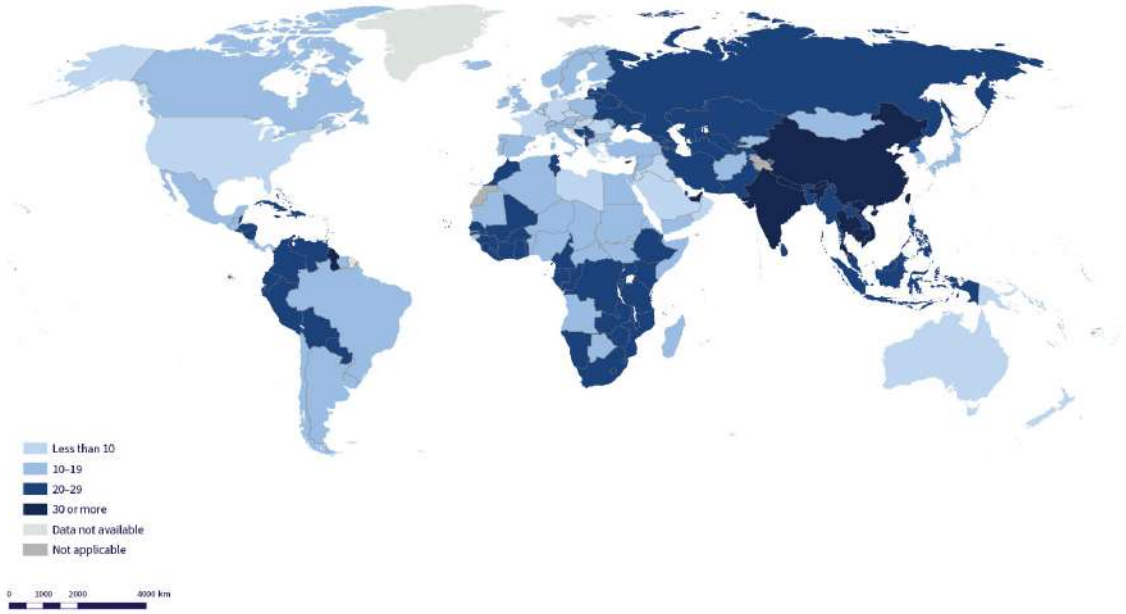
Sources: SDG indicator 3.8.1, WHO global service coverage database, May 2023 *(1); SDG indicator 3.8.2,* Global database on financial protection assembled by WHO and the World Bank *(2,3).*

[2] Calculated for all 194 countries from 2019 through 2021 using the criteria noted in Fig. 2.

Important gains in service coverage since 2000 have stalled in recent years, threatening further progress toward UHC. While substantial gains in service coverage were observed globally over the past two decades (see Fig. 3a), progress has stalled in recent years (see Fig. 3b). The global UHC SCI score increased from 45 to 68 out of 100 between 2000 and 2021, with a stagnating pace of improvement in recent years. The change in the country-level index scores from the 2000 baseline to 2021 ranged from less than one up to 39 index points, with a plurality of countries (n=85) seeing improvements of 20–29 points from the 2000 SCI baseline index score (see Fig. 3a). However, since 2015, the beginning of the SDG era, there was a global increase of only three index points with very few countries continuing to see a similar level of service coverage expansion as in the previous years (see Fig. 3b). Moreover, there was no change in the global SCI score between 2019 and 2021, a period during which the COVID-19 pandemic impacted health systems and economies worldwide.

Fig. 3. Gains in service coverage globally, 2000–2021

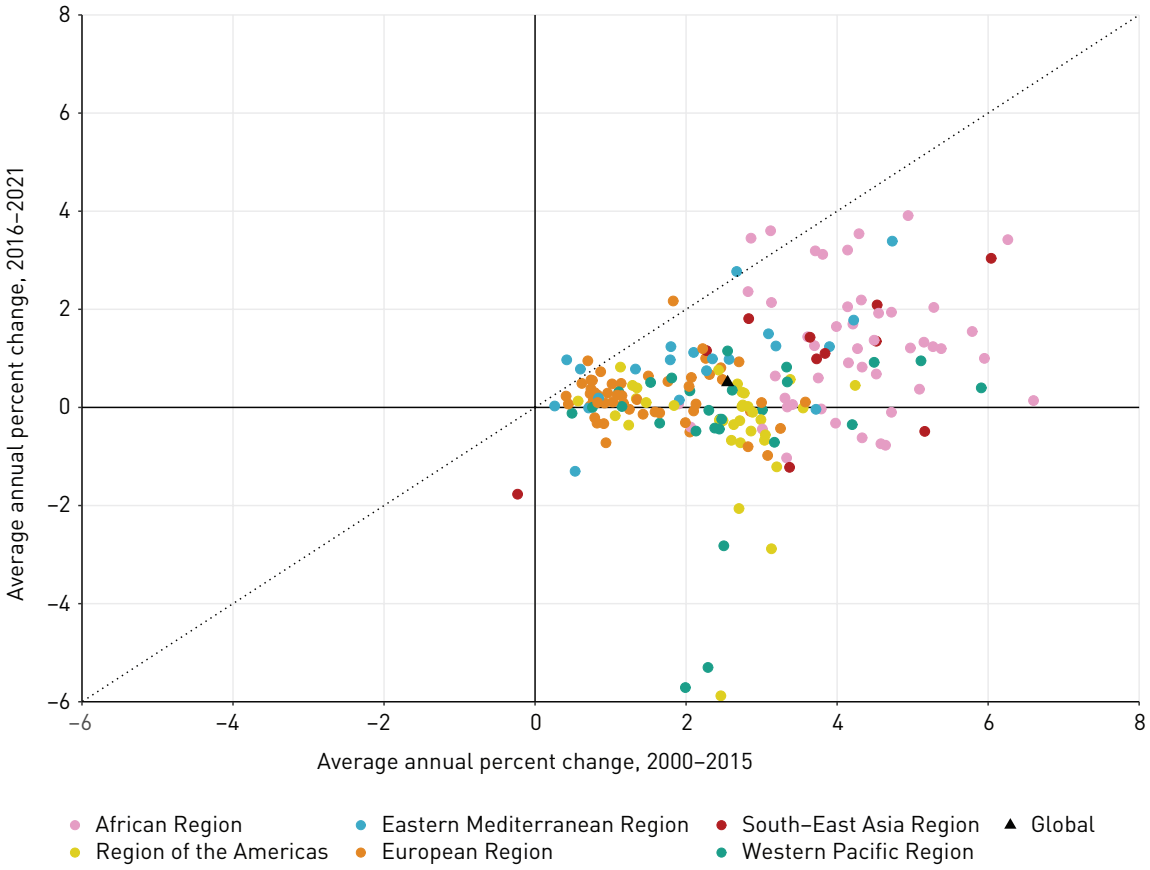
(a) Change in overall SCI points, 2000–2021



Note: This map has been produced by WHO. The boundaries, colours, or other designations or denominations used in this map and the publication do not imply, on the part of the World Bank or WHO, any opinion or judgement on the legal status of any country, territory, city, or area or of its authorities, or any endorsement or acceptance of such boundaries or frontiers.

Source: WHO global service coverage database, May 2023 *(1).*

(b) Percent average annual change in SCI by country, 2000–2015 versus 2016–2021



Note: Colours designate WHO regions.

Source: WHO global service coverage database, May 2023 *(1).*

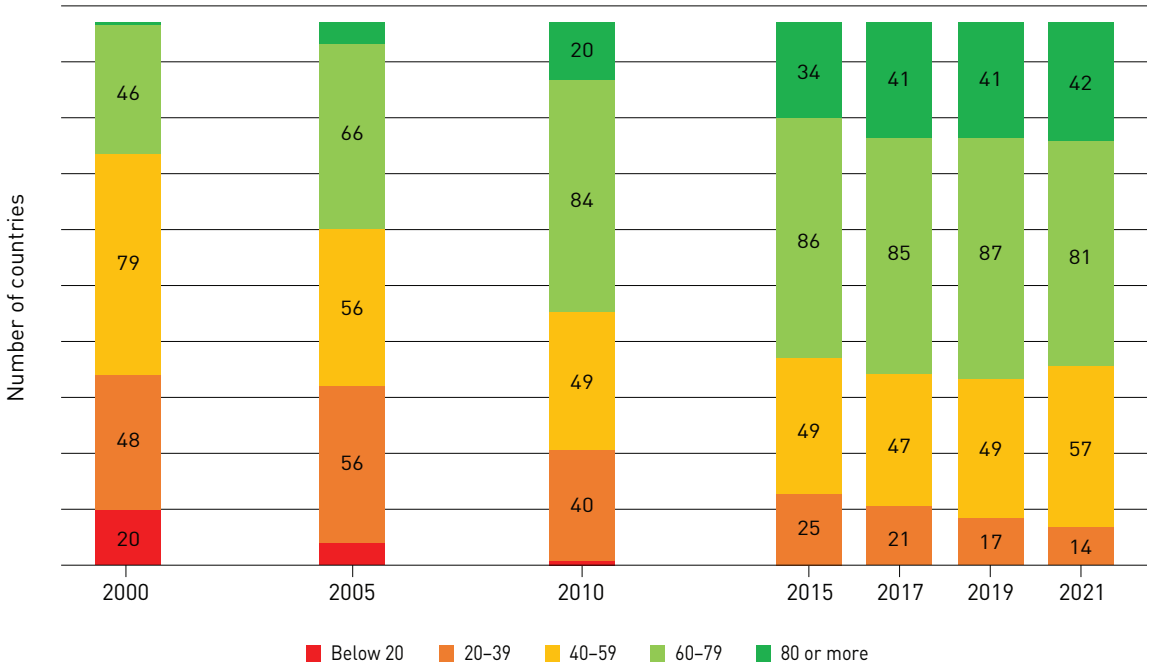
The most significant improvements since 2000 were observed in the infectious disease component of service coverage, improving by an average of 7% per year. In contrast, the SCI scores for the other components – noncommunicable diseases (NCDs), reproductive, maternal, newborn, and child health (RMNCH), and health service access and capacity – saw only gradual increases (1% or less) prior to 2015, followed by continued minimal or no improvements in recent years.

Inequalities in service coverage persist within and between countries. Different population groups, such as those living in more rural settings and the poorest households, experience less coverage of essential health services than national averages.

The proportion of the population not covered by essential health services decreased by about 15% between 2000 and 2021, with minimal progress made after 2015. This indicates that in 2021, about four and a half billion people (ranging from approximately 14–87% of the population at the country level) were not fully covered by essential health services.

Across countries, substantial variation in SCI scores persisted in 2021, ranging from 28 to 91, with a strong positive association between SCI and countries' income levels. More countries have higher levels of service coverage in 2021 than in 2000, but progress has stagnated. In 2000, 68 countries had low or very low levels of service coverage (SCI <40) compared to 14 countries in 2021 (see Fig. 4). Conversely, in 2000, only one country had very high service coverage levels (SCI 80+), which improved substantially to 42 countries by 2021. In line with these improvements, since 2000, all country-level SCI scores have converged or become more equal, as countries with lower scores in the earlier years made more relative progress on expanding service coverage than countries with higher scores at the beginning of the period. However, there was an abrupt reversal in this trend towards more global equality in service coverage after 2015 in all regions except the WHO African and South-East Asia Regions, both of which continued to see convergence of country-level scores.

Fig. 4. Number of countries by UHC SCI group, 2000–2021



Source: WHO global service coverage database, May 2023 *(1).*

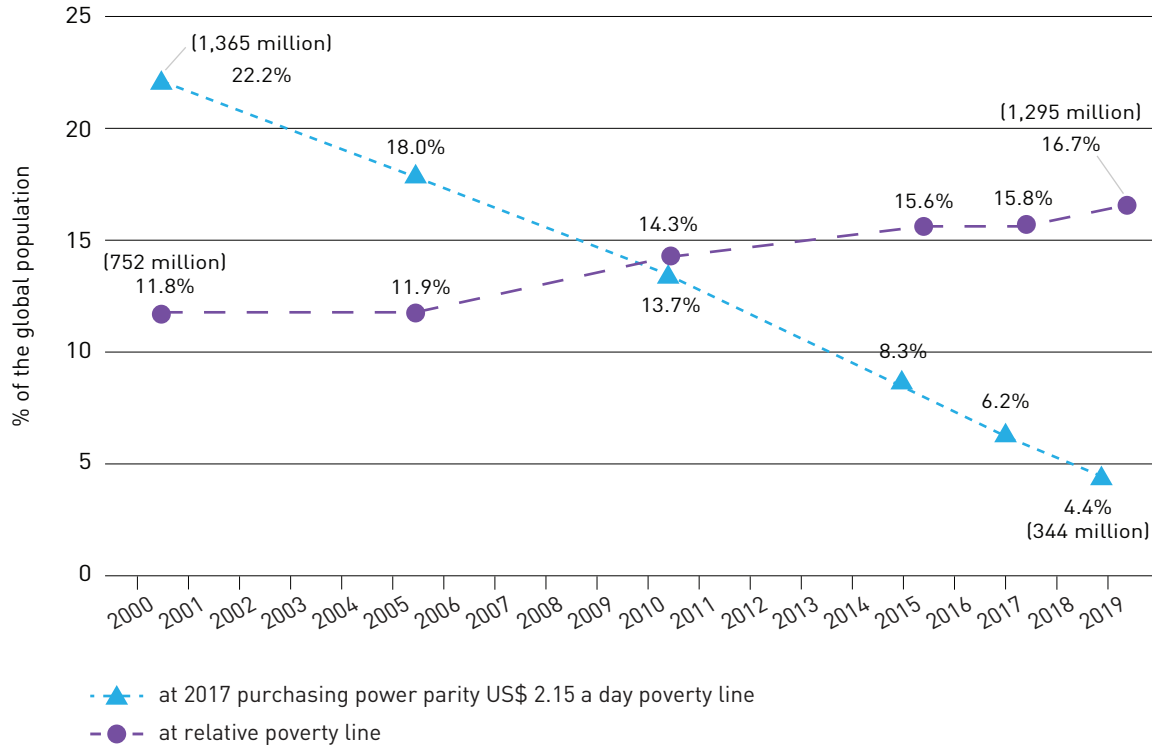
The population incurring catastrophic OOP health spending continuously increased globally since 2000 and surpassed 1 billion by 2019. Catastrophic OOP health spending reduces households' ability to consume other essential goods and services such as food, shelter, clothing, or education. The global percentage of people living in households spending more than 10% of the household budget on OOP health expenses has continuously increased from 9.6% in 2000 to 12.6% in 2015 and reached 13.5% in 2019 (see Fig. 1). Overall, the estimated number of people incurring such relatively large OOP health spending increased by 76% during the same period from 588 million people in 2000 to 1.04 billion in 2019. Within countries, catastrophic OOP health spending is more prevalent among people living in households with older members (age 60 years or over). However, there is no strong relationship between countries' income levels and catastrophic OOP health spending rates.

The proportion of the global population with impoverishing OOP health spending decreased by 80% at the extreme poverty line between 2000 and 2019, but during the same period the rate with impoverishing OOP health spending at the relative poverty line increased by 42%. For people living in poverty or in near poverty, any amount of OOP health spending can be a source of financial hardship, even if it represents less than 10% of their household budget, as they have a lower capacity to pay for health care. The global population share with impoverishing OOP health spending at the extreme poverty line of US$ 2.15 a day in 2017 purchasing power parity reduced from 22.2% in 2000 to 15.6% in 2015 and 4.4% in 2019. However, the progress made in reducing impoverishing health spending for those living in extreme poverty or close to extreme poverty was partially offset by an increase in impoverishing health spending experienced by those living in relative poverty or near to relative poverty,[3] which rose from 11.8% in 2000 to 15.8% in 2015 and 16.7% in 2019 (see Fig. 5).

[3] The relative poverty line is country specific and is defined as 60% of the median per capita consumption or income.

Fig. 5. Trends in the incidence of impoverishing OOP health spending at the extreme and relative poverty lines, 2000–2019

Global proportion of the population impoverished and further impoverished



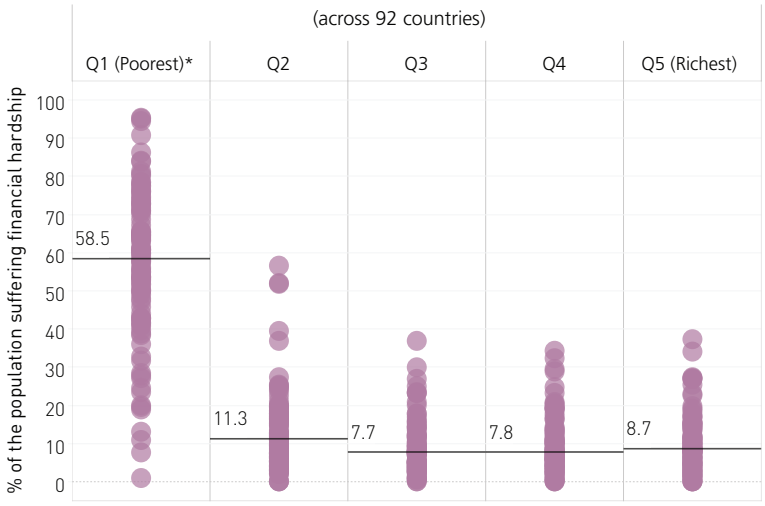
Source: Global database on financial protection assembled by WHO and the World Bank, 2023 update *(2,3)*.

In 2019, 1.3 billion people incurred impoverishing health spending at the relative poverty lines and 344 million people faced impoverishing OOP health spending at the extreme poverty line, i.e. almost half of the global population living in extreme poverty in 2019 (see Fig. 5).

Between countries, impoverishing OOP health spending at the extreme poverty line is primarily concentrated in LICs and LMICs that have higher poverty rates. There is no strong relationship between impoverishing OOP health spending at the relative poverty line and a country's income level. However, LMICs experienced the largest increases in the proportion of the population incurring impoverishing OOP health spending at the relative poverty line. Within countries impoverishing health spending is more prevalent among people living in rural areas, multi-generational households, with a male-headed household or younger household head (below 60 years of age).

Overall, financial hardship is concentrated among the less well-off households mostly due to the higher rates of impoverishing health spending rather than catastrophic health spending. In 2019, the total population experiencing catastrophic spending, or impoverishing health spending at the relative poverty line, or both (i.e. any form of financial hardship) was estimated to be 2 billion people. The latest available data shows that within countries the less well-off households were most likely to experience financial hardship (see Fig. 6).

Fig. 6. Proportion of the population with OOP health spending exceeding 10% of the household budget or impoverishing health spending (at the relative poverty line) or both, by per capita consumption quintile



*: Significantly higher than other quintiles at 95% level.

___: The horizontal line corresponds to the median of values across countries.

Note: The definitions of catastrophic and impoverishing health spending used for the global tracking of financial hardship are not mutually exclusive – people can experience neither, either, or both simultaneously. This figure shows the concentration of those incurring either or both at the same time without double counting by per capita consumption quintile based on the latest available survey-based estimates for 92 countries at all income levels during the period 2015–2019.

Sources: Background data produced by WHO and the World Bank for the 2023 update of the WHO and World Bank global financial protection database 2023 *(2,3)*.

Besides the absence of catastrophic and impoverishing OOP spending (financial hardship), *financial protection* requires that people do not forgo needed health care due to financial barriers. While forgone care is not tracked as systematically as the catastrophic and impoverishing health spending indicators, analysis of data from over 29 LICs and LMICs before the COVID-19 pandemic revealed that financial barriers were reported by 19% of the individuals self-reporting forgoing needed care.

COVID-19 has likely had an impact on progress toward UHC. The available evidence points toward a worsening of service coverage and financial protection during the pandemic. The SCI stagnated globally between 2019 and 2021, while sub-regional and country-level decreases were observed in some dimensions of the SCI, alongside significant acute disruptions in delivering health services not captured by the annual SCI at the global level. The disruptions occurred through a mix of demand and supply factors and the diversion of significant health system resources to COVID-19-related services. The combined macroeconomic, fiscal, and health impacts of the pandemic, and emerging evidence on rising poverty, led to the weakening of financial protection globally, with higher rates of forgone care due to financial barriers and more people incurring financial hardship due to catastrophic and impoverishing OOP spending.

The available evidence presents a potentially dire prospect for further progress toward UHC without urgent political action.

- Significant advances in the service coverage dimension of UHC by 2030 require accelerating the expansion of all essential health services, especially those with minimal progress, such as coverage for NCDs. Worryingly, the world has moved in the wrong direction, with a marked slowdown in the expansion of service coverage since 2015 and worsening or no significant improvements in service coverage in most countries since 2019.
- The most substantial improvements to service coverage have been concentrated in the infectious disease dimension of UHC. While there have been many successes, especially related to treatment coverage for HIV, tuberculosis (TB) and malaria prevention, complacency is not an option. Any reductions in coverage levels could lead to rapid increases in disease burden, potentially exacerbated by multiple crises, such as the expansion of infectious disease vector habitats due to global climate change.

- Continued progress in improving service coverage depends on concerted country efforts to improve services for NCDs and those related to RMNCH. Importantly, to support the expansion of all essential services, countries must have the workforce and infrastructure capacity to facilitate access and effective coverage. In addition, efficient and effective responses to public health risks and emergencies of national and international concern need to be supported through strong country-level commitments to the International Health Regulations (2005).
- Removing financial barriers to care would improve both service coverage and financial protection by reducing forgone care.
- Financial protection is undermined by a heavy reliance on OOP health spending to fund health systems, especially in LICs and LMICs. Pre-paid pooled compulsory contributions to fund health systems must be more significant.
- OOP health spending also undermines efforts to eradicate poverty globally, which can be avoided if OOP health payments are minimized for people living close to poverty and if those living in poverty are exempted from such payments.
- Proactive policy efforts are needed to decrease financial hardship from OOP payments. Specifically, public health funding needs to increase further and be used more efficiently and equitably, coverage for medicines extended, and OOP spending on health limited with low, fixed and capped co-payments for those from whom user charges are still collected and removed completely for the poor and most vulnerable.
- The WHO UHC Billion target *(4)*[4] – a composite measure of both service coverage and the proportion of the population incurring catastrophic OOP health spending – was established to catalyse and track progress during the WHO Thirteenth General Programme of Work (GPW13). In 2023, 477 million more people are expected to be covered by essential health services without facing catastrophic OOP health spending compared to 2018. However, efforts need to be re-doubled to achieve an additional billion people benefiting from UHC.
- A primary health care (PHC) approach can improve health systems and accelerate progress toward UHC. The PHC measurement framework *(5)* and indicators include UHC service coverage and financial protection metrics discussed in this report as outcome indicators. As countries strive to re-orient their health systems towards a PHC approach, the uneven progress in components of the SCI signals potential areas for action in expanding primary care services and the orientation towards the PHC approach *(5)*.
- Likewise, evidence from regional studies presented in this report shows that OOP spending on outpatient medicines – central to the provision of primary care – is a major driver of financial hardship. This underscores the need to improve policies by ensuring that primary care services include treatments, in addition to an adequate range of diagnostics and that user charges for these are minimized or completely removed for people with low incomes or chronic conditions.

As evidenced by the initial impact of the health and economic shock of COVID-19, improvements in UHC will continue to face challenges in the years to come in the absence of clear and deliberate policy choices to protect and prioritize public spending on health. This choice will be difficult, as COVID-19 set off a deep and widespread global economic crisis and despite the recent rebound in economic growth, escalating geopolitical tensions, macroeconomic shocks, and climate crises will continue to place pressures on public financing and household budgets alike. Reaching the goal of UHC by 2030 requires proactive, targeted, and accelerated efforts building on strong data and evidence. It will require strengthening partnerships with multilateral agencies, civil society, and the private sector. Leadership is needed now more than ever; UHC is ultimately a political choice.

[4] Triple Billion progress dashboard of WHO *(4)*.

Introduction

The goal of universal health coverage (UHC) is to ensure that all people receive the health services they need without facing financial hardship. These include services designed to promote better health, prevent illness, and provide treatment, rehabilitation and palliative care of sufficient quality to be effective, while ensuring that the use of these services does not expose the user to financial hardship.

Monitoring trends and patterns in UHC across countries is critical to ensure equitable and affordable access to effective health services that leave no one behind. The global health agenda calls for all stakeholders, including international agencies and civil society groups, to better coordinate and support country progress towards the 2030 Sustainable Development Goal (SDG) health targets.

This monitoring report analyses progress towards and impediments to achieving UHC. The framework used in this report builds on two SDG UHC indicators:

3.8.1 captures the service coverage dimension of UHC (that everyone – irrespective of their living standards – should receive the health services they need).

3.8.2 captures the population exposed to financial hardship due to out-of-pocket (OOP) health payments made when using health services through the incidence of catastrophic health spending. In addition, the incidence of impoverishing OOP health spending is used to identify the extent to which payments at point of use contribute to poverty.

In late 2022, the World Health Organization (WHO) collated data to calculate SDG indicator 3.8.1. Since the release of the 2021 edition of this report, WHO and the World Bank jointly prepared updates to SDG indicator 3.8.2, often in collaboration with Member States. A formal country consultation was conducted between mid-January 2023 and the beginning of March 2023, with nominated focal points from national governments and national statistical offices to review inputs and the calculation of indicators.

The content in this report is new and developed specifically for this edition, unless otherwise noted. Chapter 1 provides an updated analysis of SDG indicator 3.8.1 as measured by the UHC service coverage index (SCI), drawing on data available to WHO as of 1 May 2023. As co-custodians, Chapter 2 is co-authored by WHO and the World Bank and reports on the level of and trends in SDG-related indicators of financial hardship – specifically the SDG indicator 3.8.2 for catastrophic health spending and other indicators of impoverishing health spending available to both organizations as of 31 March 2023. Chapter 3 examines the joint progress in service coverage and financial hardship, and considers potential impediments to progress. Chapter 4 presents regional analyses on both dimensions of UHC and highlights context-specific challenges and gains.

Monitoring Sustainable Development Goal 3.8.1: coverage of essential health services

Key findings

- The population-weighted global universal health coverage service coverage index score increased from 45 to 68 out of 100 between 2000 and 2021.
- However, recent progress in increasing coverage has slowed compared to pre-2015 gains, rising only three index points between 2015 and 2021.
- The proportion of the population not covered by essential health services decreased by about 15% between 2000 and 2021, with minimal progress made after 2015. This indicates that in 2021, about four and a half billion people were not fully covered by essential health services.
- The largest improvements since 2000 were observed across the infectious disease indicators, while the those for noncommunicable diseases, reproductive, maternal, newborn and child health, as well as health service access and capacity saw gradual increases prior to 2015, followed by minimal or no improvements through 2021.
- Overall, country-level estimates of the universal health coverage service coverage index have converged, or become more equal, since 2000. Given the overall trends, this indicates that countries with the lower scores have made progress towards catching up to their peers with higher scores. However, there was an abrupt reversal in this trend after 2015 in all regions except in the African and South-East Asia Regions.
- The improvements in the universal health coverage service coverage index between 2000 and 2021 are mostly (about 60%) attributable to changes in human immunodeficiency virus antiretroviral therapy coverage.

Achieving the service coverage dimension of UHC means that all people receive the promotive, preventative, curative, rehabilitative, and palliative health services they need, of sufficient quality, to realize improvements in health and well-being. Progress towards this SDG target (3.8.1) is monitored by measuring the coverage of essential services within countries, summarized as a single index score. This chapter summarizes the updated estimates for SDG 3.8.1 for years 2000–2021 and examines trends, the pace of progress, as well as aspects of inequalities in the service coverage index. The challenges in measuring UHC service coverage are discussed and potential areas for improvement with the aim of reporting robust, policy- and programme-relevant estimates are suggested.

1.1 The service coverage index, SDG 3.8.1

To measure the service coverage dimension of UHC (SDG 3.8.1), a basket of representative essential health services is considered. This includes indicators related to reproductive, newborn, maternal and child health (RMNCH), infectious diseases, noncommunicable diseases (NCDs), and service capacity and access *(6).* The inclusive nature of UHC and its emphasis on providing health services of sufficient quality to be effective to those in need across the life course poses unique challenges for monitoring service coverage. No single index can fully capture all of the health services described in the definition of UHC. Given this, the current SCI uses a selection of indicators to represent overall coverage of essential health services across the entire population in a country.

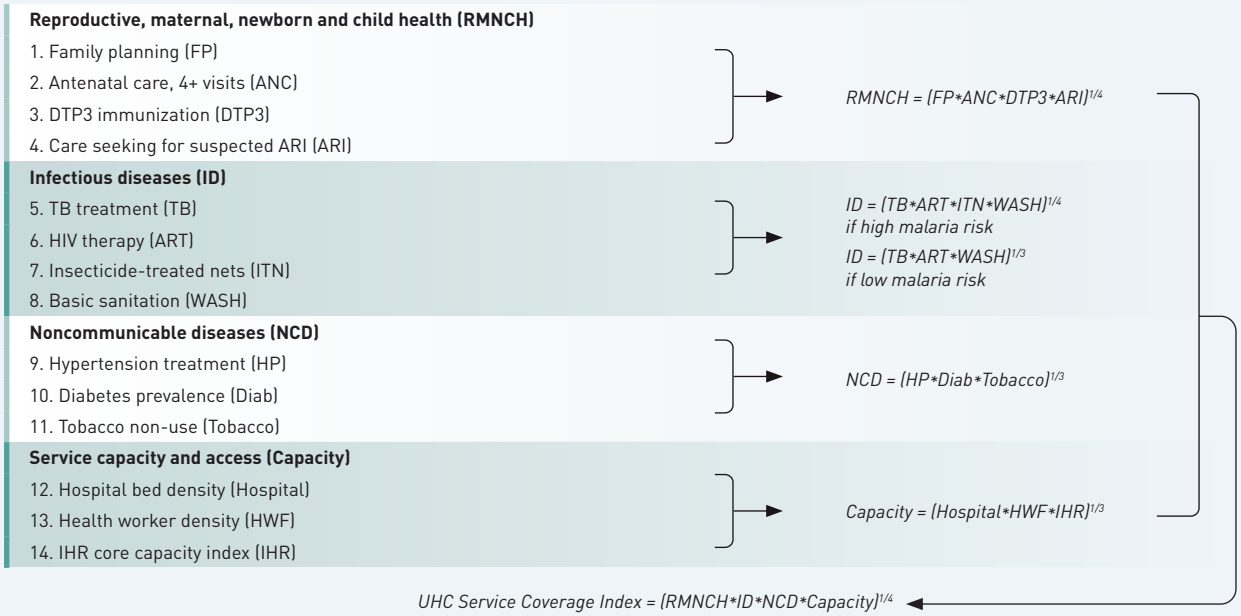
Four principles guided the initial development of the index's construction: coverage of main health areas; inclusion of different types of services (health promotion, illness prevention, curative services, rehabilitation, palliative services); preference for effective coverage measures if available; and whether disaggregation was possible by key dimensions of inequality *(7).* The degree to which each of these principles is met with the current index varies. A revision of SDG 3.8.1 is planned ahead of the next data release in 2025 and discussed in more detail at the end of this chapter. As it stands, the index consists of 14 indicators across four sub-indices (see Fig. 1.1). Indicator values are gathered from relevant technical programmes across WHO, United Nations Children's Fund (UNICEF), and United Nations Population Fund (UNFPA). For missing data in the time series for any indicator, consultations with technical experts at the respective agencies are conducted to inform the inclusion of any additional data points. Box 1.2 discusses further data considerations to be taken into account when interpreting the SCI.

While index point values are calculated for each of the 194 WHO Member States for reference years (2000, 2005, 2010, 2015, 2017, 2019, 2021), it is most useful to make comparisons over time across *levels* of service coverage: very high service coverage (index of 80 and above), high service coverage (index between 60 and 79), medium service coverage (index between 40 and 59), low service coverage (index between 20 and 39) and very low service coverage (index <20).

Box 1.1. Calculation of universal health coverage service coverage index (SDG 3.8.1)

The universal health coverage service coverage index (UHC SCI) SDG 3.8.1, is calculated as the geometric mean of 14 indicators for each year from 2000 to 2021 for all Member States (see Fig. 1.1) The entire time series is calculated to inform the reference year values. For countries that are not endemic for malaria (n=154), the insecticide-treated net (ITN) coverage indicator is excluded and the geometric mean is calculated using only 13 indicators.

Fig. 1.1. Schematic of UHC SCI (SDG 3.8.1) components and calculation



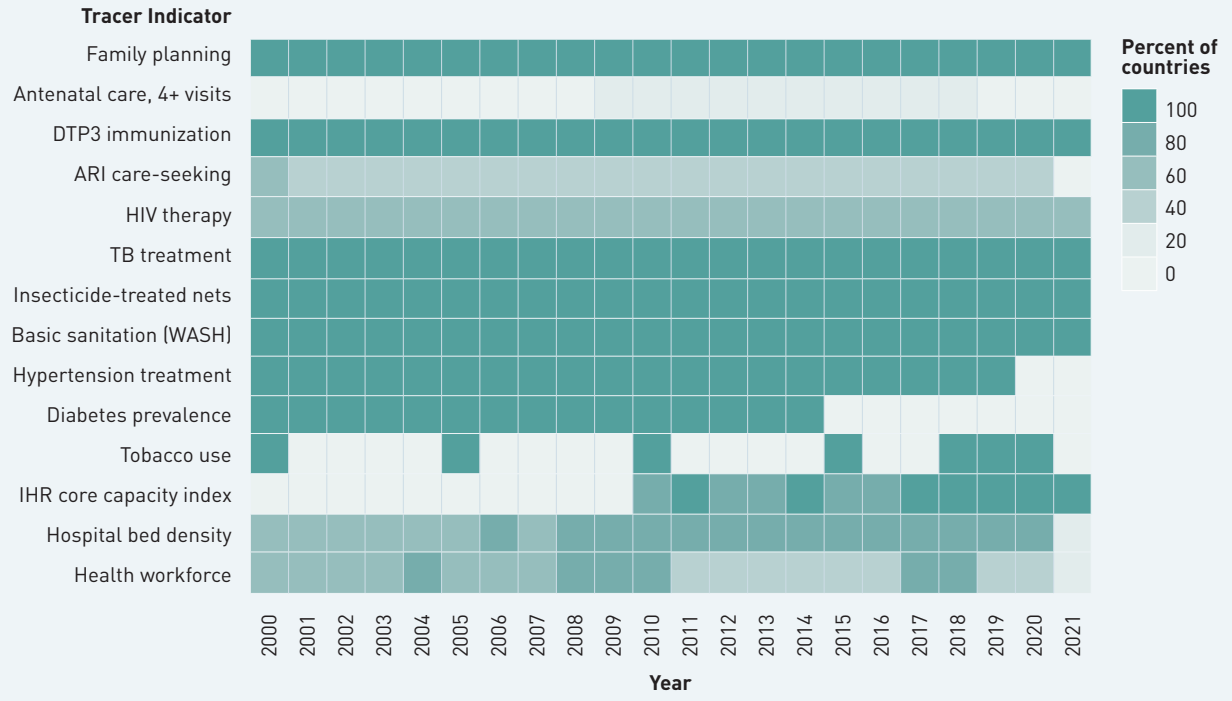
Note: DTP3, three doses of the combined diphtheria, tetanus toxoid and pertussis vaccine; ARI, acute respiratory infection; HIV, human immunodeficiency virus; TB, tuberculosis; IHR, International Health Regulations.

Source: SDG indicators metadata repository (updated 24 January 2023) *(8).*

Box 1.2. Data considerations for interpretation

To calculate the SCI, it is necessary to include indicator values for every country and year *(1)*. Values for the 14 indicators are obtained from technical programmes and are a combination of reported administrative data, survey-derived estimates, and modelled estimates. The availability of primary data, that is, data gathered through routine reporting systems or surveys, is further discussed in section 1.5. Where neither primary data nor modelled estimates are available for a particular country–indicator–year, either imputation or extrapolation are used to complete an indicator time series for a given country. Given the lag in data availability due to administrative record keeping and survey frequency, there tend to be fewer observed data points in the most recent years. Figure 1.2 below shows the percentage of countries with administrative data, survey-derived estimates, or modelled estimates for each indicator over time. Given the importance of understanding the impacts of the COVID-19 pandemic on service coverage, the interpretation of the index should also take into account the degree to which the data during 2020 and 2021 are extrapolated from pre-pandemic years. Of the 2950 possible country–indicator data points in 2020 and 2021, 59% (n=1741) were country-reported data, survey data, or modelled estimates produced by technical programmes, that is the values were not imputed or extrapolated. Figure 1.2 shows that interpolated and extrapolated indicator values for 2020 and 2021 were concentrated in specific indicators, namely, antenatal care, care seeking for acute respiratory infection, hypertension treatment coverage, diabetes prevalence, and tobacco use.

Fig. 1.2. Percentage of reported or modeled indicator values (i.e. not imputed or extrapolated) across all countries, 2000–2021



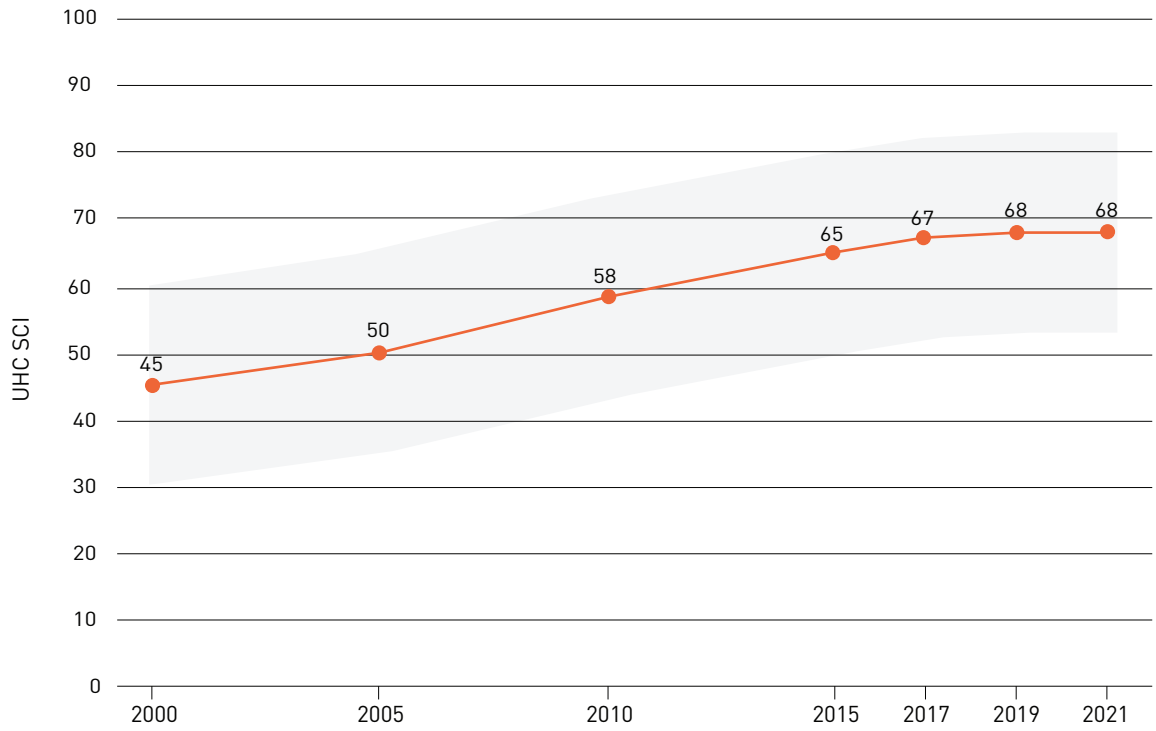
Note: DTP3, three doses of the combined diphtheria, tetanus toxoid and pertussis vaccine; ARI, acute respiratory infection; HIV, human immunodeficiency virus; TB, tuberculosis; IHR, International Health Regulations.

Source: WHO global service coverage database, May 2023 *(1)*.

1.2 Trends in UHC service coverage, 2000–2021

The population-weighted global UHC SCI score increased from 45 to 68 between 2000 and 2021 (see Fig. 1.3). However, recent progress in increasing coverage has slowed compared to pre-2015 gains, rising only three index points between 2015 and 2021. Regarding the impact of the COVID-19 pandemic on the UHC SCI, while the index continued to stagnate globally, sub-regional and country-level decreases were observed, though not consistently across all geographic areas. Likewise, while acute disruptions in the coverage of essential services were reported throughout 2020 and 2021, the durations of disruptions were not long enough to be captured in the annual estimates of some indicators, and the extrapolation of data from pre-2020 years would not reflect the impact of the pandemic in other indicators. As an index score, the SCI cannot be directly interpreted as the percentage of the population who are covered by a set of essential services. Box 1.3 describes how the population covered by essential services can be calculated and presents results using this method.

Fig. 1.3. SDG 3.8.1 UHC service coverage, 2000–2021



Note: Shaded area represents the interquartile range of country values included in the population-weighted mean global values.

Source: WHO global service coverage database, May 2023 *(1)*.

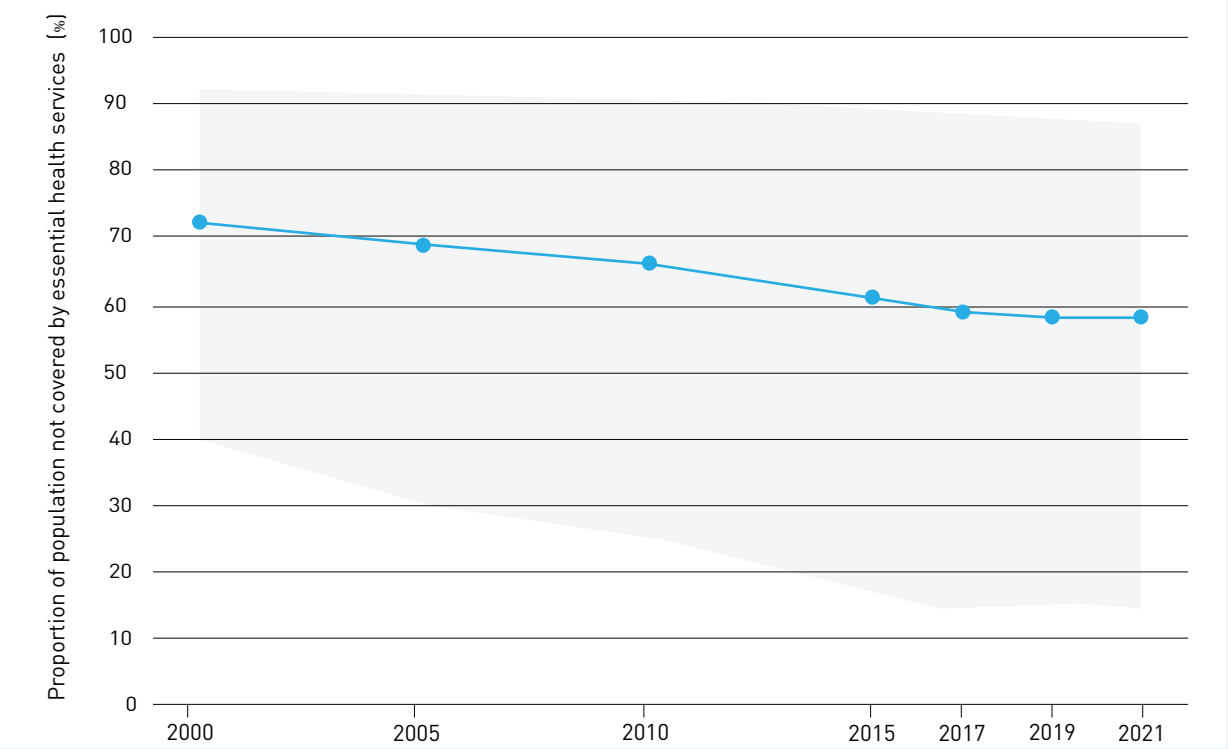
Across the 194 Member States, the SCI scores varied (see Fig. 1.5), ranging from 28 to 91 in 2021. The population-weighted regional index scores were highest in the European Region (81) and the Region of the Americas (80), followed by the Western Pacific (79), South-East Asia (62), Eastern Mediterranean (57), and African (44) Regions. The change in the country-level index scores from the 2000 baseline to 2021 ranged from less than 1 up to 39 index points, with the highest number of countries (n=85) seeing improvements of 20–29 points from the 2000 SCI baseline index score (see Fig. 1.6).

Box 1.3. Population not covered by essential health services

The UHC SCI (SDG 3.8.1) is an index score, first calculated at the country-level and then at the regional and global levels using population-weighted means. As one of the indicators included in the global indicator framework for the SDGs and targets of the 2030 Agenda for Sustainable Development *(9)*, the UHC SCI is important to monitoring progress towards UHC over time. The UHC SCI score captures coverage of essential services across the entire population of a country, and is therefore a reflection of the entire health system for all individuals.

The percentage of the population who have access to a set of essential services provides a different perspective of progress on the path to UHC. If the country-level UHC SCI scores are considered to indicate the average coverage within the population, these can be converted to percentage of people receiving essential health services using data collected from household surveys in low- and lower-middle income countries (see Annex 1 for more details about the methodology.) Figure 1.4 below shows the proportion of the global population not covered by essential health services, as calculated from the sum of country-level populations not covered by essential health services for each year. The proportion of the population not covered by essential health services decreased by about 15% between 2000 and 2021, with minimal progress made after 2015. This indicates that in 2021, about four and a half billion people were not covered by essential health services.

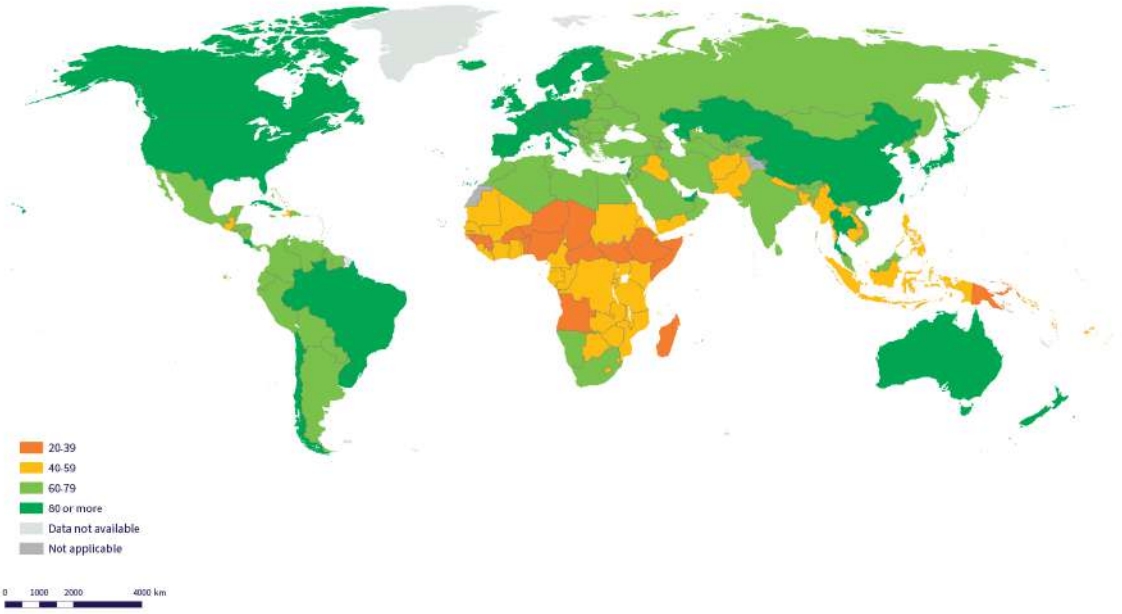
Fig. 1.4. Proportion of population not covered by essential health services using the index conversion, 2000–2021



Note: Grey shaded area indicates the range of country values for each year.

Source: Based on an analysis of WHO global service coverage database, May 2023 *(1)*.

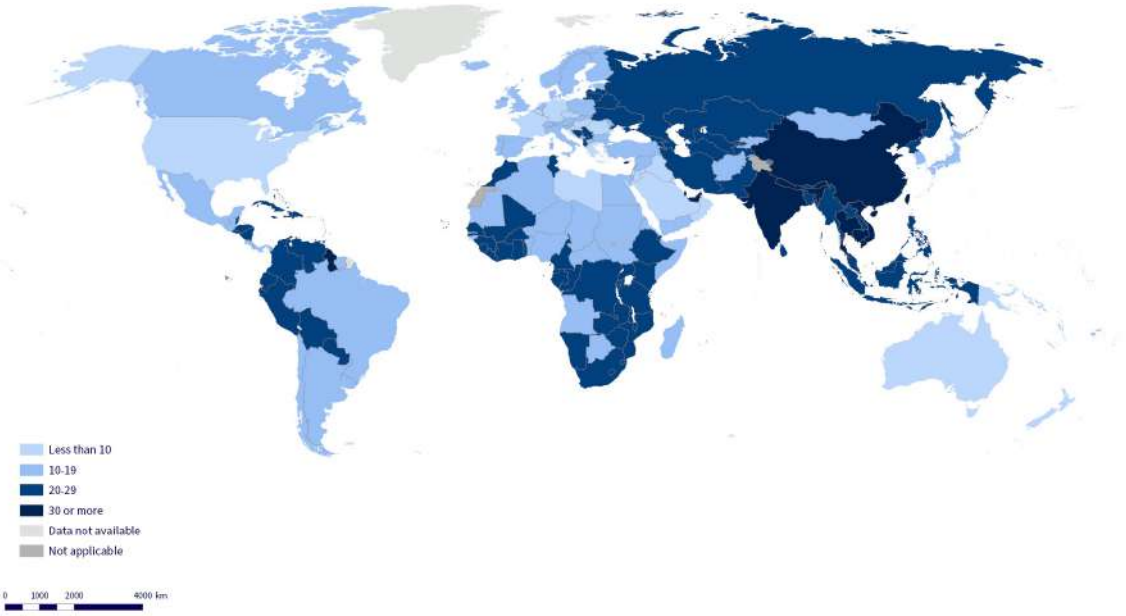
Fig 1.5. UHC SCI by country, 2021



Note: This map has been produced by WHO. The boundaries, colours or other designations or denominations used in the map and the publication do not imply, on the part of the World Bank or WHO, any opinion or judgement on the legal status of any country, territory, city or area or of its authorities, or any endorsement or acceptance of such boundaries or frontiers.

Source: WHO global service coverage database, May 2023 *(1).*

Fig. 1.6. Change in UHC SCI (in index points), 2000–2021

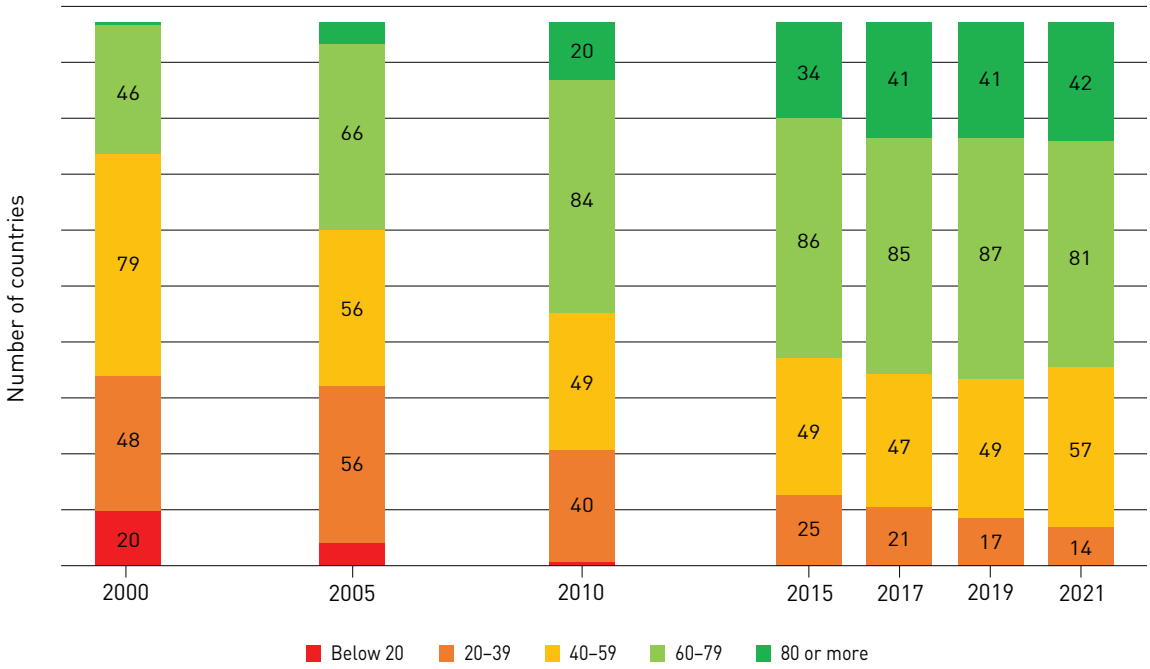


Note: This map has been produced by WHO. The boundaries, colours or other designations or denominations used in the map and the publication do not imply, on the part of the World Bank or WHO, any opinion or judgement on the legal status of any country, territory, city or area or of its authorities, or any endorsement or acceptance of such boundaries or frontiers.

Source: WHO global service coverage database, May 2023 *(1).*

In 2021, 42 of the 194 Member States had very high service coverage (SCI 80+), 81 had high coverage (SCI 60–79), 57 had medium coverage (SCI 40–59), 14 had low coverage (SCI 20–39), and no countries had very low coverage (SCI <20) (see Fig. 1.7).

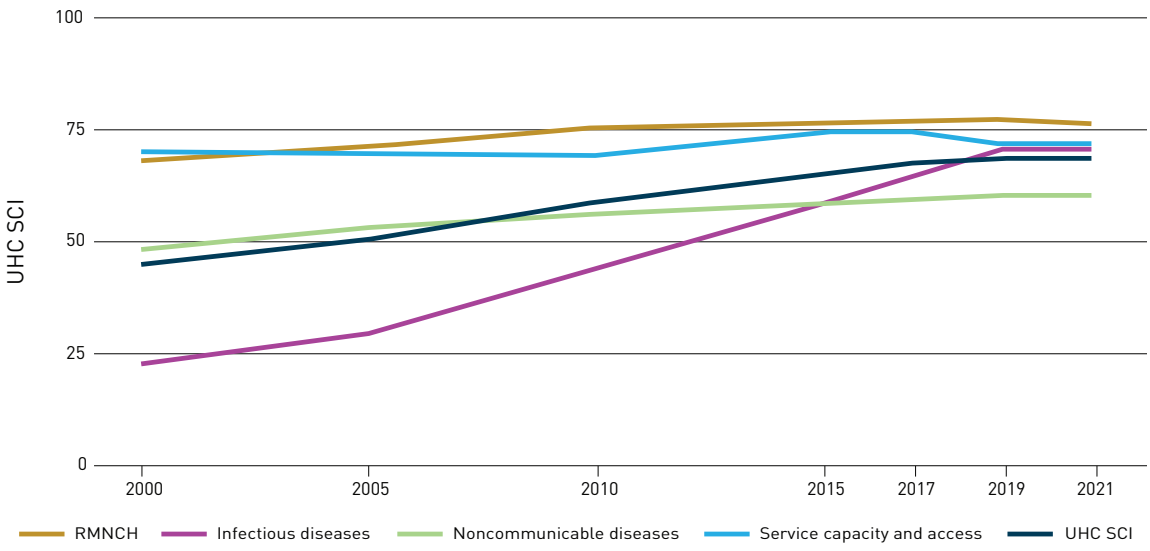
Fig. 1.7. Number of countries by UHC SCI group, 2000–2021



Source: WHO global service coverage database, May 2023 *(1)*.

As discussed in section 1.1 of this chapter, the SCI comprises sub-indices covering four key health domains: RMNCH, infectious diseases, NCDs, and health service access and capacity. The largest increases in coverage since 2000 were observed in the infectious disease sub-index, while the other sub-indices saw gradual changes prior to 2015, followed by little or no changes through 2021 (see Fig. 1.8). The flattening of the trend in the infectious diseases sub-index can be attributed in part to the slowdown in overall progress across the indicators coupled with the severe impact of COVID-19 on tuberculosis (TB) treatment coverage modelled by the WHO technical experts *(10)*.

Fig. 1.8. Trends in UHC SCI by sub-component, 2000–2021



Note: Black line indicates composite index, UHC SCI (SDG 3.8.1); RMNCH, reproductive, maternal, newborn, and child health.

Source: WHO global service coverage database, May 2023 *(1)*.

The changes in indicators had differential impacts on the overall trend over time. A breakdown of the index shows the contribution of individual indicators to the changes in the composite measurement over time. The overall contribution was calculated as the average indicator effect observed across all countries between 2000 and 2021[5] *(11–13)*. Table 1.1 shows that the difference in UHC SCI between 2000 and 2021 is mostly attributable to changes in human immunodeficiency virus (HIV) antiretroviral treatment (ART) coverage, with a weighted mean of 61.2% of the indicator effect across all countries accounting for the difference in the overall index score. It is important to note that the aggregate scores are sensitive to the gains in HIV ART coverage. ART was a new intervention at the beginning of the reference period, and therefore experienced a rapid rise from a very low baseline at or near 0 in many countries. This also means that large gains observed early in the reference period, when HIV ART became widely available, are not going to be repeated in future years, which contributes to the appearance of a levelling off over time.

Table 1.1. Breakdown of SCI by indicator contribution, 2000–2021

Sub-index	Indicator	Contribution (%) to UHC SCI (SDG 3.8.1), 2000–2021
RMNCH	Family planning	2.4
	Antenatal care, 4+ visits	2.9
	DTP3 immunization	0.5
	ARI care-seeking	0.7
Infectious diseases	HIV ART	61.2
	TB treatment	4.4
	Insecticide-treated nets	3.5
	Basic sanitation (WASH)	7.4
Noncommunicable diseases (NCDs)	Hypertension treatment	11.4
	Diabetes prevalence	-3
	Tobacco non-use	6.4
Service capacity and access	IHR core capacity index	1.7
	Hospital bed density	-0.5
	Health workforce	1.2

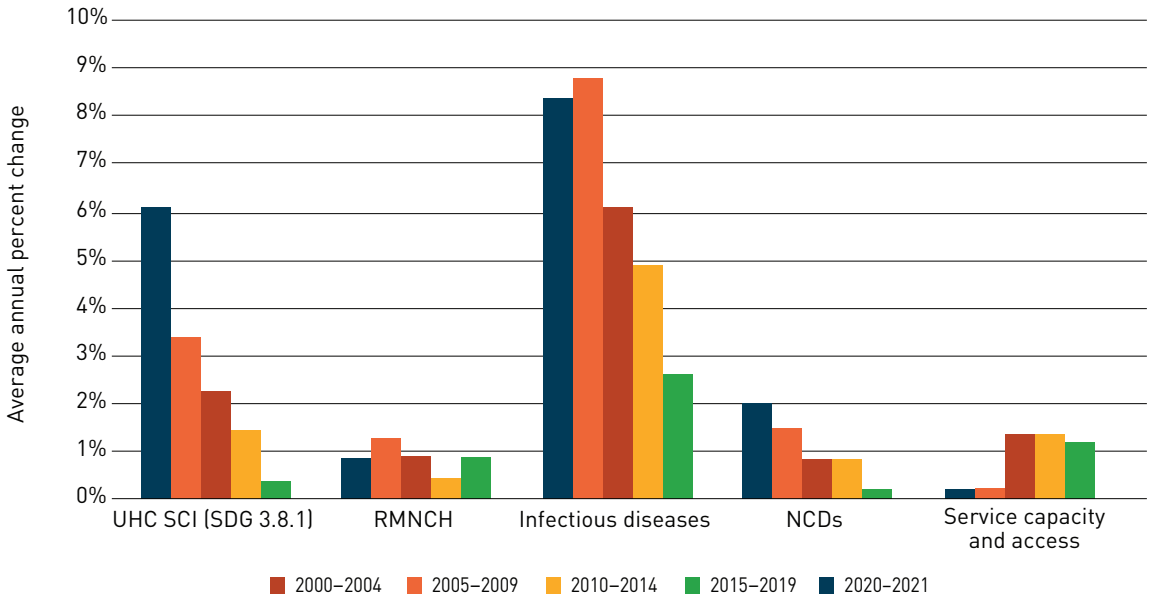
Note: DTP3, three doses of the combined diphtheria, tetanus toxoid and pertussis vaccine; ARI, acute respiratory infection; HIV, human immunodeficiency virus; ART, antiretroviral treatment; TB, tuberculosis; IHR, International Health Regulations; WASH, water, sanitation and hygiene.

Source: Analysis based on WHO global service coverage database, May 2023 *(1)*.

While it is clear that there has been substantial progress since the year 2000, the pace of progress has slowed in recent years and the continued expansion of service coverage has stalled. As shown in Fig. 1.9, at the global level, the average annual percent change in the UHC SCI has consistently fallen over time indicating a slowdown in the expansion of service coverage. The same trend was observed in the infectious disease and NCD sub-indices. The average annual percent changes in the RMNCH and service access and capacity sub-indices have been near or below 1% since 2000 and no changes were observed in the years preceding 2015.

[5] An indicator effect was calculated for each indicator as the sum of all other indicator values for both time points, divided by the number of values and multiplied by the difference in the indicator value of interest. See Annex 1 for more details.

Fig. 1.9. Average annual percent change in UHC SCI (SDG 3.8.1) and sub-indices



Note: RMNCH, reproductive, maternal, newborn, and child health; NCDs, noncommunicable diseases

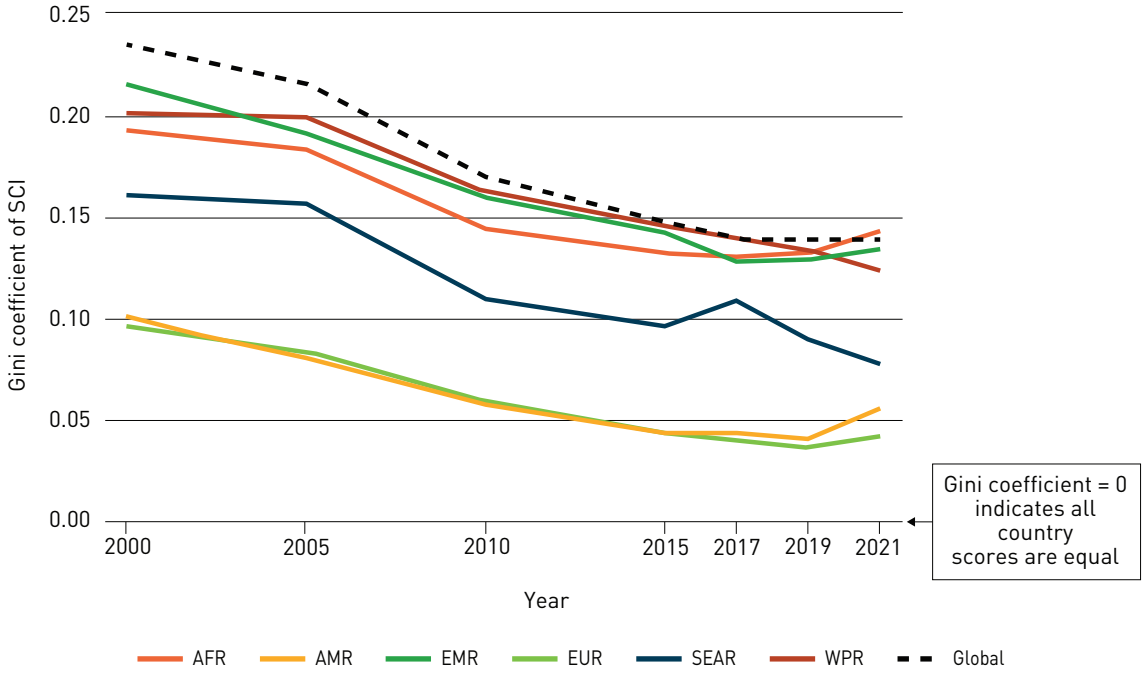
Source: WHO global service coverage database, May 2023 *(1)*.

1.3 Inequalities in service coverage

1.3.1 Inequalities between countries

Overall, country-level estimates of UHC SCI have converged, or become more equal, since 2000. Given the upper bound of the index (100), this trend indicates that countries with lower scores made progress towards catching up to countries with higher scores over the past two decades. Gini coefficients measure the degree of variation of an outcome and are used to assess inequality. Gini coefficients range between 0, indicating no variation or perfect equality, and increase in value, corresponding to greater variation or inequality, to a maximum of 1. The Gini coefficient of the SCI indicates that between-country inequality decreased globally and across all WHO regions from 2000 through 2015 (see Fig. 1.10). After 2015, while between-country inequality continued to decrease in the South-East Asia and African Regions, inequality increased in all other regions.

Fig. 1.10. Gini coefficient of SCI by WHO region, 2000–2021



Note: Dashed line shows global level Gini coefficient of UHC SCI; AFR, African Region; AMR, Region of the Americas; EMR, Eastern Mediterranean Region; EUR, European Region; SEAR, South-East Asia Region; WPR, Western Pacific Region.

Source: WHO global service coverage database, May 2023 *(1).*

Gini coefficients were also calculated for each indicator and year. Comparisons in overall percentage change in Gini coefficients for the two time periods (2000–2015 and 2015–2021) illustrate the degree to which service coverage levels between countries continue to converge or begin to diverge for each component of the index. Between-country inequalities for most indicators decreased between 2000 and 2015, and then continued to decrease though at markedly slower rates, between 2015 and 2021. However, increased inequalities between countries in coverage levels of TB treatments and DTP3[6] immunizations were observed. Thus, the pattern of increasing between-country inequality during 2015–2021, compared to pre-2015 gains, was driven by wider variation in TB treatment and DTP3 coverage levels between countries alongside slower decreases in between-country inequality across the other indicators.

1.3.2 Inequalities within countries

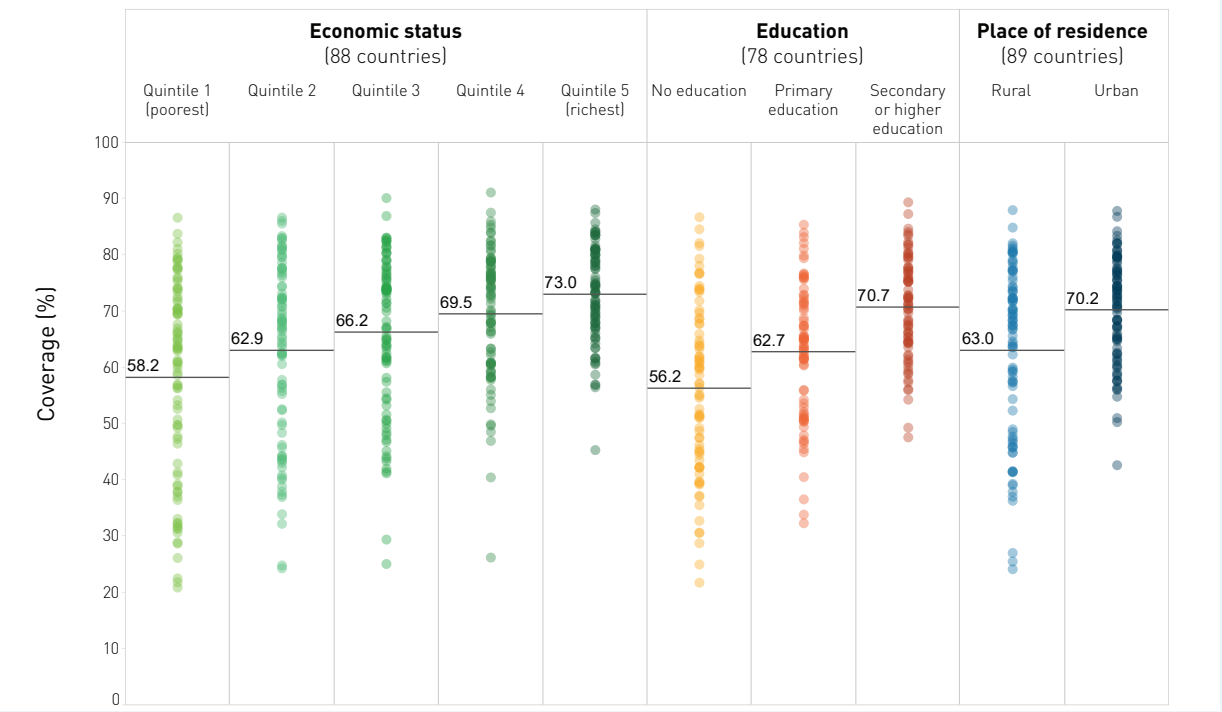
Inequalities in service coverage also persist within countries, as different population sub-groups experience differential coverage of essential health services. Measuring and monitoring within-country inequalities is vital to identify populations that are left behind and inform equity-oriented interventions that can close existing gaps. However, a major challenge to monitoring inequalities in the UHC SCI is the limited availability of disaggregated data, which is data broken down by characteristics such as age, sex and economic status. While some of the indicators comprising the index cannot be disaggregated, such as International Health Regulations (IHR) or hospital bed density, for others where it is possible, data are not collected systematically or at all. Nevertheless, inequalities across population sub-groups can be examined for a subset of low-income countries (LICs) and lower-middle-income countries (LMICs) using a composite coverage index of RMNCH services derived from household survey data. As shown in Box 1.4, large inequalities persist, with higher service coverage observed among those living in richer households and urban areas, as well as those with more education.

[6] DTP3, three doses of the combined diphtheria, tetanus toxoid and pertussis vaccine.

Box 1.4. Inequalities in reproductive, maternal, newborn, and child service coverage

The RMNCH composite coverage index *(14)* is calculated as the weighted average of eight indicators in four stages along the continuum of care: reproductive health (demand for family planning satisfied with modern methods); maternal health (antenatal care coverage with at least one visit and skilled attendance at birth); child immunization (BCG, measles and DTP3 immunization coverage); and management of childhood illnesses (oral rehydration therapy for diarrhoea and care seeking for suspected pneumonia) *(15)*. This index derived from household survey data should not be compared with the RMNCH component of the UHC SCI as it summarizes the level of coverage across a larger spectrum of RMNCH interventions and is based on primary data from demographic and health surveys (DHS) or multiple indicator cluster surveys (MICS). Figure 1.11 below shows coverage by household economic status, education, and place of residence. These results indicate large inequalities favouring those living in richer households (median coverage of 73% among the richest quintile compared to 58% among the poorest quintile across 88 countries), having more education (median coverage of 71% among those with secondary or higher education compared to 56% among those with no education across 78 countries), and living in urban areas (median coverage of 70% in urban areas compared to 63% in rural areas across 89 countries).

Fig. 1.11. RMNCH composite coverage index by multiple dimensions of inequality, 2011–2020



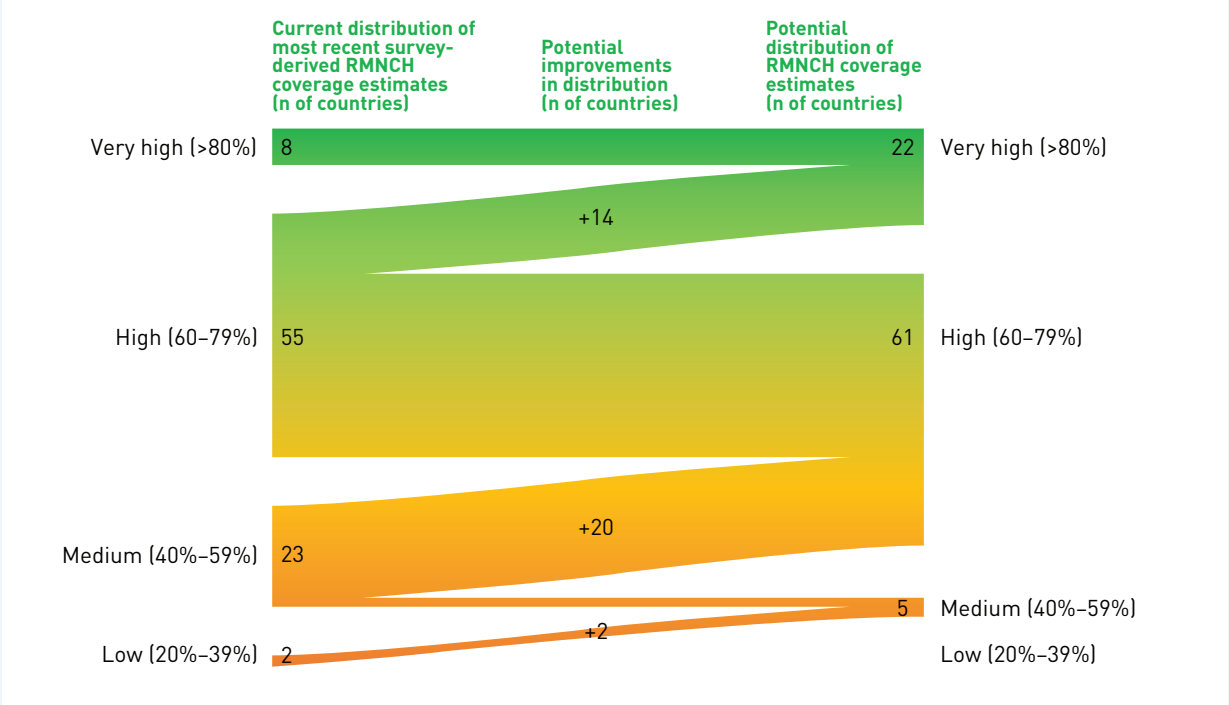
Notes: Circles indicate countries – each country is represented by multiple circles (one for each subgroup). Horizontal black lines indicate the median value (middle point of estimates). This analysis used DHS, MICS, and reproductive health survey (RHS) data and was conducted by the WHO Collaborating Centre for Health Equity Monitoring (International Center for Equity in Health, Federal University of Pelotas.)

Source: WHO Health Inequality Data Repository *(14)*.

The potential impact of eliminating economic-related inequalities on RMNCH service coverage is substantial. The most recent household survey data from DHS, MICS, and reproductive health surveys (RHS) between 2011 and 2020 for 88 LICs and LMICs were used to calculate the current national average of the RMNCH composite coverage index by household economic status (wealth quintiles) (see Fig. 1.12). The potential for improvement in each country was then determined by increasing the coverage in each wealth quintile to that of the highest wealth quintile. This yielded the potential national average that could be achieved if economic-related inequality were to be eliminated.

According to the most recent household survey data, only eight of 88 countries had RMNCH composite coverage index scores of 80% or more, while coverage was between 60% to 79% in 55 countries, between 40% and 59% in 23 countries, and below 40% in one country. After considering the potential improvement in national average by eliminating economic-related inequality, 14 additional countries would have coverage above 80%, 20 additional countries would have coverage between 60% and 79%, and two additional countries would have coverage between 40% and 59%. This accounts for the movement of 40% of countries (36 out of 88 countries) into the next highest category and demonstrates the importance of eliminating within-country inequality in service coverage to increase national coverage.

Fig. 1.12. Potential improvement in national average by eliminating economic-related inequality in RMNCH composite coverage index



Note: This analysis used DHS, MICS, and RHS data and was conducted by the WHO Collaborating Centre for Health Equity Monitoring (International Center for Equity in Health, Federal University of Pelotas.)

Sources: WHO Health Inequality Data Repository *(14).*

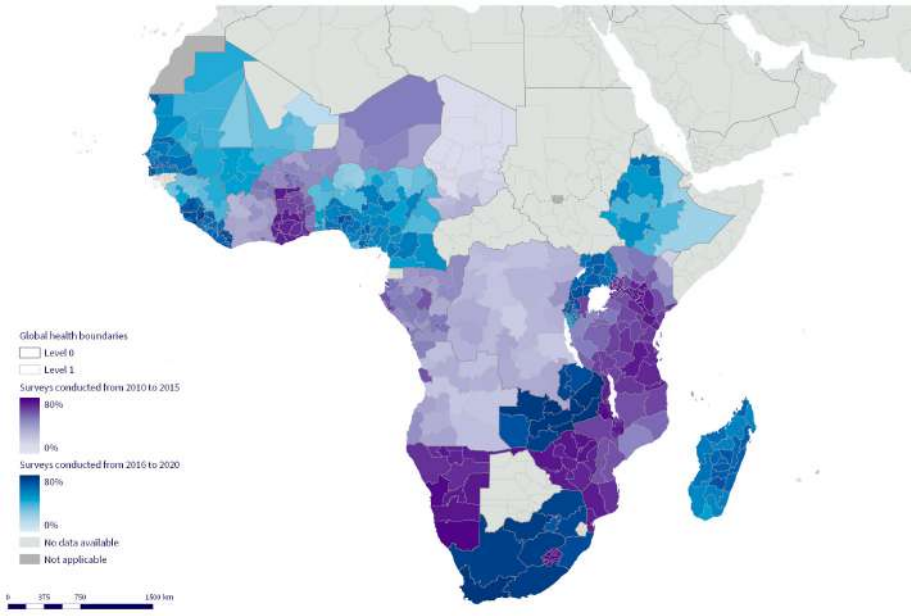
Within-country inequalities in UHC service coverage should be monitored across multiple dimensions of inequality, including household economic status, education and place of residence, as illustrated above. Sub-national analyses provide additional information regarding the progress on the pathway to UHC as well as insights for the design and implementation of health policies and programmes. Advances in small area estimation (SAE) methods can be used with household survey data to produce estimates for smaller sub-groups by utilizing spatial correlation between data points. Figure 1.13 shows the results from an SAE analysis of average RMNCH service coverage[7] (panel a) and antenatal care (4+ visits) (ANC4+) coverage (panel b) for sub-national administrative units from the most recent household surveys since 2010 in sub-Saharan Africa. Striking patterns of inequalities both within countries and across all administrative units were observed. There were substantial variations in RMNCH service coverage across all administrative units included in the analysis (range 10–79%), and a median of 59%. There were wide variations in coverage across all administrative units when only

[7] RMNCH average coverage was derived using the most recent DHS household survey data *(16)*, available for each country between 2010 and 2021. The average coverage was calculated as the geometric mean of estimated coverage for the four indicators related to RMNCH: ANC4+, DTP3, family planning needs satisfied with modern methods, and care-seeking for suspected acute respiratory infection ARI in children under five years of age)

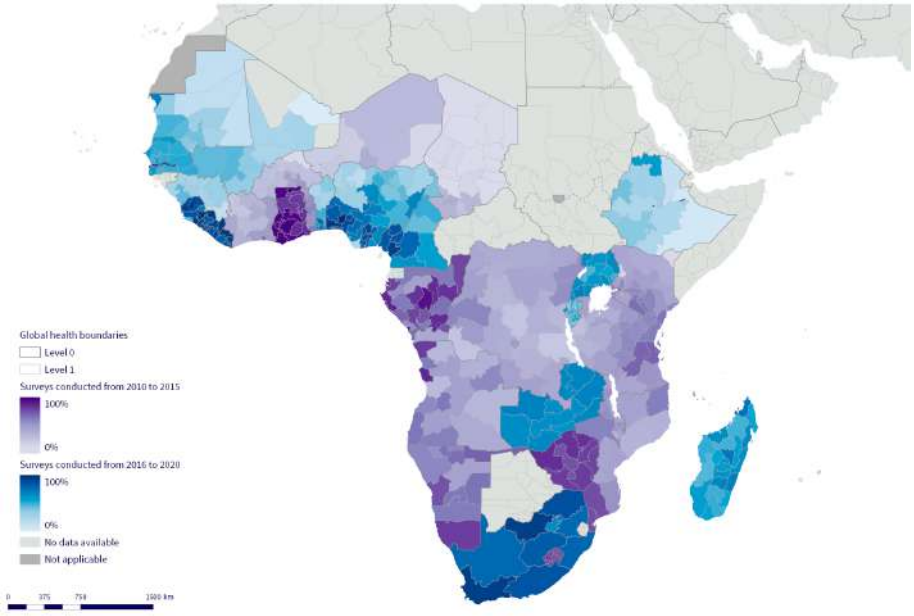
the ANC4+ indicator was considered, with prominent inequalities observed when administrative units were disaggregated by those containing capital cities and non-capital city units. The median ANC4+ coverage in capital city administrative units was 73% (range 48–93%), which was 20 percentage points higher than the median ANC4+ coverage in non-capital city administrative units at 53% (range 12–93%).

Fig. 1.13. Average RMNCH service coverage and ANC4+ coverage sub-national survey estimates, most recent household surveys available at two time periods, 2010–2015 and 2016–2020

a. RMNCH index sub-national survey estimates



b. ANC4+ sub-national survey estimates



Notes: These maps have been produced by WHO. The boundaries, colours or other designations or denominations used in the maps and the publication do not imply, on the part of the World Bank or WHO, any opinion or judgement on the legal status of any country, territory, city or area or of its authorities, or any endorsement or acceptance of such boundaries or frontiers.

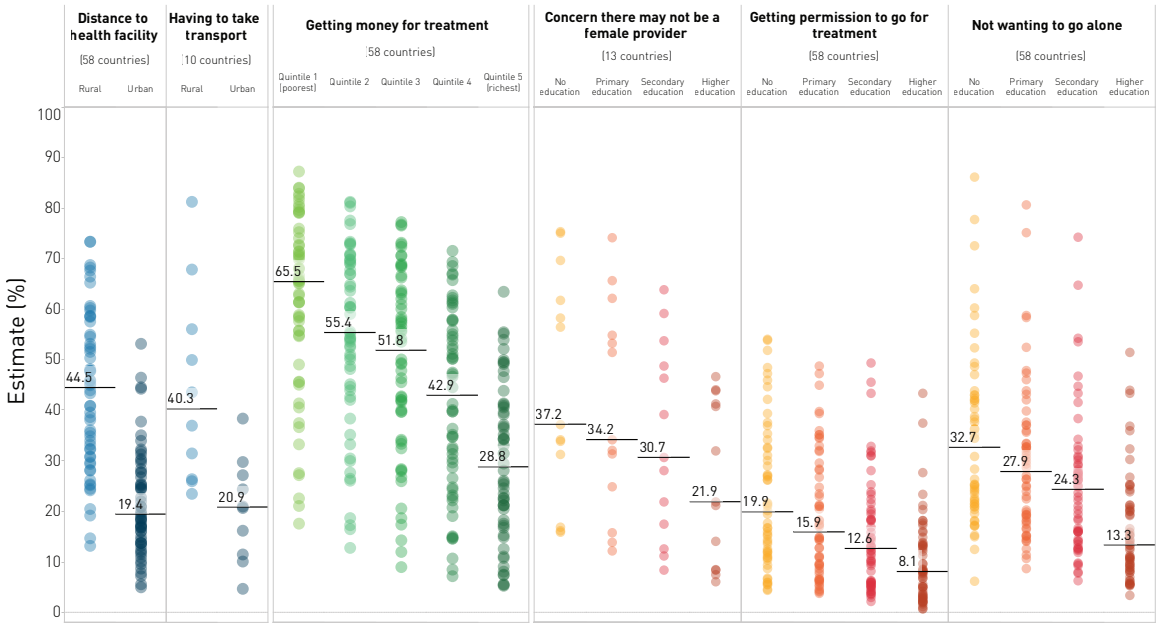
Source: Analysis using most recent DHS concerning household survey data, 2010–2021 *(16)*.

1.3.3 Inequalities in unmet need and forgone care

Thus far this section has focused on populations who have received essential health services as the units of analysis. To better understand how, where and to whom services should be targeted to continue making progress on expanding service coverage, there is a need to understand where the gaps are in service coverage. One aspect of this is to consider those with unmet health service needs and the reasons for forgoing care for health issues. Assessing unmet needs provides an understanding of the extent to which individuals have health needs yet do not receive quality services in sufficient quantity to alleviate the burden of disease or ill-health over their life course. Understanding the reasons individuals do not receive services or forgo care provides insights as to the barriers people face when engaging with the health system. There has been an increasing interest in measuring and monitoring unmet need and forgone care as a means to promote equity in service coverage and provide insights on how access to effective services might be improved. Future prospects for assessing unmet needs and forgone care are discussed in section 1.6.

Barriers to accessing health services exist in all countries; however, large inequalities exist between and within countries. Within countries, barriers to accessing health services are more commonly experienced by disadvantaged population sub-groups such as the poorest, least educated, and those living in rural areas. The most recent available household survey data collected in LICs and LMICs between 2011 and 2021 was used to examine how different barriers to accessing health care were experienced by women by household economic status, education level attained by the individual, and place of residence (see Fig. 1.14). For instance, distance to a health care facility was cited as a barrier by 45% of women aged 15–49 years living in rural areas compared with 19% living in urban areas (median values across 58 countries). Getting money for treatment was cited as a barrier by 66% of women from the poorest quintile, compared with 29% of women from the richest quintile (median values across 58 countries). And getting permission to go for treatment was cited as a barrier by 20% of women with no education, compared with 8% of women with higher education (median values across 58 countries *(14)*).

Fig. 1.14. Reasons for forgoing health care among women aged 15–49 years, most recent household surveys 2011–2021



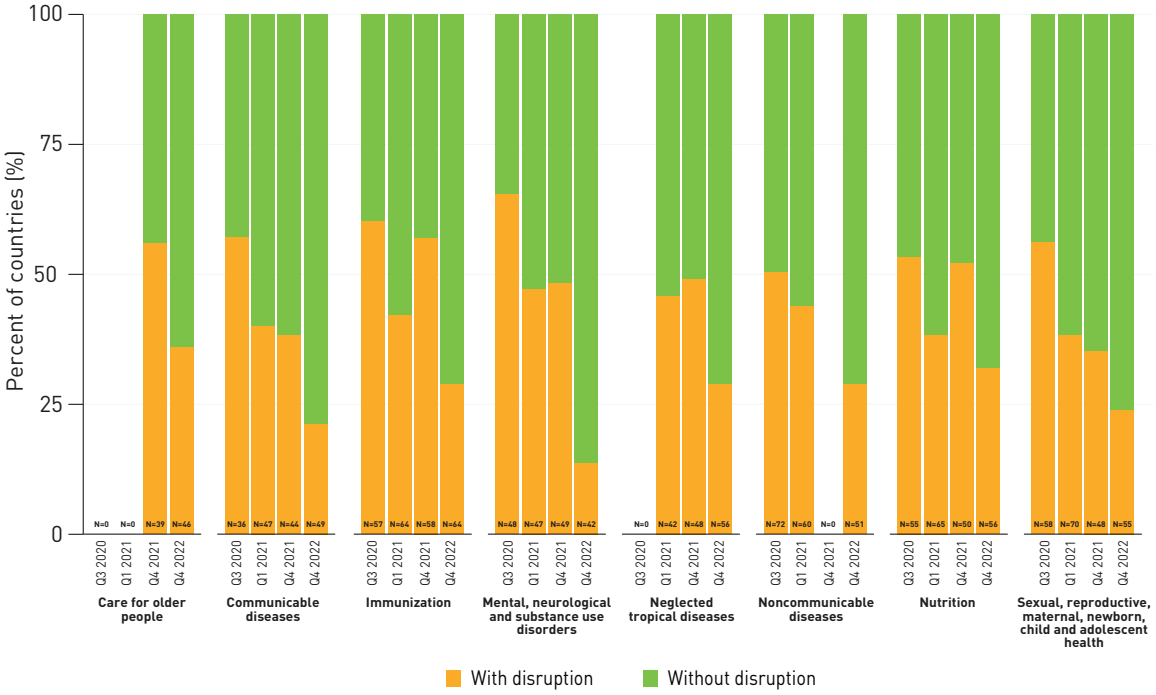
Notes: Circles indicate countries – each country is represented by multiple circles (one for each indicator and subgroup). Horizontal black lines indicate the median value (middle point of estimates). This analysis used DHS, MICS, and RHS data and was conducted by the WHO Collaborating Centre for Health Equity Monitoring (International Center for Equity in Health, Federal University of Pelotas.)

Source: WHO Health Inequality Data Repository *(14)*.

1.4 Impacts of the COVID-19 pandemic

As discussed in section 1.2, the impact of the COVID-19 pandemic observed on the UHC SCI was uneven across global, regional, and country levels. To provide additional insights, the WHO pulse surveys captured the perspectives of ministries of health on service disruptions throughout the duration of the pandemic. In total, 139 respondents provided feedback on the situations in their respective countries, territories and areas in the fourth survey round between November 2022 and January 2023. Fewer respondents reported essential health service disruptions in 2022 compared with previous survey rounds, and the magnitude of disruptions decreased (see Fig. 1.15). Supply-side issues, i.e. both intended service delivery modifications and unintended disruptions due to lack of resources, were the most frequent reasons cited for the disruption across services (66%), while demand, in the form of decreased care-seeking, accounted for about one-third (34%) of reasons cited for service disruption *(16)*.

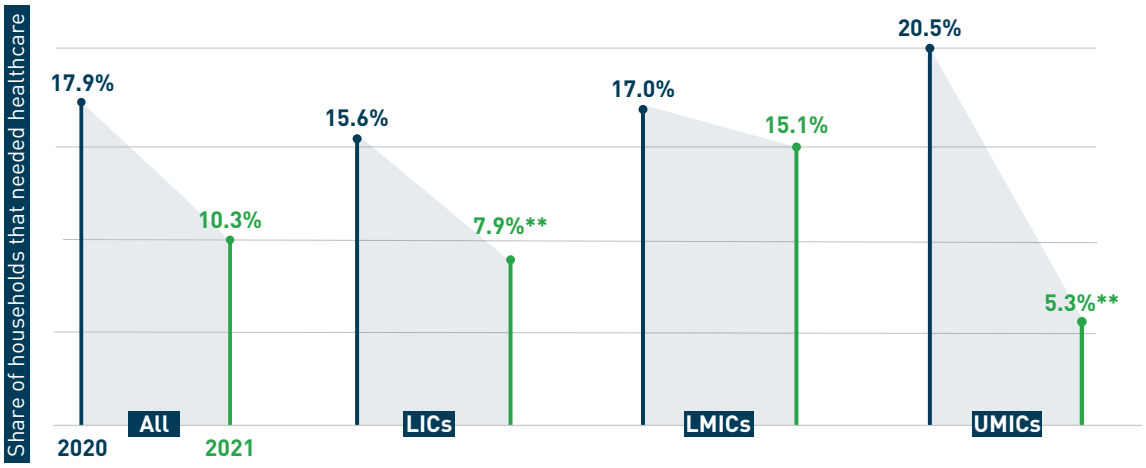
Fig. 1.15. Comparison of disruptions, by condition- and programme-specific service areas, four rounds of pulse surveys



Source: Redrawn from the fourth round of the global pulse survey *(17)*.

High frequency phone survey data, intended to assess forgone care, provided further information on the demand for services throughout the COVID-19 pandemic. The results from 25 countries showed that while in 2020 approximately 18% of households reported not being able to obtain health care when needed, by 2021 this had fallen to just over 10% of households, suggesting a decrease in forgone care as the pandemic continued (see Fig. 1.16). Reported prevalence of forgone care was roughly 16% in LICs, 17% in LMICs, and almost 21% in upper-middle-income countries (UMICs). 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 *(18)*. Reasons for forgone care during the COVID-19 pandemic are further explored in Chapter 2, Box 2.4.

Fig. 1.16. Forgone care: percentage of households that did not access needed care by share of all households that needed care, 2020 and 2021



Note: **p<0.01. LICs, low-income countries; LMICs, lower-middle-income countries; UMICs, upper-middle-income countries.

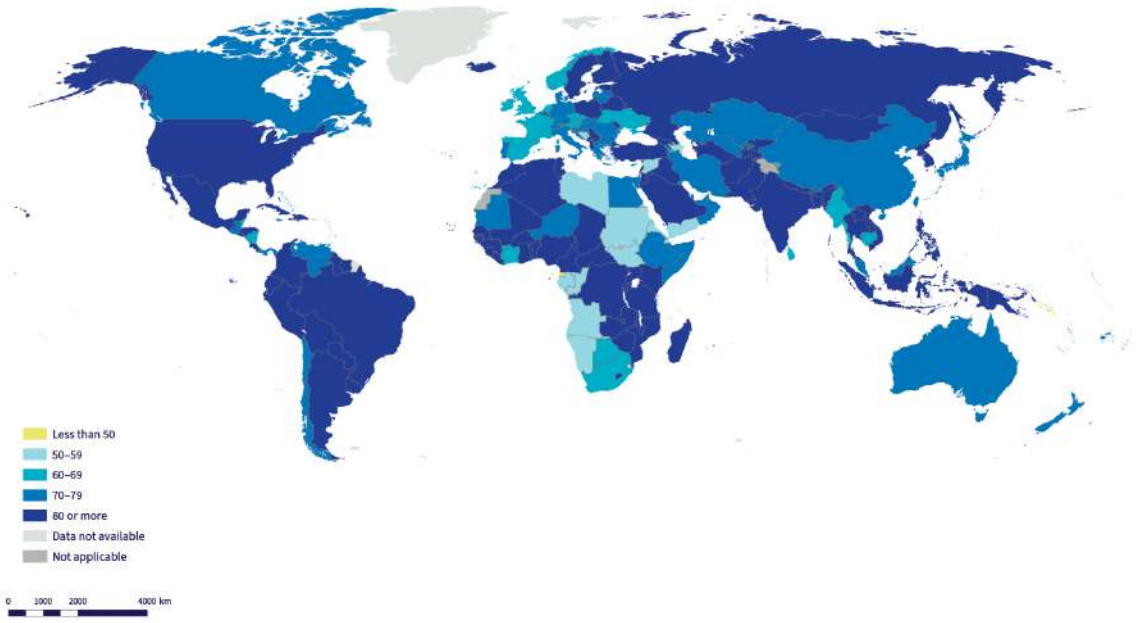
Source: Analysis prepared by the World Bank based on two rounds of World Bank high-frequency phone surveys (HFPS). The final sample included 86 643 observations collected from 63 348 unique households across the two waves of data *(18).*

1.5 Data availability

The availability of timely primary data impacts the extent to which the SCI is able to provide an accurate measurement of service coverage within a country. Primary data include data gathered through routine reporting systems or household surveys. As discussed in Box 1.2, primary data are either used directly for indicator values or as inputs for models to estimate the indicators. Regular data collection ensures that the estimates reflect the most recent situation. It is recommended that administrative data are reported on an annual basis and that household surveys are conducted at least every five years to ensure that up-to-date measurements are included in the SCI. On average, countries had at least one primary data point during the 2017–2021 time period for 76% of indicators (see Fig. 1.17). Nearly all countries (94%, n=183) had at least one data point for more than half of the indicators during this same time period. Most countries with primary data for less than half of the indicators were small island developing states, micro states or conflict-affected countries. Countries in the African and South-East Asia Regions had the highest average availability, at 80% and 84%, respectively, while countries in the Western Pacific Region had a lower average availability of 70%.

In addition to the availability of primary data, it is also important to highlight the availability of data for disaggregation across categories of interest, such as by gender and urban–rural location. As discussed in section 1.3.2, one major challenge with using the SCI to inform policy and practice is the lack of disaggregated data available for most indicators that comprise the index (see Table 1.2.) Most of the indicators listed in Table 1.2 are collected through internationally funded household survey programmes, such as the United States Agency for International Development's (USAID) DHS or the United Nations Children's Fund's (UNICEF) MICS, which are conducted in places without robust routine reporting systems.

Fig. 1.17. Percentage of UHC SCI sub-indicators for which primary data were available during 2017–2021



Note: This map has been produced by WHO. The boundaries, colours or other designations or denominations used in the map and the publication do not imply, on the part of the World Bank or WHO, any opinion or judgement on the legal status of any country, territory, city or area or of its authorities, or any endorsement or acceptance of such boundaries or frontiers.

Source: WHO global service coverage database, May 2023 *(1)*.

Table 1.2. Number of countries with disaggregated data for select SCI indicators available since 2015

Sub-index and indicator	Age	Economic status	Education	Place of residence	Sex
Reproductive, maternal, newborn and child health					
Percentage of women of reproductive age (15–49 years) who are married or in a union who have their need for family planning satisfied with modern methods	66	76	63	75	N/A
Percentage of woman aged 15–49 years with a live birth in a given time period who received antenatal care four or more times	70	75	54	74	N/A
Percentage of infants receiving three doses of diphtheria-tetanus-pertussis containing vaccine	33	70	51	71	71
Percentage of children under 5 years of age with suspected pneumonia in the two weeks preceding the survey taken to an appropriate health facility or provider	13	32	35	56	60
Infectious diseases					
Percentage of people living with HIV currently receiving antiretroviral therapy					128
Percentage of population in malaria-endemic areas who slept under an insecticide-treated net the previous night		31		31	N/A

Sub-index and indicator	Age	Economic status	Education	Place of residence	Sex
Percentage of households using at least basic sanitation facilities				165	
Noncommunicable diseases					
Age-standardized prevalence of hypertension among adults aged 30–79 years					192
Age-standardized prevalence of tobacco use among persons over 15					164

Source: Adapted from the WHO Health Inequality Data Repository *(14)*.

1.6 Future developments in measuring the UHC SCI (SDG 3.8.1)

1.6.1 Refresh of the UHC service coverage monitoring framework in 2025

In accordance with General Assembly Resolution 71/313 *(19)* the Inter-Agency and Expert Group on Sustainable Development Goal Indicators (IAEG-SDGs) will conduct a comprehensive review of the global SDG indicator framework throughout 2024 to refine, revise, and replace indicators used to monitor progress towards the 2030 agenda *(20)*. For SDG 3.8.1, the review will consist of a conceptual revision of the index construction and basket of indicators, followed by methodological development. Importantly, the indicator selection and validation will consider aspects of data frequency and availability. The next country consultation on using the updated methodology will take place at the end of 2024 or beginning of 2025.

1.6.2 Effective coverage

One of the critiques of the current SCI is that it is not fully aligned with the definition of UHC as written for SDG 3.8, and therefore does not provide the full picture of progress toward the service coverage aspect of UHC as measured by SDG 3.8.1. This is, in part, due to the inclusion of indicators that measure the proportion of target populations to receive interventions, but do not indicate whether the interventions were of sufficient quality and quantity to achieve the desired health outcomes. Different approaches to measuring effective coverage have been proposed, but are ultimately limited by data availability and the degree to which certain methodological approaches are fit for purpose in the context of Member State-consulted measurements and reporting requirements for the SDGs. Nonetheless, continued advances to measuring effective coverage are key to improving the assessment of progress towards UHC.

Conceptually, effective coverage links potential health gains with health systems inputs and processes. Proposed effective coverage cascades provide analytical frameworks to identify barriers and facilitating factors in achieving intervention coverage targets *(21,22).* On a practical level, the identification of service provision bottlenecks, particularly among specific subpopulations or geographic areas, is key to making progress towards UHC, especially when intervention coverage has reached a relatively high threshold at the national level. While these cascades are informative on the intervention or programme level, such as those proposed to improve quality of care for maternal, neonatal, child, and adolescent health and nutrition (MNCAHN) interventions *(23),* an index of effective coverage indicators to use as a proxy of UHC at the country level for all Member States requires data inputs beyond what are currently available. To ameliorate the data availability issues, and address the critiques regarding the appropriateness of service coverage indicators selected in the current UHC SCI, the inclusion of additional data not derived from country-based sources and the use of relatively complex methodological approaches were used to estimate an effective coverage index to proxy UHC *(24)*. The degree to which a similar approach to measuring the service coverage dimension of SDG 3.8 could be operationalized in the context of SDG reporting requirements and WHO's commitment to Member State consultation will be explored in the refresh of the monitoring framework discussed in section 1.6.1.

1.6.3 Unmet need /forgone care

One aspect of making progress toward UHC requires that everyone receives the health services they need. To continue the expansion of service coverage, especially in contexts of relatively high levels of existing coverage, it is essential to understand who has not received the needed services as well as the reasons that they have not received them. There is no universally accepted definition or measurement framework for unmet need and forgone care, but rather a variety of definitions are used for different purposes (see Box 1.5 for examples). Individuals with unmet needs are those who have the potential to realize a health benefit from a given service, which may differ from perceived need due to a variety of social, cultural, and economic factors *(25).* The unrealized or unexpressed demand for services from those with unmet needs adds further complications to addressing coverage gaps. From a measurement perspective, these groups are difficult to differentiate with respect to many health interventions without extensive diagnostics and monitoring at the population level. This is important also when the reasons for forgoing care or barriers to access are evaluated, such as through household survey data, where the populations discussed are only those with perceived and expressed unmet demand for services. It should be noted that unmet need is commonly defined and measured in the same way as forgone care, i.e. as occurring when people are unable to access a service they felt they needed due to a range of health system-related factors (e.g. cost, distance, waiting time) or other factors. The lack of widely accepted definitions for these terms adds complexity to the comparability across studies and data sets. At the global level, routine reporting systems are not designed to capture unmet needs and therefore data availability would be a major limitation to its adoption as a proxy to making progress towards UHC. Despite these limitations, as with effective coverage in section 1.6.2, continued advances to measuring unmet needs and understanding the reasons populations forgo care are key to ultimately making progress towards UHC.

Box 1.5. Definitions of unmet need and forgone care

Both conceptually and from a measurement perspective, unmet need is not well-defined, however, there are some working definitions used for different purposes. A collection of these follows, to demonstrate the range of content and specificity of definitions.

- "The variables on unmet needs for health care are used to assess health inequalities with respect to health care services. They refer to the proportion of persons aged 15 years or over that felt they needed health care in the previous 12 months but did not receive it for reasons of financial barriers, waiting lists and distance/transport." Source: Unmet health care needs statistics. Eurostat [online database] (https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Unmet_health_care_needs_statistics#Unmet_needs_for_health_care, accessed 29 July 2023)*(26).*
- "An individual is categorized as having unmet needs if they are unable to access quality care when needed arising for various reasons, including barriers related to the availability, affordability, accessibility, and acceptability of services." Source: Rahman MM, Rosenberg M, Flores G, Parsell N, Akter S, Alam MA, et al. A systematic review and meta-analysis of unmet needs for healthcare and long-term care among older people. Health Econ Rev. 2022; 12(1):60 *(27)*.
- "The Inverse Care Law states that the availability of good medical care tends to vary inversely with the need for it in the population served. The marginalized and hard-to-reach populations have poorer health and still have limited access and or utilization of health care services because of various reasons and barriers related to availability, accessibility, acceptability, quality care etc. in comparison to the affluent population. This may indicate unmet need and the operation of the Inverse Care Law." Sources: Hart JT. The inverse care law. Lancet. 1971;297(7696):P405–12 *(28)*; and Watt G. The inverse care law revisited: a continuing blot on the record of the National Health Service. Br J Gen Pract. 2018; 68(677):562–3 *(29)*.
- "Unmet need for healthcare can be seen as covering a spectrum of healthcare needs that are not optimally met. At one end there is "unexpressed demand" (people who have healthcare needs but who are not aware of them, or who choose not to seek healthcare). At the other end there is "expressed demand that is sub-optimally met". This can include people ineligible for treatment, or who have poorer quality treatment than would optimally be the case. For some individuals, their unmet need may be a combination of the two." Source: Unmet need in healthcare. Summary of a roundtable held at the Academy of Medical Sciences on 31 July 2017, held with support from the British Academy and NHS England. London: Academy of Medical Sciences; 2017:1–16 *(30)*.

Forgone care is a dimension of unmet need that aims to capture the inability of an individual to fulfil their perceived health service needs. The reasons for forgone care are often assessed to describe the systematic barriers to accessing quality care of sufficient quality. However, as with unmet need, there is no consensus on the conceptual or measurement framework used to define forgone care.

- The forthcoming WHO handbook on forgone care defines it as follows: "Forgoing health services occurs when someone who realizes that she/he needs services, prior to establishing initial contact with services for a given condition or at any point along the patient pathway and continuum of care, is unable to access the services or required medicines and health products due to a range of barriers. Forgone care is different than unmet need as the latter can also occur without someone realizing that they need services (i.e. a 50-year-old woman may not realize that she needs to get screened for cervical cancer, but the fact that she does not get screened implies she has an unmet need)." Source: Handbook for conducting assessments of barriers to effective coverage with health services in support of equity-oriented reforms towards universal health coverage. Geneva: World Health Organization (in press) *(31)*.

2

Monitoring SDG indicator 3.8.2 and SDG-related indicators of financial hardship

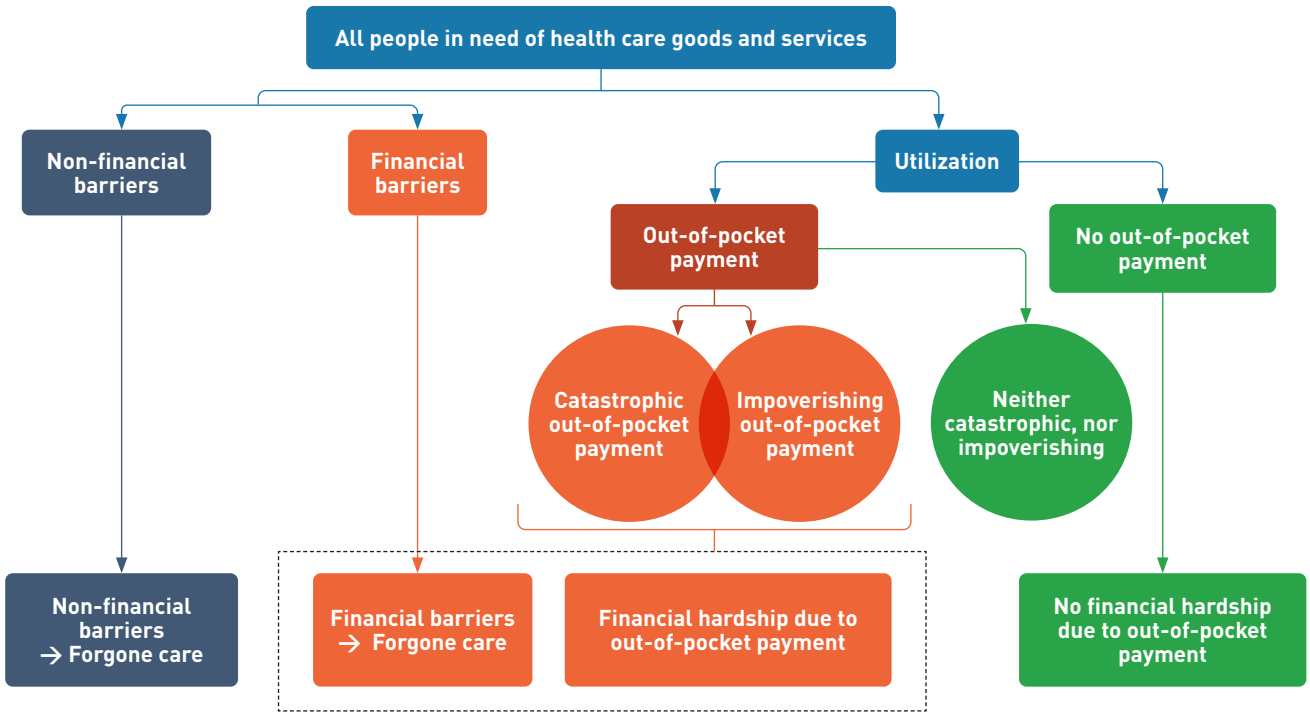
Key findings

- During the two decades prior to the COVID-19 pandemic, the global incidence of catastrophic health spending defined as the percentage of population with household budget spent on health out-of-pocket exceeding 10% (Sustainable Development Goals indicator 3.8.2), continuously increased from 9.6% in 2000 to 12.6% in 2015, at the beginning of the SDG era and reached 13.5% in 2019.
- The share of the global population impoverished or further impoverished at the *extreme* poverty line (US$ 2.15 a day per person in 2017 purchasing power parity) by out-of-pocket health spending reduced from 22.2% in 2000 to 15.6% in 2015 and 4.4% in 2019. At the same time, the share of the global population impoverished or further impoverished at the *relative* poverty line (60% of a country median per capita consumption) by out-of-pocket health spending increased from 11.8% in 2000 to 15.6% in 2015 and 16.7% in 2019.
- A relatively small share of people suffering financial hardship experience both catastrophic and impoverishing out-of-pocket health spending at the same time, namely 12.6% when the relative, and 8.6% when the extreme poverty lines are applied to the data during the 2010–2019 period.
- Between 1.3 and 2 billion people incurred financial hardship in 2019 globally, including 1 billion facing catastrophic health spending and 344 million people facing impoverishing health spending at the extreme poverty line (i.e. almost half of the global population living in extreme poverty in 2019).
- Financial hardship is more prevalent among poorer households mostly due to higher rates of impoverishing health spending rather than catastrophic health spending. Occurrences of catastrophic and impoverishing health spending also vary by other household sociodemographic characteristics.
- Besides eliminating catastrophic and impoverishing out-of-pocket health spending, financial protection also includes the absence of people forgoing needed care for financial reasons. Evidence from 29 low- and lower-middle-income countries suggests that before the pandemic financial reasons accounted for 18.5% of forgone care.
- Lack of data prevents computation of global and regional estimates of financial hardship for years after the onset of the COVID-19 pandemic. However, available data from a relatively small subset of countries suggest worsening in catastrophic and impoverishing out-of-pocket health spending and an increase in forgone care due to financial barriers.
- The worsening in prevalence of financial hardship could have been avoided if health systems had provided better coverage of outpatient medicines, the main driver of financial hardship in many countries, and if people with low incomes had been exempt from user charges (co-payments) when using health services, including medicines.

The financial protection dimension of UHC is achieved when there are no financial barriers to accessing needed health services and goods, and OOP health spending is not a source of financial hardship (see Fig. 2.1). This report monitors progress towards eliminating financial hardship from OOP health spending at the global, regional, and country levels by measuring how many people experience financial hardship as defined by the SDG indicator 3.8.2 and by a related set of indicators that track how many people are impoverished or further impoverished by OOP health spending.

Section 2.1 provides the definitions of catastrophic and impoverishing OOP health spending indicators used for global monitoring, briefly describes data sources, and the way global and regional estimates are produced. Section 2.2 then presents new global estimates of financial hardship for the 2000–2019 period. Section 2.3 examines inequities in financial hardship between countries and across sociodemographic groups within countries. As demonstrated in Fig. 2.1, financial hardship related to OOP spending can only affect those who use health services and products and must pay out of pocket. In the context of UHC, the financial hardship indicators should be considered jointly with service coverage rates. Lower financial hardship is not always preferable if the implication is that fewer people get the health services they need. The need for OOP health spending not only causes financial hardship but could also reduce and even completely eliminate the demand for health services. Financial protection in health requires removing financial barriers that cause individuals to forgo care. While forgone care due to financial barriers is not tracked as systematically as the two financial hardship indicators, this report provides evidence of it from a subset of countries with available data in section 2.4. Section 2.5 presents findings on financial hardship and financial access barriers during 2020–2022 from 23 countries that maintained their household survey programmes during COVID-19, and from phone surveys that proliferated during the pandemic. Because the COVID-19 pandemic disrupted survey data collection in most countries, the available data are insufficient to provide global and regional estimates of financial protection for that period. Section 2.6 provides additional details on the data and methods employed in this chapter. Section 2.7 concludes with a summary and discussion on the implications of the evidence presented in this chapter.

Fig. 2.1. Financial hardship and financial barriers to accessing health



Note: Catastrophic and impoverishing OOP health spending concepts are used to identify in which case OOP health payments are a source of financial hardship (see Annex 7). Catastrophic OOP spending metrics include SDG indicator 3.8.2 and capacity to pay approaches (see Annex 8). Impoverishing OOP health spending includes indicators to identify both people impoverished and further impoverished by OOP health spending, using various poverty lines (such as the global extreme poverty line, a relative poverty line).

Source: Global monitoring report on financial protection in health 2021 *(32).*

2.1 Indicators of financial hardship in health (SDG 3.8.2 and related)

People suffer financial hardship in health when their OOP health spending (defined as in Box 2.1) threatens their living standards or compromises access to essential goods such as food, shelter, clothing, or education *(33,34)*. Those living in or near poverty are particularly vulnerable to being forced to reduce their consumption of necessities due to OOP health spending, which in turn, may lead to a perpetual vicious cycle of poor health and poverty. For instance, when OOP health spending requires the depletion of savings or assets or causes borrowing *(35,36),* people may be less likely to cope with other economic shocks and invest in productive assets as well as their own and their children's education and human capital *(37,38).*

Financial hardship related to OOP health spending is captured in this report through indicators of *catastrophic* and *impoverishing* health spending, using SDG and SDG-related definitions. Alternative ways to define these indicators are discussed in Annexes 7 and 8.

SDG indicator 3.8.2 defines the incidence of catastrophic health spending as the proportion of the population with *large* OOP health spending, in effect, those exceeding 10% and 25% of the household's total consumption or income (budget) *(2)*.

Indicators of impoverishing health spending complement SDG 3.8.2 catastrophic spending indicators by recognizing that even relatively small OOP payments can threaten the living standards of people living near or in poverty. The incidence of impoverishing health spending is defined as the proportion of the population impoverished and further impoverished by OOP health spending. People are considered impoverished when the total per capita consumption of their household – including OOP health spending – is above a poverty line, but per capita consumption net of OOP health spending lies below it. Further impoverished people are those for whom total household per capita consumption already lies below a poverty line and includes *any* OOP health spending. This report employs two types of poverty lines to assess the degree to which OOP health spending interferes with ending poverty everywhere (SDG 1): (i) The absolute poverty line of "US$ 2.15[8] a day per person in 2017 purchasing power parity (PPP)" (henceforth 2017 PPP US$ 2.15) *(39)* defines extreme poverty (SDG target 1.1) and thus is most relevant for measuring impoverishing OOP in low- and lower-middle income settings where extreme poverty is more prevalent; and (ii) relative poverty lines of 60% of countries' median per capita consumption or income which are more relevant for measurement in upper-middle and high-income contexts.

In this report, the overall population suffering financial hardship is defined as those incurring catastrophic health spending (SDG indicator 3.8.2 at the 10% threshold), impoverishing health spending, or both, without double counting. Box 2.2 provides more information to ease the interpretation of the catastrophic, impoverishing, and overall financial hardship indicators used in this report.

This chapter updates prior global and regional estimates of financial hardship during 2000–2017 and adds new estimates for 2019. The estimates are projected for six *reference years* during the 2000–2019 period. Projections are based on data from almost 1000 household surveys from 167 (146) countries for catastrophic (impoverishing) health spending and rely on econometric modelling for the remaining countries and territories for which no household survey data on financial hardship were available (Annex 9 provides details on the projection methodology). In addition, section 2.4 provides preliminary insights on the financial hardship during the COVID-19 pandemic with findings from 12 countries for impoverishing health spending to 23 for catastrophic health spending where household surveys were carried out in 2020 or 2021 despite the pandemic.

[8] This report uses the latest value of the extreme poverty line to monitor impoverishing health spending, i.e. US$ 2.15 per day per capita using 2017 PPP (2017 PPP US$ 2.15) for private consumption which replaces the US$ 1.90 poverty line based on 2011 PPP used in previous reports and corresponds to the median poverty line in LICs. For more information on this, please see *(39)*.

Box 2.1. What is out-of-pocket (OOP) health spending?

OOP health spending corresponds to health spending made by people, funded from their income, savings, and loans. It includes both formal and informal payments. It excludes pre-payments (e.g. taxes, contributions, or premiums) and reimbursements by a third party, such as the government, a health insurance fund, or a private insurance company, as well as indirect expenses (e.g. non-emergency transportation costs) and the opportunity cost of seeking care (e.g. lost income).

OOP health spending includes payments made by people at the time of using any health good or service; delivered by any type of provider; for any type of care (i.e. preventive, curative, rehabilitative or long-term care); for any kind of disease, illness, or health condition; and in any type of setting (e.g. outpatient, inpatient, at home).

In effect, OOP health spending comprises medicines and health products; outpatient and inpatient care services, including dental care; diagnostic and laboratory services; and emergency transportation and rescue services.[a] Medicines include over-the-counter medicines and outpatient prescribed medicines. Health products include masks and other prevention and protective devices, medical diagnostic products (e.g. blood pressure meters), and assistive products (e.g. glasses, hearing aids, crutches, standing frames). It is important to note that spending on some health-enhancing goods and services are excluded from the definition of OOP, such as gym memberships or consumption of more expensive but more nutritious food.

See Annex 6 for a more detailed discussion of the components of OOP health spending.

[a] *Classification of individual consumption according to purpose (COICOP) 2018. New York:* United Nations Statistics Division; 2017 (https://unstats.un.org/unsd/classifications/business-trade/desc/COICOP_english/COICOP_2018_-_pre-edited_white_cover_version_-_2018–12–26.pdf, accessed 30 July 2023).

Box 2.2. How should global indicators of catastrophic, impoverishing, and financial hardship in health be interpreted?

The definitions for catastrophic and impoverishing health spending used for global tracking are complementary (see Annex 7). SDG 3.8.2 definition of catastrophic health spending identifies people incurring *relatively large* OOP health spending in relation to their total consumption or income (greater than 10% or 25% of the household's total consumption or income budget). The proportion of the population with OOP health spending exceeding 10% of the household budget includes those with OOP health spending accounting for more than 25% of the household budget.

Indicators of impoverishing health spending identify people who incur any OOP health spending, even when it does not exceed 10% of their household budget, but for whom the absolute amount of OOP health expenses exceeds the resources they have available to meet their basic needs and as such are impoverished or further impoverished. Two different definitions of poverty lines are used. The absolute line of extreme poverty, defined as 2017 PPP US$ 2.15 per person per day, represents the ability to consume the most basic necessities. The relative poverty line refers to the standard of living compared to the economic standards of living within the same surroundings.[b] We use 60% of median per capita consumption to identify such a relative line. In this report, this is the relevant poverty line to interpret impoverishing health spending in middle- and high-income countries (HICs) where the rates of extreme poverty are relatively low.

In most LICs, the relative poverty line is below 2017 PPP US$ 2.15 per person per day, meaning that people impoverished at the relative poverty line are also impoverished at the extreme poverty line in these contexts. In all other countries, the money value of the relative poverty line exceeds the money value of the extreme poverty line. This means that many people living in MICs who are impoverished at the relative poverty line are not counted among those impoverished at the extreme poverty line. In HICs, it is the majority of those impoverished at the relative poverty line that are not counted among those living in extreme poverty. Hence, impoverishing health spending at the relative poverty line and extreme poverty line do not completely overlap.

The global definitions of catastrophic and impoverishing health spending used in this report are not mutually exclusive – people can experience neither, either, or both at the same time. Hence, we provide estimates of the number of people experiencing financial hardship that include those incurring either or both at the same time without double counting.

[b] *Feng J, Nguyen MC. Relative versus absolute poverty headcount ratios:* the full breakdown. World Bank blogs; 2014 [website] (https://blogs.worldbank.org/opendata/relative-versus-absolute-poverty-headcount-ratios-full-breakdown, accessed 29 July 2023).

2.2 Global trends in catastrophic, impoverishing, and overall financial hardship (SDG 3.8.2 and related indicators) since 2000

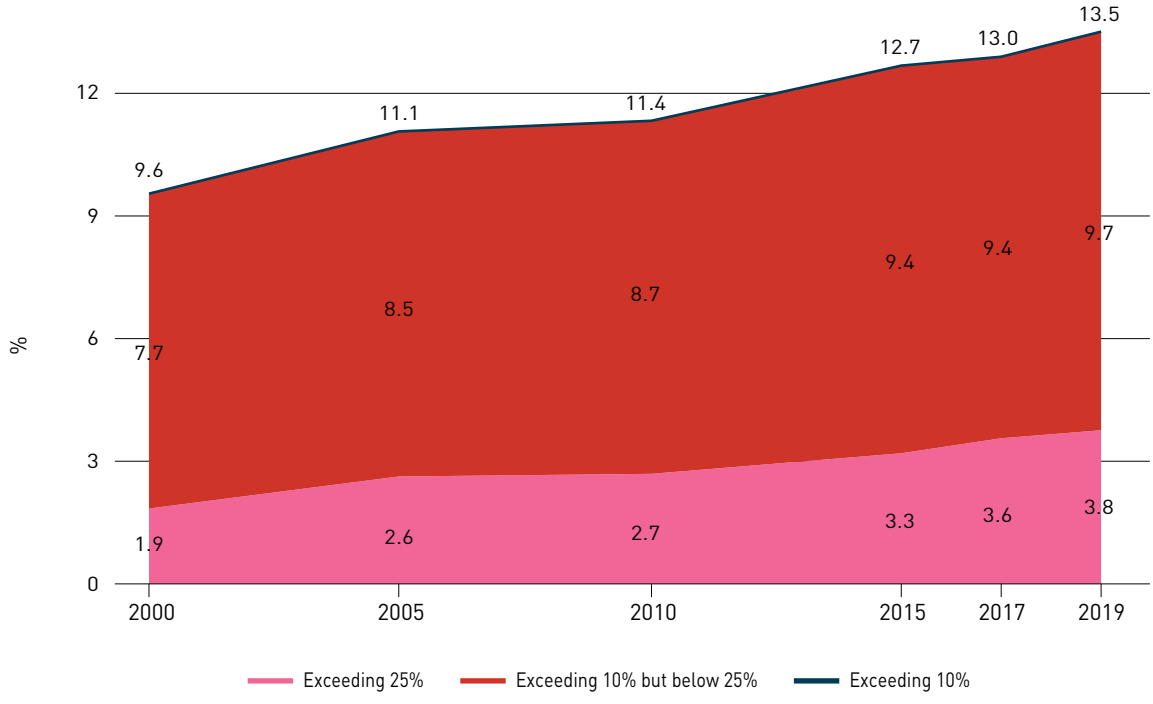
2.2.1 Trends in catastrophic and impoverishing OOP health spending

The global proportion of the population with catastrophic OOP health spending at 10% (and 25%) thresholds continuously increased from 2000 to reach 13.5% (3.8%) in 2019. The proportion of the global population spending more than 10% of the household budget on OOP health spending increased from 9.6% in 2000 to 15.6% in 2015 and 13.5% in 2019 – an average increase of 0.2 percentage points per year (see Fig. 2.2). At the same time, the share using more than 25% of the household budget for OOP health spending rose from 1.9% in 2000 to 3.3% in 2015 and 3.8% in 2019 – an average annual increase of 0.1 percentage points. The average annual increase in the incidence of catastrophic health spending at both thresholds 10% and 25% was similar before and after 2015 (+0.1 and +0.2 percentage points, respectively).

The rise in catastrophic health spending is in line with evidence that people use increasing shares of their rising consumption for OOP health payments. The global increase in catastrophic health spending over the 2000–2019 period was against the background of globally rising levels of private consumption.[9] In 88 of 176 countries with available data, the OOP health spending share in total private consumption increased between 2000 and 2019, providing a partial explanation for the increases in the shares of people with catastrophic health spending worldwide. While people's ability to spend more on health may reflect a reduction in forgone care, reliance on OOP spending prevents higher incomes translating to even better welfare. This finding points to a global failure to efficiently capture those additional resources through prepayment mechanisms subject to redistribution and pooling, unlike OOP health spending.

Fig. 2.2. Trends in the incidence of catastrophic health spending as tracked by SDG indicator 3.8.2, 2000–2019

Global proportion of the population with OOP health spending exceeding 10% or 25% of the household budget



Source: Global database on financial protection assembled by WHO and the World Bank, 2023 *(2,3)*.

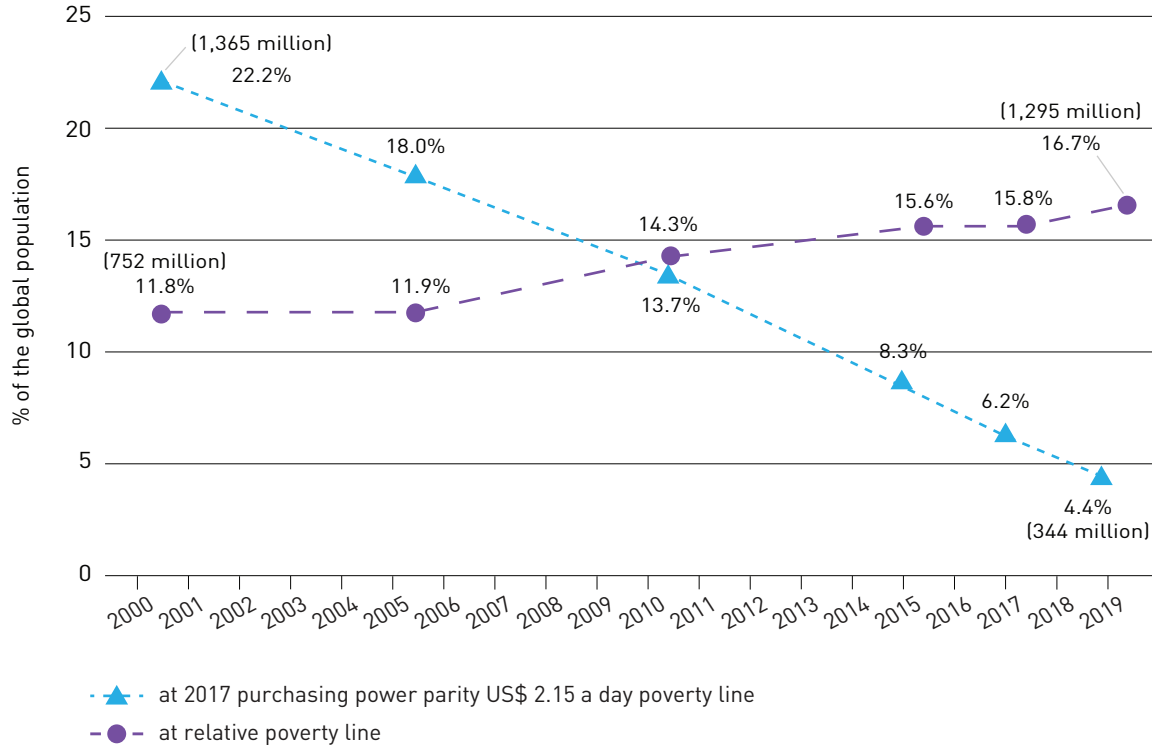
[9] The median consumption growth globally was 4% per year per capita median using population weights.

The proportion of the global population impoverished or further impoverished by OOP health spending decreased by 80% at the extreme poverty line between 2000 and 2019; but during the same period the rate impoverished or further impoverished at the relative poverty line increased by 42%. The proportion of the global population with impoverishing OOP health spending at the 2017 PPP US$ 2.15 extreme poverty line, which includes both those impoverished and further impoverished, decreased from 22.2% in 2000 to 8.3% in 2015 and 4.4% in 2019 (see Fig. 2.3), on average at -0.9 percentage points per year. In contrast, the global population share with impoverishing OOP health spending at the relative poverty line increased from 11.8% in 2000 to15.6% in 2015 and 16.7% in 2019 (see Fig. 2.3), on average at +0.3 percentage points per year. The contrasting trend of impoverishing OOP health spending at the relative and extreme absolute poverty lines indicate that while those affected by impoverishing OOP health spending were less poor in absolute terms in 2019 than in the early 2000s, globally they were still heavily concentrated in the lower parts of most countries' consumption distribution. During 2015–2019, the average rate of reduction in impoverishing health spending at the extreme poverty line and increase at the relative poverty line were similar to that prior to 2015 (-0.9 and +0.3, respectively).

Overall, OOP health spending clearly undermined efforts to eradicate poverty globally over the past two decades due to incomplete financial protection of those living in or close to poverty. The rapid drop in incidence of impoverishing health spending at the extreme poverty line between 2000 and 2019 was largely driven by a fast reduction in the number of people living in extreme poverty over the same period *(40)*. In contrast, the incidence of impoverishing OOP health spending at the relative poverty line is unaffected by economic growth, which largely drove the reductions in impoverishing OOP at the absolute, extreme line of poverty. Instead, the rising incidence of impoverishment at the relative poverty line is driven by a combination of incomprehensive health coverage and rising consumption among those living near or in relative poverty, which increases their likelihood to have OOP health spending. More significant gains in poverty reduction would have been achieved if those living *near* or *in* poverty had been exempted from paying OOP when seeking care.

Fig. 2.3. Trends in the incidence of impoverishing health spending at the extreme and relative poverty lines, 2000–2019

Global proportion of the population impoverished and further impoverished

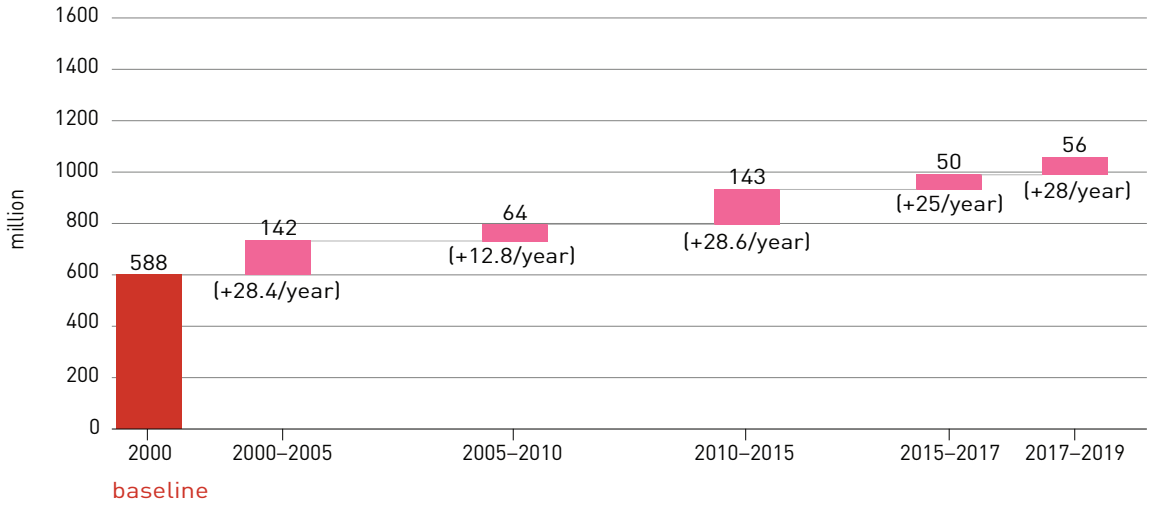


Source: Global database on financial protection assembled by WHO and the World Bank, 2023 *(2,3)*

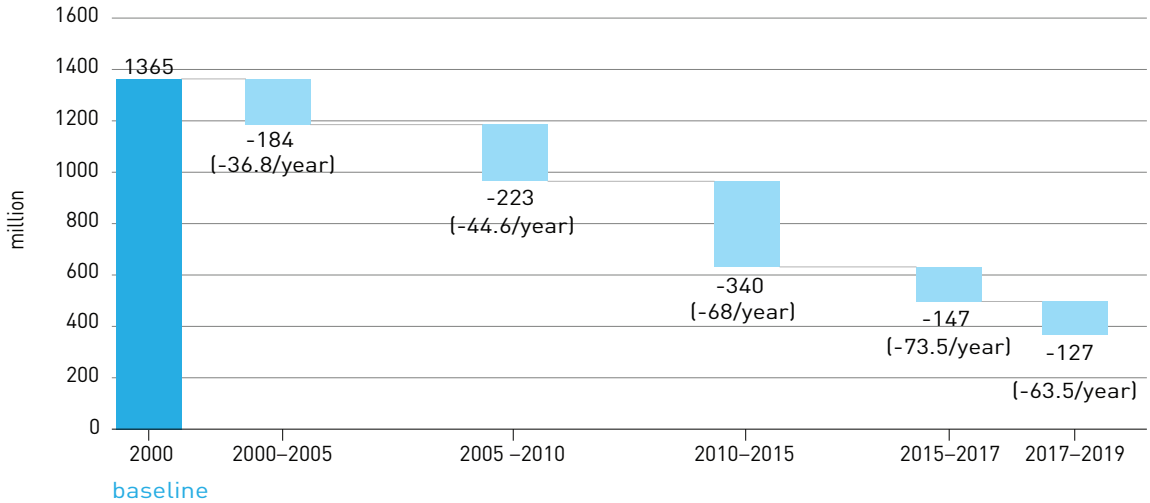
In absolute terms, the global population facing catastrophic health spending surpassed 1 billion in 2019, and so did the global population with impoverishing health spending at the relative poverty line, while those with impoverishing health spending at the relative poverty line surpassed 300 million people. The number of people with catastrophic health spending at the 10% (25%) level increased from 588 (117) million in 2000 to 937 (245) million in 2015 and reached 1.04 (292) billion in 2019, meaning that the world saw an additional average of 24 (9) million people with catastrophic health spending at the 10% (25%) level in each year over the 2000–2019 period (see Fig. 2.4a). The number of people impoverished or further impoverished at the extreme poverty line on average reduced by 74 million per year on average over the 2000–2019 period (see Fig. 2.4b). Despite this rapid decrease, the 344 million people with impoverishing OOP health spending at the extreme poverty line in 2019 still represented almost half of the global population living in extreme poverty that year *(41).*[10] The population with impoverishing health spending at the relative poverty line increased on average by 31 million per year between 2000 and 2019 (see Fig. 2.4c) to reach almost 1.3 billion people.

Fig. 2.4. Change in the number of people globally incurring catastrophic or impoverishing health spending between reference years 2000 and 2019

a. Increase in the global population with out-of-pocket health spending exceeding 10% of household budget (SDG 3.8.2, 10% threshold) between reference years

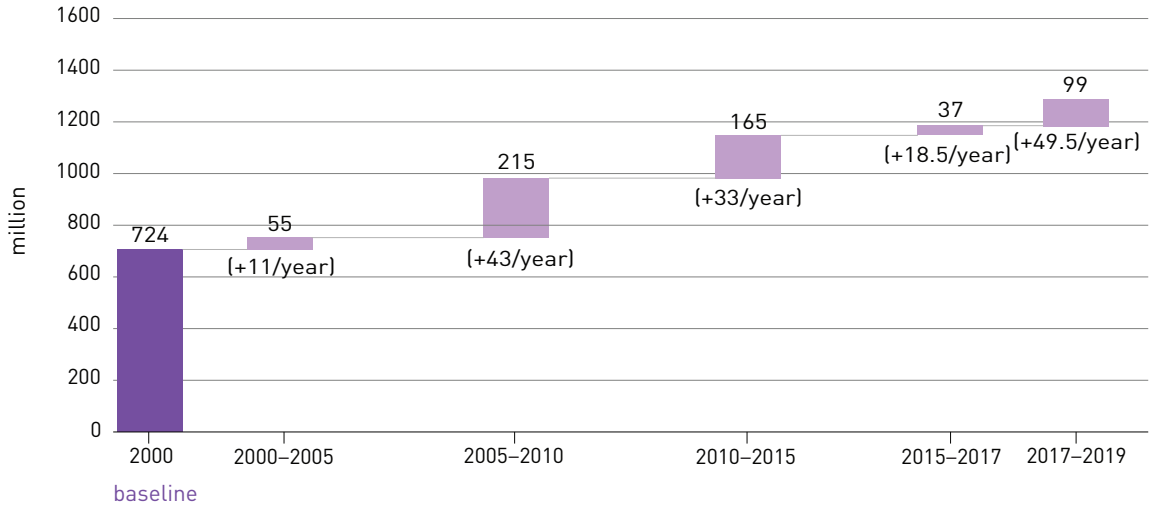


b. Decrease in the global population impoverished and further impoverished at the 2017 PPP US$ 2.15 a day extreme poverty line between reference years



[10] The global population living in extreme poverty in 2019 was 659 million people according to the World Bank *(41).*

c. Increase in the global population impoverished and further impoverished at the relative poverty line between reference years



Source: Global database on financial protection assembled by WHO and the World Bank, 2023 *(2,3)*

Population growth also contributed to accelerating the global rise in both catastrophic and impoverishing OOP health spending at the relative poverty line and undermines progress in reducing impoverishing health spending at the extreme poverty line. Because of rapid population growth, the relative increase of 78% (150%) in the global *number* of people with catastrophic health spending at the 10% (25%) level between 2000 and 2019 is much larger than the relative increase in the global *share* of people with catastrophic spending of 41% (100%). Similarly, the total number of people with impoverishing health spending at the relative poverty line increased much faster between 2000 and 2019 than its incidence rate (79% versus 42%, respectively). On the other hand, the global population with impoverishing health spending at the extreme poverty line decreased more slowly between 2000 and 2019 than its incidence rate (divided by 4 rather than 5 for the latter).

2.2.2 Trends in total financial hardship from out-of-pocket health spending

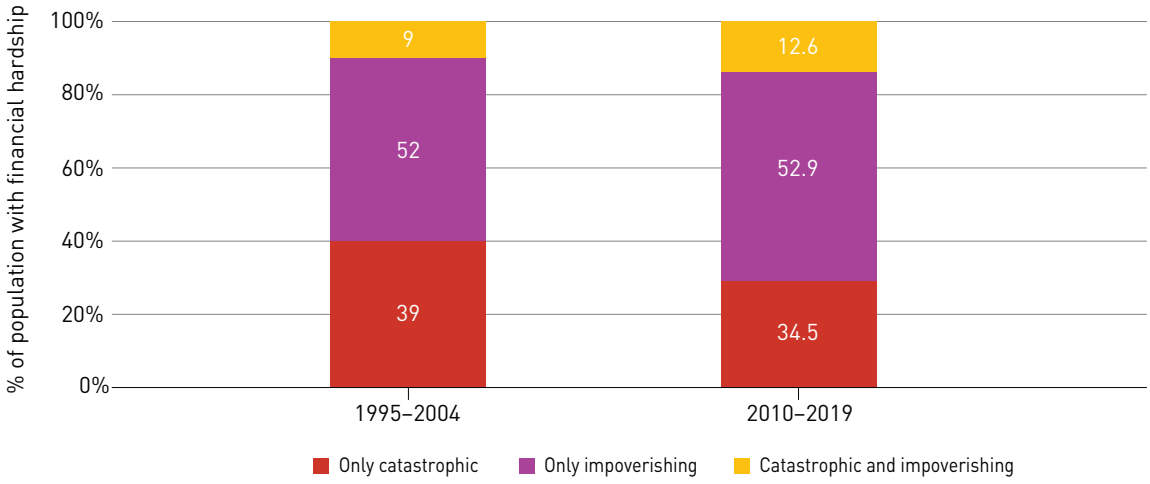
Catastrophic and impoverishing health spending are not mutually exclusive – people can incur either one of them or both. In what follows, the number of people who suffer a double burden of both catastrophic and impoverishing OOP payments are identified. The analysis uses both the extreme and relative poverty lines to track impoverishing OOP health spending indicators, but relies only on the 10% threshold for catastrophic OOP health spending. The evidence presented is taken directly from household surveys, and not from the projections employed to produce the global and regional estimates of financial hardship presented in the previous section. These survey-based values are then applied to the global estimate as a simple 'back of the envelope' approach to avoid double counting when deriving the total number of people globally who experience financial hardship.

Of those with either catastrophic spending at the 10% level and/or medical impoverishment at the relative poverty line, 12.6% experienced both forms of financial hardship at the same time. Based on a sample accounting for at least 80% of the global population, the share of people with impoverishing OOP health spending at the relative poverty line and catastrophic OOP health spending at the 10% threshold among those incurring financial hardship increased from 9% during the 1995–2004 period to 12.6% in 2010–2019 (see Fig. 2.5a). In contrast, people incurring only impoverishing health spending consistently accounted for about half of all people with financial hardship, meaning that the main driver of financial hardship in both periods was the relatively small OOP health spending (i.e. those accounting for less than 10% of household budgets). The increase in the share of people with both catastrophic and impoverishing payments consequently resulted from a reduction in the concentration of those with catastrophic spending alone, among those suffering financial hardship – specifically from 39% in 1995–2004 to 34.5% in 2010–2019 (see Fig. 2.5a).

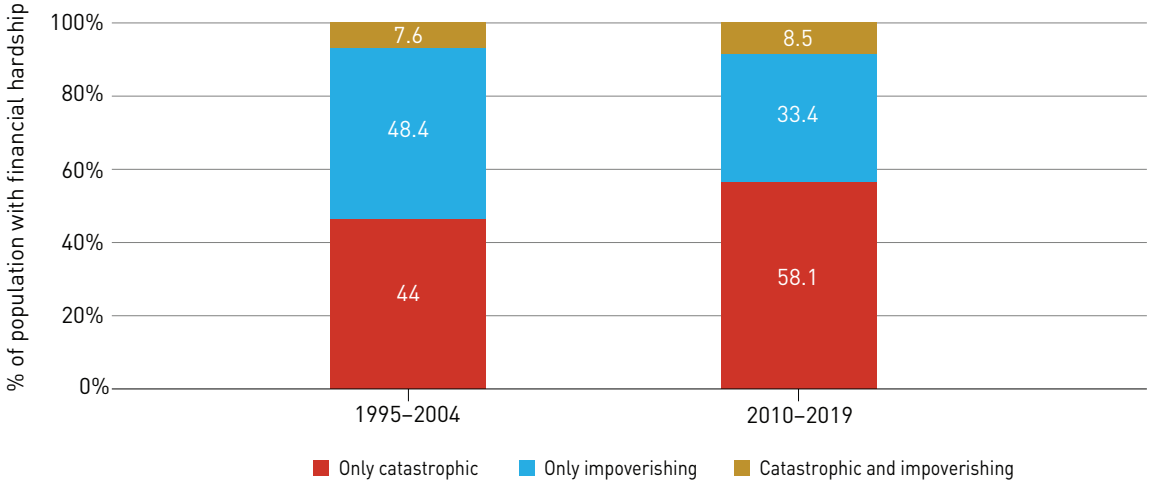
Of those with either catastrophic spending at the 10% level and/or impoverishing health spending at the extreme poverty line, 8.6% experienced both forms of financial hardship at the same time. Based on a sample accounting for at least 76% of the global population, the share of people with impoverishing OOP health spending at the extreme poverty line and catastrophic spending at the 10% level saw only a slight increase from 7.6% during 1995–2004 to 8.6% in 2010–2019 (see Fig. 2.5b). The main driver of financial hardship in 1995–2004, when extreme poverty was more prevalent, was impoverishing OOP spending caused by relatively small OOP health payments (i.e. payments of less than 10% of household budgets), which accounted for 48% of all people with financial hardship at the time. However, in 2010–2019, when substantial progress in the eradication of extreme poverty had been made, the concentration of impoverishing health spending from relatively small OOP health spending had dropped to 33% (see Fig. 2.5b). The majority of financial hardship (58%) was now accounted for by people exclusively experiencing catastrophic health spending, whose share was at 44% in 1995–2004 (see Fig. 2.5b).

Fig. 2.5. Average percentage of the population facing either catastrophic or impoverishing health spending or both as a percentage of the total population facing financial hardship

a. At the relative poverty line



b. At the extreme poverty line



Note: For 2010–2019, the joint distribution of catastrophic health spending and impoverishing health spending with both poverty lines is estimated based on a sample of 123 to 126 Member States representing 83% of the world's population in 2019. For the period 1995–2004, the joint distribution is estimated based on a sample of 98 Member States representing 80% of the world population in 2000 for the relative poverty line and a slightly smaller sample for the extreme poverty line (89 Member States) accounting for 76% of the world's population in 2000).

Source: Background estimates produced by WHO and the World Bank for the 2023 update of the WHO and World Bank global financial protection database *(2,3)*.

In 2019, more people suffered financial hardship from health spending than ever before, with 1.3 or 2 billion affected, depending on the poverty line used to estimate impoverishing OOP health spending.

Using the 10% level of catastrophic health spending, the relative poverty line, and without double-counting those who experience both catastrophic and impoverishing OOP health payments, the global number of people facing one or both forms of financial hardship increased by 71% during 2000–2019, from slightly less than 1.2 billion people to over 2 billion (see Table 2.1d). During the same period, and again without double-counting, the global population incurring catastrophic health spending at the 10% threshold, impoverishing health spending at the extreme poverty line, or both, decreased by 30%, from 1.8 billion people to slightly less than 1.3 billion (see Table 2.1d). These contrasting global trends reflect that those with impoverishing OOP health spending were somewhat less poor in 2019 than they were in 2000 as many were not living in extreme poverty anymore, but still, most of them were relatively worse off than the rest of the population and certainly poorer than those incurring catastrophic health spending. Overall, financial hardship remained concentrated among the poorest between 2000 and 2019.

Table 2.1. Global population incurring catastrophic health spending and/or impoverishing health spending, in millions

a. Population facing catastrophic health spending	**2000**	**2019**
Population spending more than 10% of their household budget on health out of pocket **(SDG 3.8.2, 10% threshold)**	588	1043
b. Population facing impoverishing health spending (impoverished and further impoverished)	**2000**	**2019**
at the *relative* poverty line	724	1295
at the 2017 PPP US$ 2.15 a day *extreme* poverty line	1365	344
c. Percentage of the population facing *both catastrophic (SDG 3.8.2, 10% threshold) and impoverishing health spending**	**2000**	**2019**
at the *relative* poverty line	9.0%	12.6%
at the 2017 PPP US$ 2.15 a day *extreme* poverty line	7.6%	8.6%
d. The total number of people incurring financial hardship**	**2000**	**2019**
at the *relative* poverty line	1194.2	2043.0
at the 2017 PPP US$ 2.15 a day *extreme* poverty line	1804.8	1267.9

Notes:

** For 2019, the percentage of the population facing both catastrophic OOP health spending and impoverishing OOP health spending with both poverty lines is based on the sample of 123 to 126 Member States representing 83% of the world's population in 2019, with estimates available for 2010–2019. For 2000, the joint distribution is based on a sample of 98 Member States representing 80% of the world population in 2000 for the relative poverty line and a slightly smaller sample for the extreme poverty line (89 accounting for 76% of the world's population in 2000), in both cases with estimates available for the period 1995–2004.*

*** Estimated number of people incurring catastrophic OOP health spending, impoverishing OOP health spending or both without double counting. Catastrophic OOP health spending is defined as OOP health spending exceeding 10% of a household budget (SDG 3.8.2 indicator, 10% threshold).*

Source: Global database on financial protection assembled by WHO and the World Bank, 2023 *(2,3)*.

2.3 Inequalities in financial hardship (SDG 3.8.2 and related indicators)

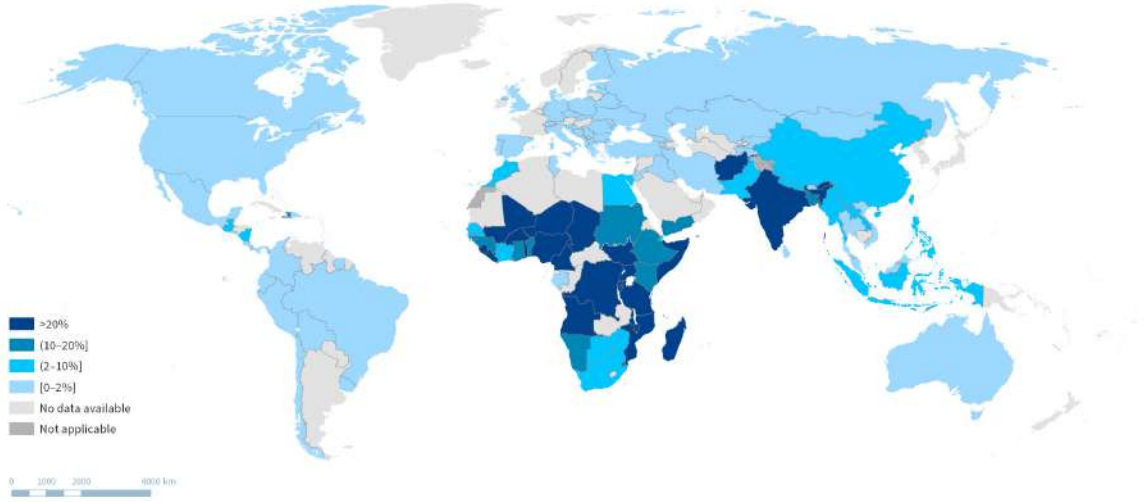
2.3.1 Between-country inequalities in levels of catastrophic and impoverishing health spending

Rates of impoverishing and catastrophic OOP health spending vary substantially between countries (see Fig. 2.6). During 2010–2019, impoverishing health expenditure at the extreme poverty line level showed the most variation between countries with high levels of extreme impoverishment concentrated in a relatively small number of LICs and LMICs. On the other end, high levels of

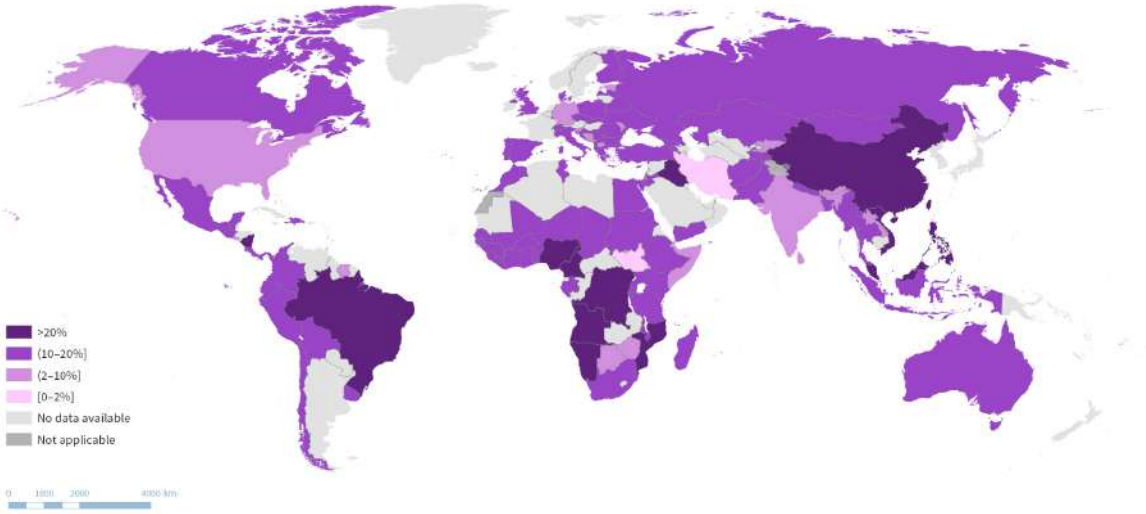
impoverishing health spending at the relative poverty line occurred in many countries, as relative poverty exists in all country income groups. Similarly, catastrophic OOP health spending occurred everywhere, with low and high incidence rates in all regions. But many countries with high incidence levels of catastrophic OOP health spending also had high incidence levels of impoverishing health spending at the relative poverty line.

Fig. 2.6. Incidence of catastrophic and impoverishing health spending by country, most recent years (2010–2019)

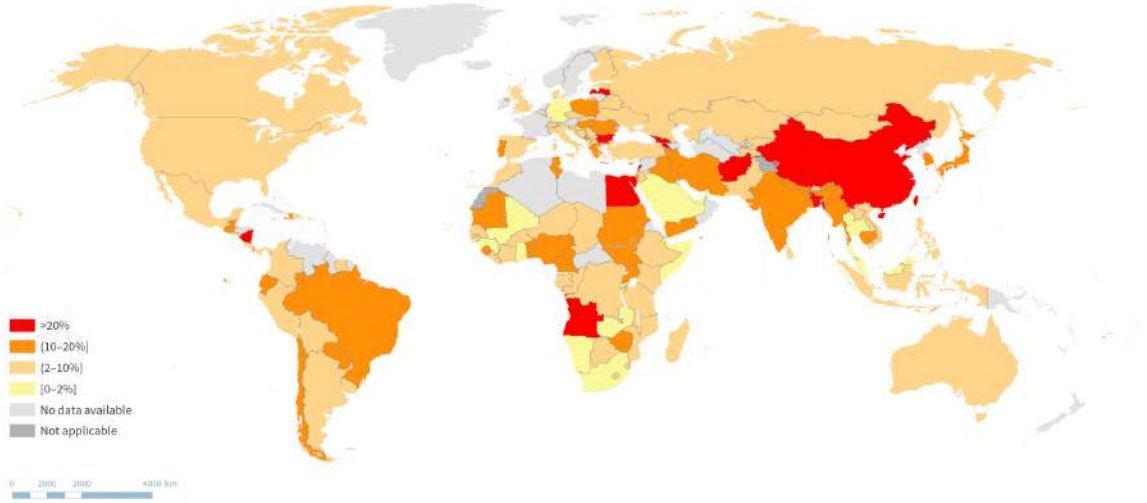
a. Proportion of the population impoverished and further impoverished at the 2017 PPP US$ 2.15 a day extreme poverty line



b. Proportion of the population impoverished and further impoverished at the relative poverty line



c. Proportion of the population with OOP health spending exceeding 10% of the household budget (SDG 3.8.2, 10% threshold)



Note: The estimates for impoverishing health spending for Canada, Germany, Nicaragua, and Paraguay (panels a and b) and catastrophic health spending for Belize, Canada, El Salvador, Germany, and Nicaragua (panel c) are based on income. For all other countries, they are based on consumption expenditure or expenditure. These estimates are based on a data availability for global monitoring, which may not necessarily align with the availability of data at national or regional levels. These maps have been produced by WHO. The boundaries, colours or other designations or denominations used in the maps and the publication do not imply, on the part of the World Bank or WHO, any opinion or judgement on the legal status of any country, territory, city or area or of its authorities, or any endorsement or acceptance of such boundaries or frontiers.

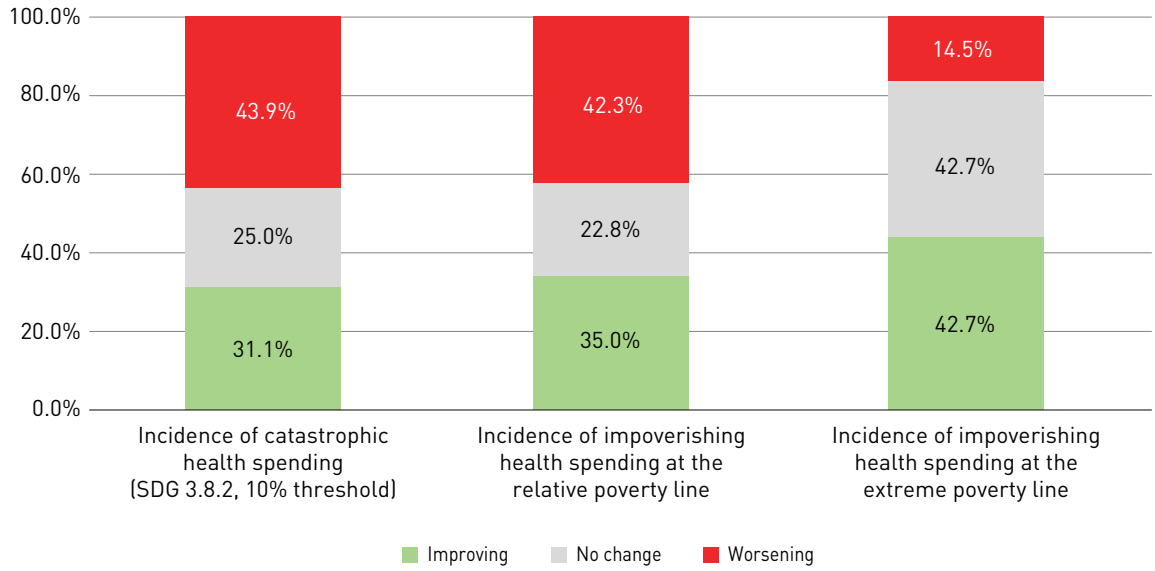
Source: Global database on financial protection assembled by WHO and the World Bank, 2023 *(2,3)*.

2.3.2 Inequalities between countries in trends of financial hardship

Reflecting the global worsening of financial protection since 2000, of the countries with more than one data point between 2000 and 2019, only 31% managed to reduce catastrophic spending and 35% impoverishing OOP health spending at the relative poverty line, while impoverishing health spending at the extreme poverty line decreased in 43% of the countries (see Fig. 2.7).[11] It is important to note that of the 43% of countries that did not have any changes in impoverishing OOP health spending at the extreme poverty line, many did not have any extreme impoverishment at all in the 2000–2019 period.

[11] On average, in the countries with improving financial protection, the rates of catastrophic health spending and impoverishing health spending at the relative poverty line decreased at similar rates (-0.6 percentage points per year), while the reduction in impoverishing health spending at the extreme poverty line was somewhat faster (-1.1 percentage point per year).

Fig. 2.7. Percentage of countries by type of progress made in the incidence of catastrophic or impoverishing health spending



Notes: No change corresponds to a change below 0.1 percentage points per year. Analysis is based on estimates available for 132 Member States for catastrophic health spending (SDG 3.8.2,10% threshold); 123 and 117 Member States for impoverishing health spending, respectively, at the relative poverty line and the extreme poverty line. The median number of survey-based estimates for all indicators is 4.

Source: Global database on financial protection assembled by WHO and the World Bank, 2023 *(2,3)*.

Only 12% of countries managed to reduce both catastrophic and impoverishing OOP health spending at the relative poverty line in 2000–2019, and in a quarter of countries both indicators deteriorated (see Table 2.2). Eight percent of the countries with multiple data points experienced no change in either indicator and in 25% of countries, both catastrophic health spending and impoverishing OOP health spending at the relative poverty line increased. For catastrophic health spending and impoverishing OOP spending at the extreme poverty line, 15% of countries saw improvements, and 9% saw a worsening of both indicators between 2000 and 2019 (see Table 2.2).

Table 2.2. Percentage of countries by type of progress made in both the incidence of catastrophic and impoverishing health spending

AND incidence of impoverishing health spending		**Incidence of catastrophic health spending (SDG 3.8.2, 10% threshold)**		
		improving	*no change*	*worsening*
at the *relative poverty line*	*improving*	12%	11%	12%
	no change	7%	8%	7%
	worsening	11%	7%	25%
at the 2017 PPP US$ 2.15 a day *extreme poverty line*	*improving*	15%	13%	15%
	no change	10%	12%	21%
	worsening	5%	1%	9%

Notes: Total number of countries with trend data for both SDG 3.8.2 at the 10% threshold and impoverishing health spending is 123 and 117, respectively at the relative poverty and the extreme poverty line.

Source: Global database on financial protection assembled by WHO and the World Bank, 2023 *(2,3)*.

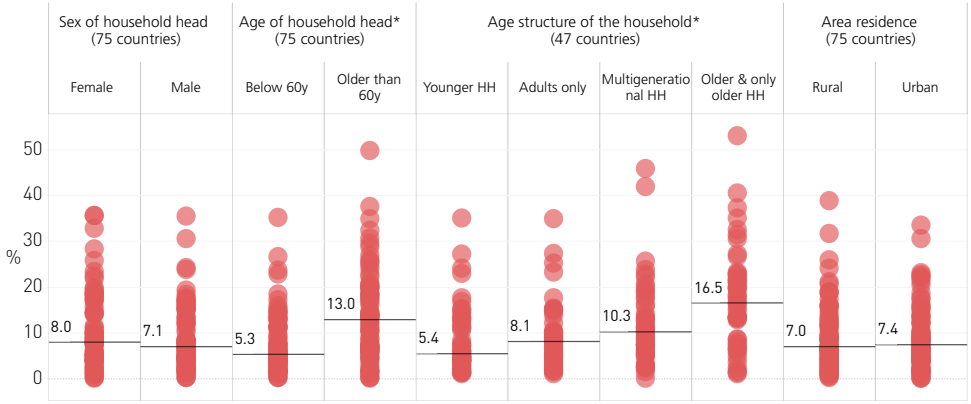
2.3.3 Inequalities within the countries

There were marked differences in catastrophic and impoverishing OOP health spending across sociodemographic groups within countries. Catastrophic spending tends to be concentrated among multi-generational and older households. The available household survey data for the 2015–2019 period shows that households that have an older head (age 60 or over) are multi-generational, and those composed of either only older people or including at least one older person had higher rates of catastrophic health spending at the 10% threshold (see Fig. 2.8a). There were no significant differences in the median incidence rate of catastrophic health spending in female- versus male-headed households, nor were there substantive differences when compared by people's area of residence (rural versus urban).

Impoverishing health spending is more common among younger and multi-generational households and those living in rural areas. Based on estimates from the same surveys for the same period (2015–2019), male-headed households, households with younger heads, younger households (i.e. adults with children), multi-generational households, and those living in rural areas had higher rates of impoverishing health spending at the relative poverty line (see Fig. 2.8b).

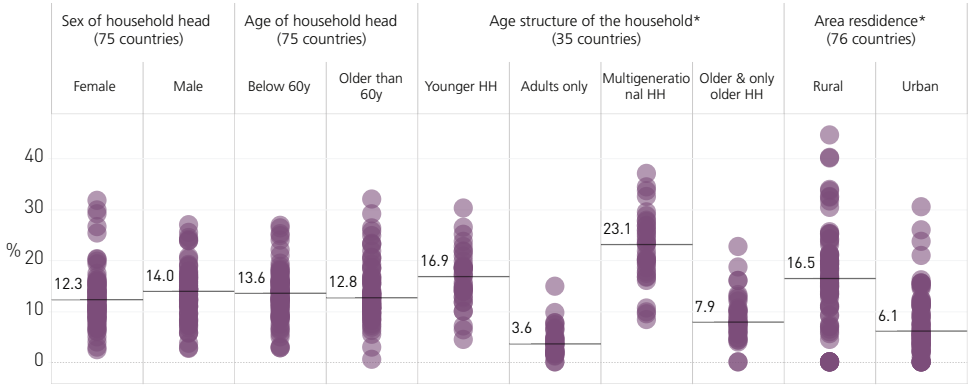
Fig. 2.8. Inequalities in the incidence of catastrophic health spending or impoverishing health spending, most recent years (2015–2019)

a. Percentage of the population with out-of-pocket health spending exceeding 10% of household budget (SDG 3.8.2 indicator, 10% threshold)



*: Significant at 95% level.
___: The horizontal line correspond to the median of values across countries.

b. Percentage of the population with impoverishing health spending at the relative poverty line



*: Significant at 95% level.
___: The horizontal line correspond to the median of values across countries.

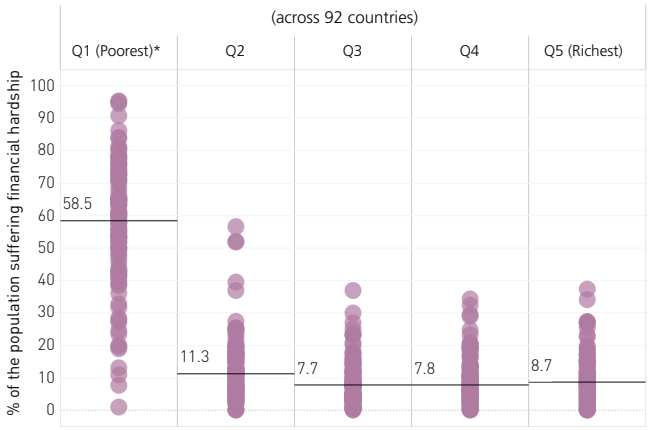
Note: In panels a and b, each dot corresponds to the estimated rate in a country for a given sociodemographic category and the horizontal line corresponds to the median value across all countries for that category.

Source: Global database on financial protection assembled by WHO and the World Bank, 2023 *(2,3)*.

Poorer households are most affected by financial hardship due to the higher rates of impoverishing health spending, and inequalities in financial hardship are rising. People experiencing catastrophic spending, impoverishing health spending, or both (i.e. any form of financial hardship) were concentrated in the bottom two consumption quintiles (see Fig. 2.9). For financial hardship defined as either catastrophic spending or medical impoverishment at the relative poverty line or both, people in the lowest two (poorest) consumption quintiles had a median incidence rate almost seven times higher than that of the top (wealthiest) quintile at the relative poverty line (59.1% versus 8.6%, see Fig. 2.9a). For financial hardship defined as either catastrophic spending or impoverishing health spending at the extreme poverty line or both, the lowest quintile (33.7%) was still four times more likely to experience financial hardship than the top quintile (8.3%) (see Fig. 2.9b). Household survey data available before 2015 confirm all these patterns and show a widening in sociodemographic inequalities over time in the incidence of catastrophic, impoverishing health spending and both simultaneously (see Annex 15). As discussed in section 2.2.2, the higher rates of financial hardship among the less well-off are due to impoverishing health spending rather than catastrophic health spending.

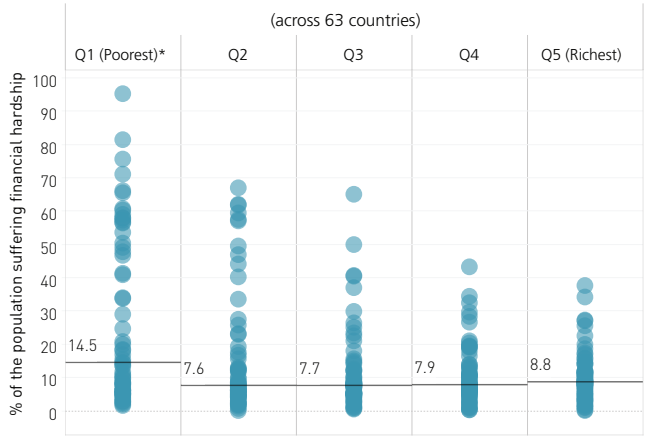
Fig. 2.9. Inequalities in the incidence of financial hardship by consumption quintile, recent years (2015–2019)

a. Proportion of the population with OOP health spending exceeding 10% of household budget, impoverishing health spending at the relative poverty line, or both by per capita consumption quintile



*: Significantly higher than other quintiles at 95% level.
___: The horizontal line correspond to the median of values across countries.

b. Proportion of the population with OOP health spending exceeding 10% of household budget, impoverishing health spending at the extreme poverty line or both by per capita consumption quintile



*: Significantly higher than other quintiles at 95% level.
___: The horizontal line correspond to the median of values across countries.

Notes: In panels a and b, each dot corresponds to the estimated rate in a country for a given sociodemographic category.
** Significantly higher than other quintiles at 95% level.*
__ The horizontal line corresponds to the median value across all countries for that category.
Source: Background data produced by WHO and the World Bank for the 2023 update of the WHO and World Bank global financial protection database *(2,3)*.

2.4 Financial barriers to access as a driver of forgone care

Financial protection in health requires elimination of financial access barriers. As shown in Chapter 1, people face multiple types of barriers to access the health care they need. Among these barriers are financial ones, and their elimination is required to achieve full financial protection in health. Financial access barriers arise when accessing adequate care requires OOP payments, and these payments exceed people's ability to pay so that they are forced to forgo the care they need (see Box 2.3). This situation can occur when the health services or goods are not available or accessible for a person at an affordable OOP fee or free of charge or when affordable or free-of-charge services and goods are of deficient quality.

Box 2.3. Data on financial access barriers to health

The data on financial reasons for forgoing health care in this section are drawn from 29 nationally representative household surveys conducted mainly in, but not limited to the WHO African Region, with 2017 as the median year of data collection. It is important to note that the way data on financial access barriers to care are collected varies across surveys:

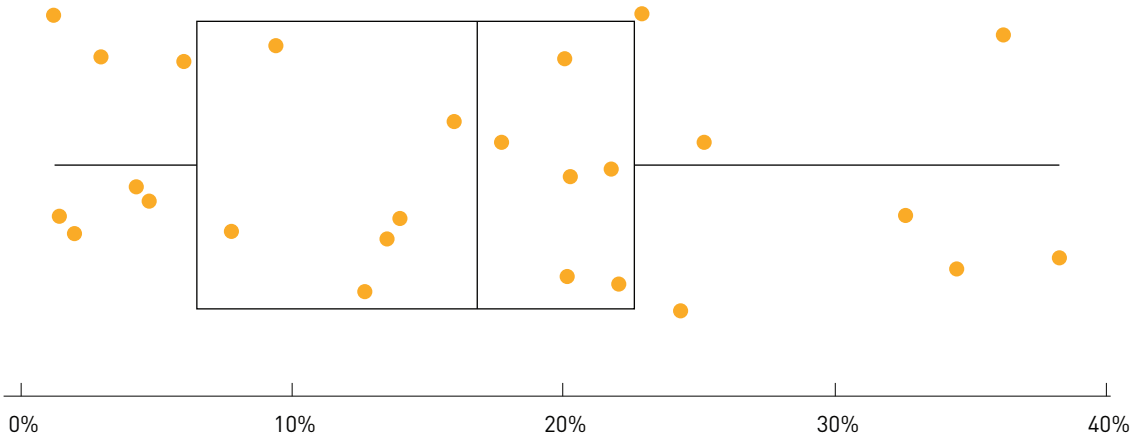
- Information on financial access barriers is often collected from people who report not to have used health services for a recent illness episode, but sometimes there is no such conditioning on recent illness or forgoing care. The analysis in this section only uses financial access barrier data collected conditionally on forgone care.
- Information on financial access barriers is often collected from individuals, but sometimes they are only available for a household as a whole. The analysis in this section only uses the former.
- Survey respondents are often asked for financial access barriers to *any* type of care (including self-medication), but sometimes data on financial access barriers are only collected from people who forwent *formal* health services.
- Survey respondents can often report multiple access barriers, but sometimes only the most important access barrier can be selected.

It is important to note that data on financial access barriers are typically derived from multipurpose surveys, which include modules on health care use. They are less commonly found in household consumption surveys or household consumption modules, which underlie most of the estimates of financial hardship presented in this chapter (see Annex 10). It is a major challenge to report on both financial hardship and financial barriers to access for the same group of people and the same period globally. For example, in a sample of 119 recent survey reports from surveys used to track catastrophic and impoverishing health spending, only eight had readily available information on financial barriers to access. An analysis of the microdata itself allowed us to produce this type of indicator for an additional 21 countries. The work is still ongoing, but some preliminary findings complement the results previously available at the regional level, which are already used to inform policies, most notably in the WHO Region of the Americas *(42,43)* and the European Region *(44)*.

For a sample of 29 LICs and middle-income countries (MICs), the median population share reporting financial reasons for forgoing care was 19%, but the relevance of financial access barriers varied widely across countries. The box plot in Fig. 2.10 shows the dispersion of the share of people reporting financial access barriers across 29 countries. The median rate of forgone care for any reason in the sampled countries was 46%. Among those who forwent care, financial reasons at the median accounted for nearly one in five (18.7%) reported cases of forgoing care. Dispersion in the relevance of financial access barriers across the sampled countries was high, with rates ranging from 1.2% to 74%. Reasons for this large degree of variation require further investigation, as they likely include both differences in data collection methods (see Box 2.3) and variations in income and health coverage across countries which affect the affordability and need for OOP charges.

Fig. 2.10. Financial reasons for forgoing care, evidence from 29 countries, median year 2017

Percentage of individuals reporting financial barriers among people not seeking any care



Notes: Estimates are produced from microdata files, except for seven surveys, where data points are extracted from published analytical reports. The median percentage of individuals forgoing care for financial reasons corresponds to the line which divides the box into two parts. The dots indicate a country estimated percentage. The distance between the upper and lower limit of the box corresponds to the interquartile range.

2.5 Impacts of COVID-19 on financial hardship and financial barriers to access as a driver of forgone care

The lack of standardized survey instruments and data collection methods proved to be a major challenge to produce comparable data on financial barriers in health care globally until 2019. However, the massive increase in mobile phone surveys to attenuate the interruption of face-to-face household surveys almost reversed the gap in knowledge of the past three years. As illustrated in this chapter, since 2020, there is more evidence of self-reported financial barriers than of financial hardship due to OOP health spending. Indeed, during the COVID-19 pandemic, national statistical offices (NSOs) experienced unparalleled disruption in data collection when most face-to-face interviews had to be suspended.

The COVID-19 pandemic brought data collection for the household surveys underlying the estimates of financial hardship presented in this report to an almost complete halt. For instance, at the beginning of the pandemic in May 2020, 96% of 122 NSOs interviewed for a study of COVID-19-related data collection disruptions reported having stopped face-to-face data collection completely *(45)*. In May 2021, only 44% of 118 NSOs had resumed face-to-face data collection *(46)*. While more countries resumed national household survey data collection in 2022, given the typical lag of one to two years between data collection and availability for analysis, data availability was insufficient for this report to provide global or regional estimates of financial hardship for any year in the 2020–2022 period.

This section sheds light on the pandemic's impact on financial protection with a combination of financial hardship indicators based on estimates for countries that continued their household survey programmes despite the pandemic and evidence on financial access barriers based on phone surveys that proliferated in 2020–2022. Because countries with estimates available for 2020–2021 for catastrophic (23 countries) and impoverishing health spending (18 countries at the relative poverty line and 12 countries at the extreme poverty line) have longstanding household survey programmes, the pandemic era estimates of financial hardship can be contrasted with those just before the pandemic (i.e. 2015–2019) and earlier (i.e. pre-2015).[12] Information on financial barriers from 2020 to 2022 is available from the COVID-19 high-frequency phone survey which asked individuals: if they needed medical treatment (62 countries);

[12] The median number of survey-based estimates per country for catastrophic and impoverishing health spending is 15 to 16 years depending on the indicator.

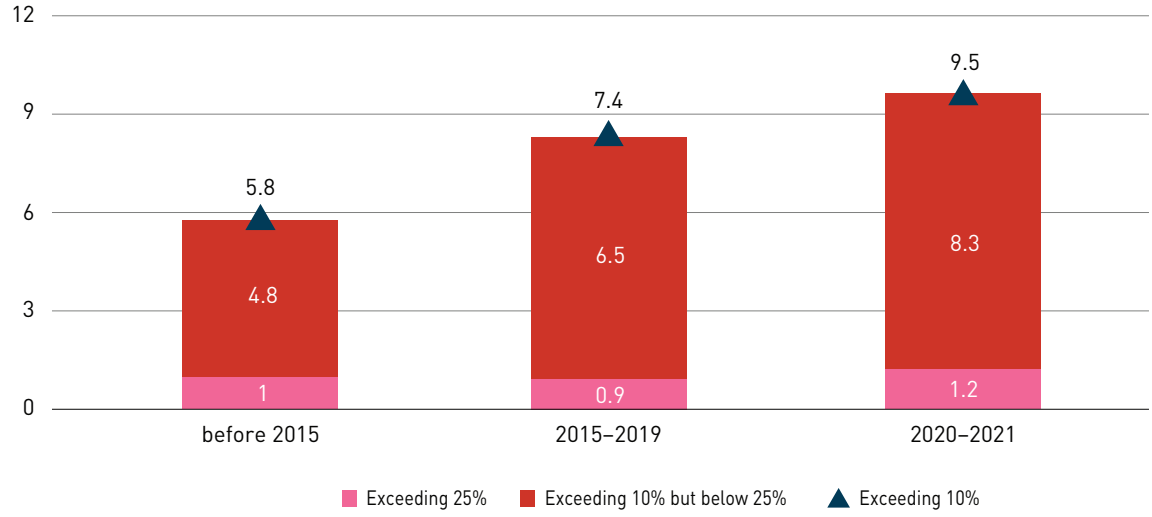
if they received medical attention when needed, conditional on need (72 countries); and lastly, for those forgoing care, if they could not receive medical attention due to lack of money (61 countries).

The available evidence indicates that catastrophic and impoverishing health spending at the extreme poverty line worsened during the pandemic, while impoverishing health spending at the relative poverty line was unaffected. In the sample of 23 countries with data available until 2020 or 2021, the median population share with catastrophic health spending (10% threshold) stood at 9.5% during the pandemic, up 28% from the 7.4% median share across surveys conducted in 2015–2019, which was also 28% higher than the median incidence rate estimated prior to 2015 in the same countries (see Fig. 2.11a). Further analysis is required to understand if this increase was primarily driven by falling consumption, i.e. the denominator of the catastrophic spending indicator, or by rising OOP payments, i.e. the indicator's numerator. In line with relative poverty being unaffected by the large fluctuations in consumption (see Box 2.2 above) the pandemic brought *(47,48)* and the relative stability of the propensity to spend OOP for health, no substantive changes to impoverishing OOP spending were observed at the relative poverty line among 18 countries with data before and after COVID-19 (see Fig. 2.11b, left panel). However, the pandemic dramatically reversed the course in eliminating impoverishing health spending at the extreme poverty line: in 12 LMICs, the median population share with impoverishing health spending at the extreme poverty line, which was 1.3% in surveys conducted before 2015, had decreased to 0.3% in 2015–2019 but doubled to 0.6% during the pandemic (see Fig. 2.11b, right panel). This finding is consistent with the increase in extreme poverty estimated during the pandemic (+1.1 percentage points in the global proportion of the population living with less than 2017 PPP US$ 2.15 in 2020) *(41)*.[13]

Other data sources support the emerging evidence of a worsening of financial hardship in 2020/2021 in the general population and for the poorest and point to uneven recovery. OOP health spending fell in real terms *(49)*, and so did median income *(39)*. An estimated 90 million additional people were pushed into extreme poverty by the end of 2020, with human capital stalling. Countries may struggle to return to pre-COVID-19 incidence rates of impoverishing health spending. For example, quarterly estimates available for an upper-middle-income country (UMIC) between 2018 and 2021 show a sharp increase in extreme poverty in 2020 and 2021 compared to 2019, which was still high in 2022 (see Fig. 2.14).

Fig. 2.11. Trends in financial hardship indicators before 2015, in 2015–2019 and 2020–2021, median rates

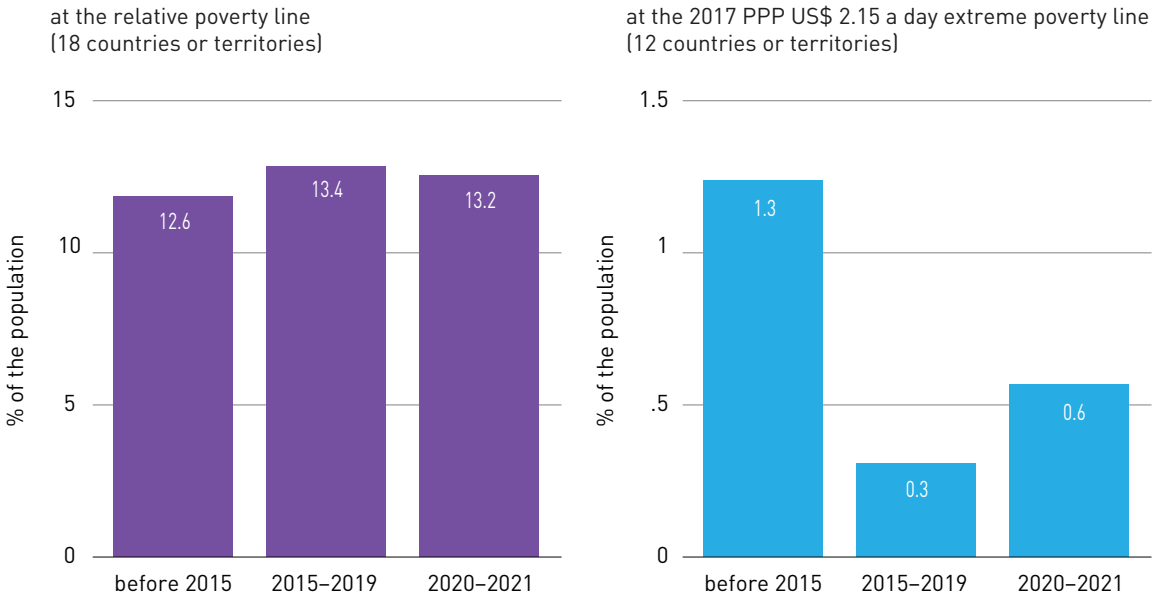
a. Median proportion of the population with OOP health spending exceeding 10% or 25% of the household budget (SDG 3.8.2 indicators), from 23 countries or territories.



Note: Medians before 2015 and after 2019 are based on data from 23 countries, covering all WHO regions and income groups, but only five were classified as high-income in 2020/2021.

[13] Global extreme poverty increased from 8.4% in 2019 to 9.3% in 2020 *(40)*.

b. Median proportion of the population with impoverishing health spending prior to 2015, in 2015–2019 and 2020–2021, from 12 to 18 countries



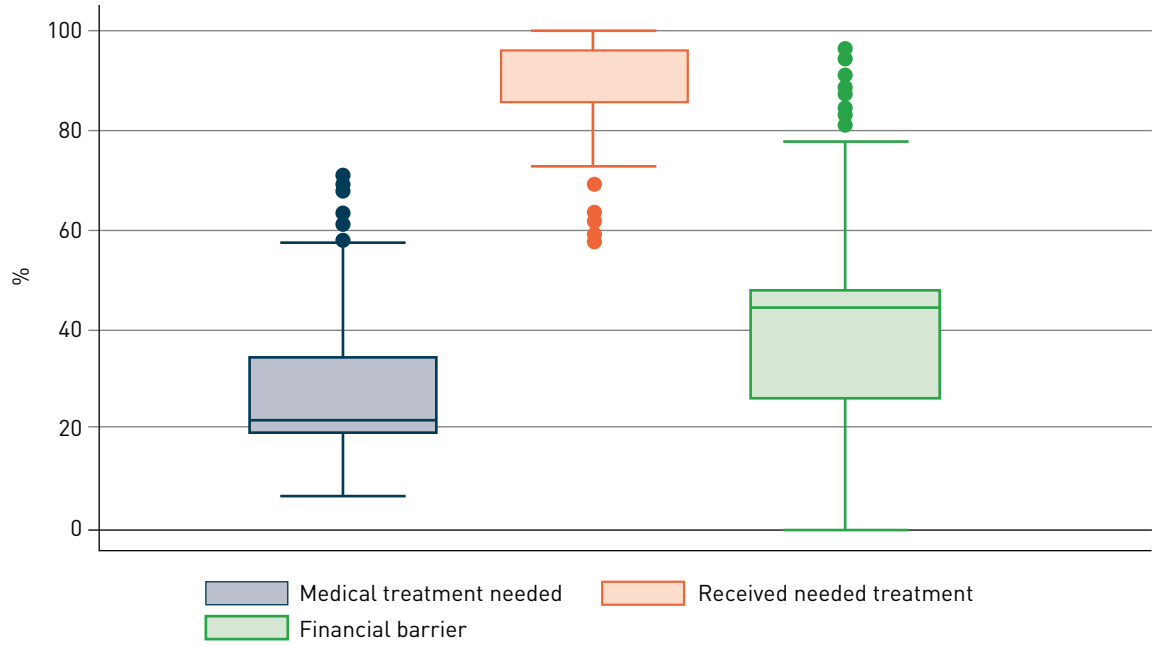
Notes: Panel a is based on a sample of 12 countries, all classified as either low-income, lower-middle-income or upper-middle-income in 2020 or 2021, with data available pre- and post-2015. Panel b is based on a sample of 18 countries at all income levels in 2020 or 2021, with data available pre- and post-2015. The median year prior to 2015 is 2006, the median year before COVID is 2017, and the median year during COVID is 2020. In both cases, the median year before 2015 is 2006, the median year before COVID is 2017, and the median year during COVID is 2020.

Source: Global database on financial protection assembled by WHO and the World Bank, 2023 *(2,3)*.

During the pandemic, the prevalence of financial barriers to accessing health services and products increased. During the COVID-19 pandemic, seeking and accessing needed health care and products was impeded by financial barriers. For example, in 2020, households, particularly in LICs, reported financial barriers to seeking care for all health services, not only those related to COVID-19 (*32)*.

Evidence from nationally representative phone surveys in LMICs indicate a low share of household forgoing needed care during the pandemic, but among those with forgone care, the prevalence of financial barriers to accessing health services is high. Based on the evidence from several waves of the COVID-19 high-frequency phone survey conducted during 2020 and 2022, the median proportion of those needing medical treatment was 21.6%, the median proportion of those who received needed medical treatment was 95.1%, and the median proportion of those who could not receive medical attention due to financial barriers (lack of money) was 37.3% (see Fig. 2.12). The relevance of self-reported financial access barriers varied strongly across countries, with an interquartile range (IQR) of 21.5 percentage points and a substantive number of countries falling outside the 1.5 times IQR range.

Fig. 2.12. Distribution of the proportion of households that needed, received and had to forgo medical treatment for financial reasons during COVID-19, various countries



Notes: The distribution of the proportion of households in need, receiving and forgoing medical treatment for financial reasons are illustrated by the means of box-plots. The median rate corresponds to a line which divides the box into two parts. The upper limit of the box indicates the value below which fall 75% of the rates (the 75th percentile). The lower limit of the box indicates the value below which the rates falls (the 25th percentile). Each box-plot is based on a different number of countries as follows: The proportion of households that needed medical treatment is based on a sample of 57 countries. The proportion of households that received medical treatment when needed as is based on a sample of Y countries. The proportion of households forgoing medical treatment due to cost when needed is based on a sample of 54 countries.

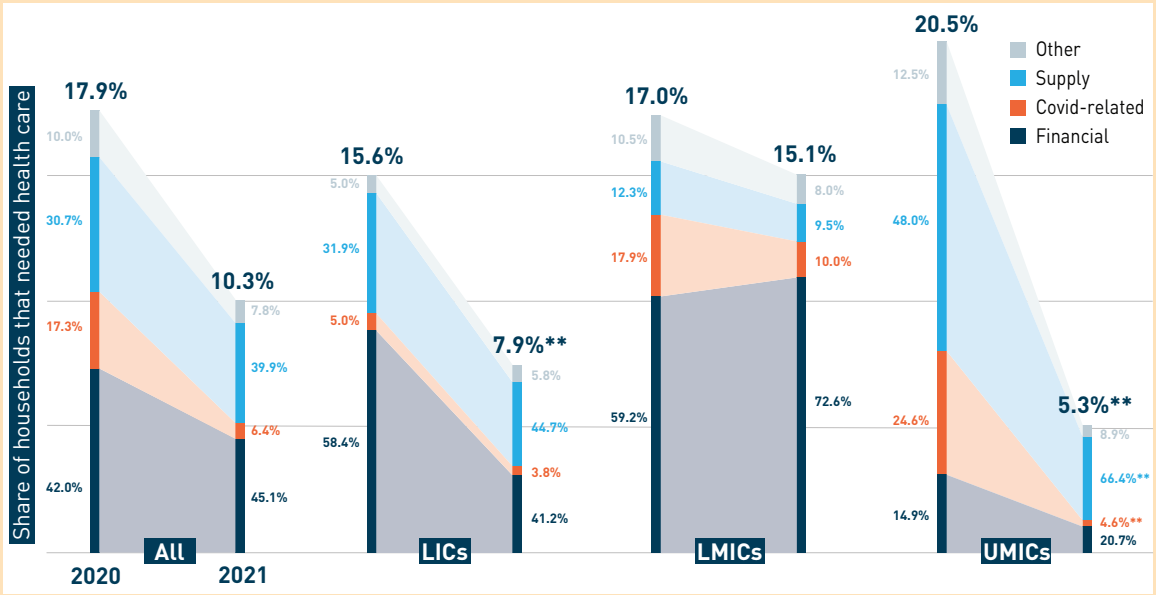
Source: Authors own computation based on data from the COVID-19 High-frequency Monitoring Dashboard *(50).*

More detailed analyses on forgone care due to financial barriers is presented in Box 2.4 for countries of different income levels. Heterogeneity in forgone care due to financial barriers across countries can not only reflect differences in overall income levels but also in health financing arrangements and other health system factors. The impact of financial factors on service utilization is particularly worrying, given the uneven economic recovery from the pandemic across income groups and the multiple shocks and crises countries around the world have faced since 2021 (see Chapter 4).

Box 2.4. Sharp increases and an uneven, ongoing recovery in financial barriers to access and financial hardship

In 2020, 42.0% of the households reporting forgoing care in a pooled sample (including the 25 LICs, LMICs, and UMICs)[14] indicated that it was due to financial reasons, 30.7% reported reasons related to the supply of health services, and 17.3% reported that it was due to the reasons associated directly with COVID-19. Financial reasons were more commonly reported in LICs and LMICs (58.4% and 59.2%, respectively) than in UMICs (14.9%). The difference between LICs and LMICs was not statistically significant; the differences between LICs and UMICs and LMICs and UMICs were statistically significant. The percentage of households reporting forgoing care for reasons related to the supply of services was the highest in UMICs (48%) and the lowest in LICs (12.3%). The differences between all country income groups were statistically significant (see Fig. 2.13).

Fig. 2.13. Reasons for forgone care (as a share of households that needed care), 2020 and 2021, evidence from 25 low-, lower-middle, and upper-middle-income countries



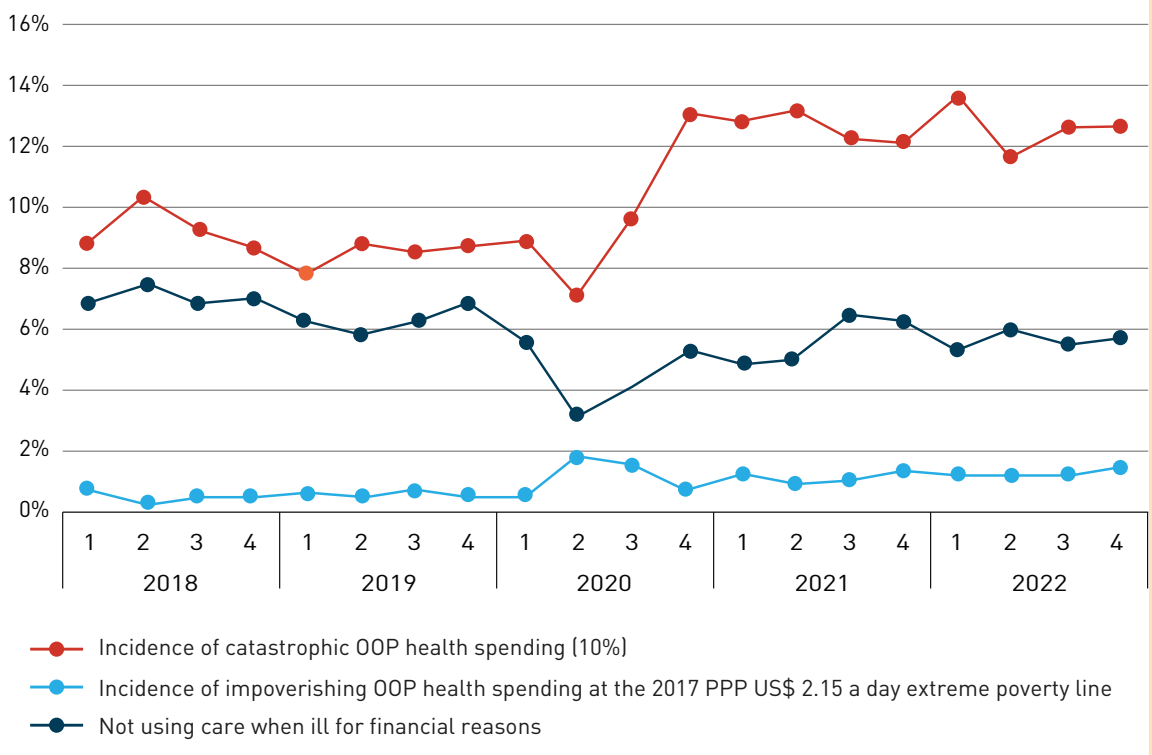
Note: * significant at 10% level; ** significant at 5% level; *** significant at 1% level.

Source: Analysis prepared by the World Bank based on two rounds of World Bank high-frequency phone surveys. The final sample included 86 643 observations collected from 63 348 unique households across the two waves of data *(18).*

In the first half of 2021, 45.1% of households reported forgoing care for financial reasons – roughly the same proportion as in 2020 (a 3.1 percentage point difference that was not statistically significant). However, there was a significant increase of 13.4 percentage points in LMICs and a statistically insignificant decline of 17.2 percentage points in LICs compared to 2020. Financial reasons for forgone care were reported more frequently in UMICs in 2021 than in 2020, but the increase was not statistically significant, and they were not the primary driver of forgone care. In 2021, a statistically significant higher proportion of households in the pooled sample reported forgoing care due to reasons related to the supply of services in 2021 compared to 2020, and supply issues remained the main drivers of forgone care in UMICs, reported by 66.4%, i.e. a statistically significant increase of 18.5 percentage points. 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% compared to 17.3% in 2020 – a 10.9 percentage point decline that was statistically significant).

[14] The proportion of households reporting forgoing care in the pooled sample and by income group is available from Chapter 1, Fig. 1.16.

Fig. 2.14. Financial barriers and financial hardship in one upper-middle-income country (2018–2022)



Note: OOP, out-of-pocket.

Source: Background data prepared by the World Bank using the Peru Encuesta Nacional de Hogares (ENAHO) 2018–2022 in preparation of the update of the global database on financial protection *(51)*.

Peru is among the few countries globally that continued their quarterly national household survey ENAHO throughout the pandemic by moving to a phone survey format in the second quarter of 2020 and resuming face-to-face interviews as early as the fourth quarter of 2020. The survey saw the rate of formal health care drop by one third from 2019 to 2020, with no indication of recovery in 2021. The persistent decline in formal health care in 2020 and 2021 was primarily driven by mobility restrictions, facility closures, and fear of contracting COVID-19 in health care settings. Financial reasons, in contrast, plummeted in the second quarter of 2020 and, while on a steady rise since then, remained slightly below pre-pandemic levels in 2022 (see Fig. 2.14).

Financial hardship from OOP spending, however, sharply increased. After an initial drop resulting from OOP spending falling even more than household consumption in the first quarter of 2020, the population share with catastrophic health spending increased rapidly. By the first quarter of 2021, catastrophic spending was elevated by 66% compared to a year earlier, as increases in OOP spending substantively outpaced household consumption growth. No sign of recovery has been visible since. In fact, by the first quarter of 2022, the catastrophic spending rate reached a new peak – 76% above its levels in the first quarter of 2019. Considering annual changes compared to 2019, the elevation of the catastrophic spending rate was 14% in 2020, but it jumped to 49 and 50% in 2021 and 2022, respectively.

The pandemic also caused a stark increase in the incidence of impoverishing health spending at the extreme poverty line in Peru. While only a small share of Peruvians was pushed or further pushed into extreme poverty by OOP health spending before COVID-19, the drastic drop in consumption at the onset of the pandemic more than tripled the impoverishing OOP health spending rates in the second quarter of 2020 compared to the rates a year earlier. The incidence of impoverishing health spending subsequently somewhat decreased as consumption partially bounced back but remained highly elevated with no signs of further recovery. In fact, 2022 saw a worsening: while the 2020 and 2021 rates of impoverishing health spending at the extreme poverty line were 86% and 81% higher than 2019 levels, in 2022 the increase compared to the 2019 pandemic baseline was 105%.

2.6 Data availability to track financial hardship and financial barriers to access

Financial hardship monitoring relies on the availability of good and frequent quality data from household budget surveys, household income and expenditure surveys, household living standard surveys, or socioeconomic surveys (see Annex 9). The financial hardship estimates in this chapter are based on data available to and validated by WHO and the World Bank by the end of March 2023, including 987 data points for 167 countries or territories on catastrophic payments (see Fig. 2.15a) and 856 data points for 146 countries or territories for impoverishing health spending at the extreme poverty line (see Fig. 2.15b). Altogether, the countries for which validated data points of financial hardship were available represent more than 92% of the world population (see Annex 10); half of the data points were collected after 2009 (see Fig. 2.15).[15]

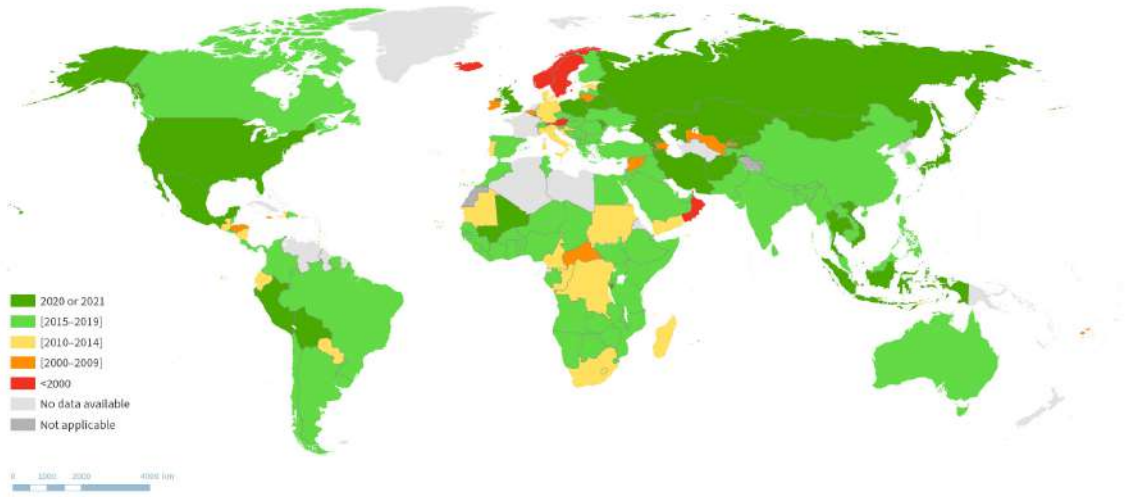
All indicators of financial hardship were included in a country consultation process conducted by WHO and the World Bank between January and March 2023.[16] A total of 45 countries and territories produced the estimates for SDG indicator 3.8.2 that are used in this report with or without collaborating with WHO and/or the World Bank; 20 countries or territories also produced the indicators of impoverishing health spending on their own.

Global and regional estimates were produced for six reference years between 2000 and 2019. To that end, the financial hardship indicators were projected for all countries that did not have estimates directly from a household survey in the corresponding year. Following the approaches used in the previous global monitoring reports, the projections were based on interpolation from years within a band around the reference years that are described in Annex 9. Although the number of data points has increased since the last global monitoring report, the COVID-19 pandemic substantially decreased the production of household surveys during 2020–2022. Therefore, the estimation of the global and regional rates in the 2019 reference year depended more heavily on modelling, as described in Annex 9.

Additional data sources used in sections 2.3 and 2.4 are listed in Annex 16.

Fig. 2.15. Timeliness of financial hardship indicators

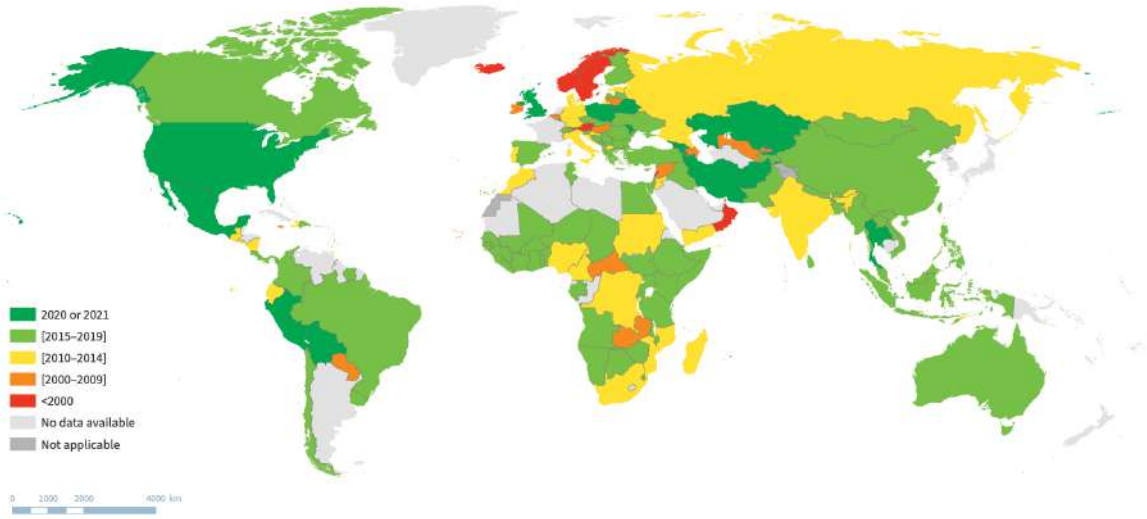
a. Most recent year for the incidence of catastrophic OOP health spending (SDG 3.8.2 indicators)



[15] Availability of estimates to produce this report may not align with availability of data at the national and regional levels.

[16] Countries and territories without any estimates available on financial hardship were informed about the methods and data needed to produce them in the future.

b. Most recent year for the incidence of impoverishing OOP health spending at the extreme poverty line (SDG related indicators)



Note: These maps have been produced by the WHO. The boundaries, colours or other designations or denominations used in the maps and the publication do not imply, on the part of the World Bank or WHO, any opinion or judgement on the legal status of any country, territory, city or area or of its authorities, or any endorsement or acceptance of such boundaries or frontiers.

Source: Global database on financial protection assembled by WHO and the World Bank, 2023 *(2,3)*.

2.7 Implications of the available evidence

This fourth global report demonstrates that OOP health spending continued to worsen globally and in most world regions prior to the COVID-19 pandemic, compromising household living standards and exacerbating poverty. Country-level evidence from 2020–2022 further indicates that the pandemic accelerated the worsening of catastrophic spending and partially eradicated previous progress in reducing medical impoverishment at the extreme poverty line, with few signs of recovery to date.

The report also demonstrates that financial hardship is most prevalent among the poor, for whom even small OOP payments suffice to compromise access to essential goods and services such as food, shelter and education. In fact, most people suffering financial hardship are pushed or further pushed into poverty by OOP health spending absorbing less than 10% of the household budget, which are not considered catastrophic within the SDG monitoring framework. Moreover, OOP user charges do not just jeopardize living standards and widen socioeconomic inequalities – they make people forgo needed care and also negatively impact health and therewith countries' human capital that is key to economic growth *(52)*.

In light of an uneven and unfinished recovery from the COVID-19 pandemic, new geopolitical crises with global economic repercussions, and the rising burden of chronic conditions in the world, financial hardship will continue to worsen unless there is a shift from the current heavy reliance on OOP spending to increasing and efficiently using public spending on health, including exemptions for the poor and most vulnerable from all user charges, and low, fixed co-payments with caps linked to income for those from whom user charges are still collected. Strong evidence suggests that these policies will reduce unmet needs and financial hardship *(44)*. Moreover, countries can tackle financial hardship in health by extending conditional and unconditional income support for the poor – by raising incomes and consumption. Such policies help in lowering catastrophic spending and medical impoverishment among the poor and near-poor, even if OOP payments remain unchanged.

Not least, the report shows that there is a great need to continue to advocate for and enable timely monitoring of financial protection indicators to capture and respond to the negative impacts of geopolitical crises and shocks such as the COVID-19 pandemic and to assess and learn from financial protection policies. For comprehensive monitoring of financial protection, it is necessary to track indicators of SDG 3.8.2 catastrophic health spending and medical impoverishment, and financial access barriers to care together. This highlights the need to reconsider the definition of SDG 3.8.2 going forward to incorporate all aspects of financial protection.

3

Joint progress in service coverage and financial protection within the SDGs

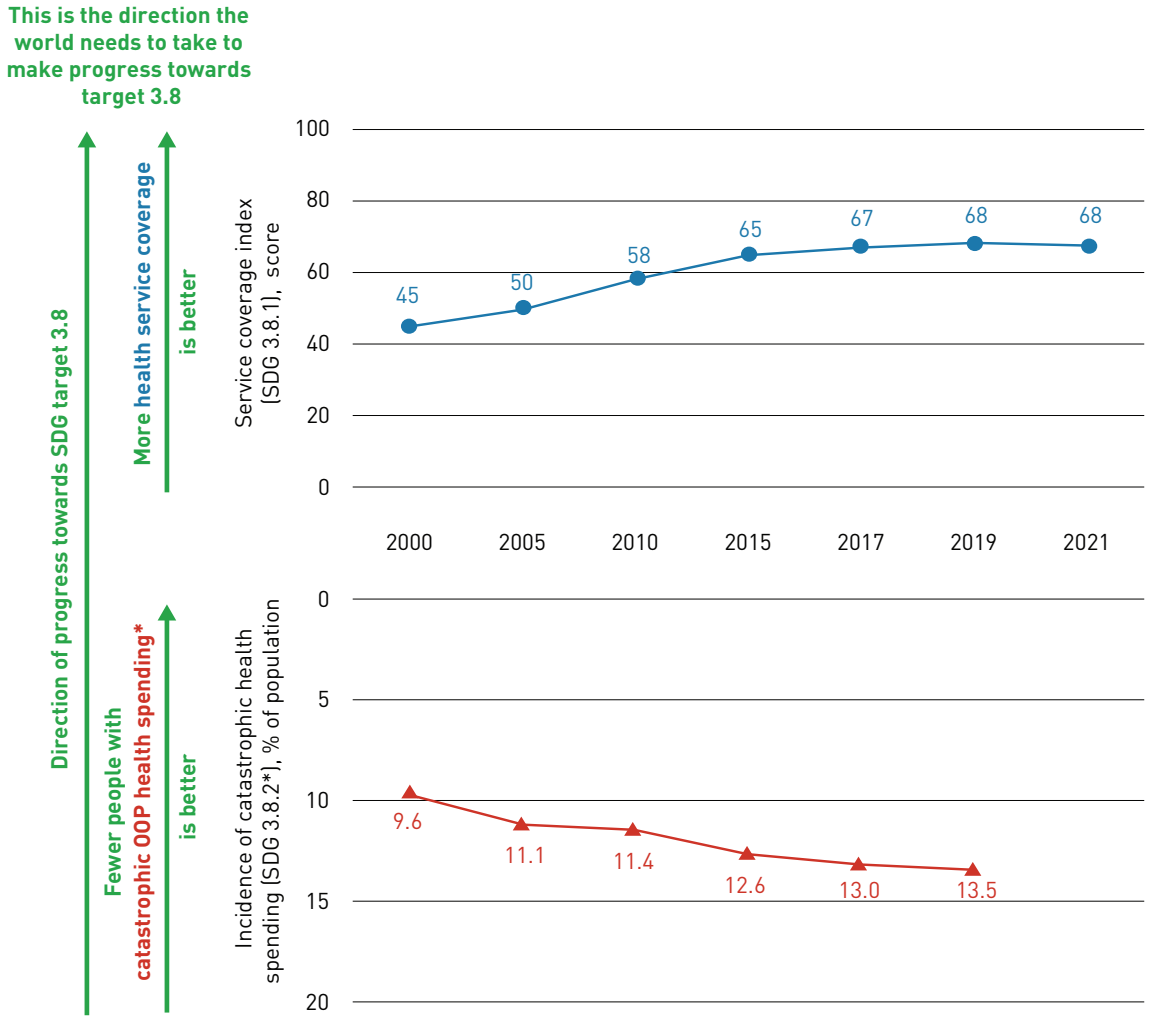
Key findings

- There have been clear improvements in expanding service coverage relative to financial protection, which has continued to worsen over time.
- However, improvements to health services coverage have stagnated in recent years, and financial hardship resulting from the need to pay out of pocket for health services and products have worsened.
- Monitoring forgone care and unmet needs also appears to be important to ensure no one is left behind.

3.1 Joint progress at the global level

The latest data confirm alarming trends in SDG UHC indicators until 2019, the reference years for which global values were available for both indicators of service coverage (3.8.1), catastrophic (3.8.2), and impoverishing OOP health spending (see Fig. 3.1). Progress on expanding service coverage had slowed markedly, rising by only three points to 68 between 2015 and 2019 (see Chapter 1), and catastrophic OOP health spending continued to worsen at 0.2 percentage points on average per year to reach 13.5% in 2019 (about 1 billion people) (see Chapter 2). In addition, in 2019, 4.9% of the global population (about 480 381 million people) was pushed or further pushed into extreme poverty due to OOP payments for health (see Chapter 2). In the early 2000s, low levels of service coverage and high levels of catastrophic OOP health spending were jointly prevalent worldwide (see Fig. 3.2). In recent years, the joint prevalence has shifted dramatically, with significant improvements to service coverage, as visible in the diminished prominence of dark blue tones in see Fig. 3.3), alongside the persistence of high levels of catastrophic household OOP health expenditure, as illustrated by the overall shift to red tones across most of the map.

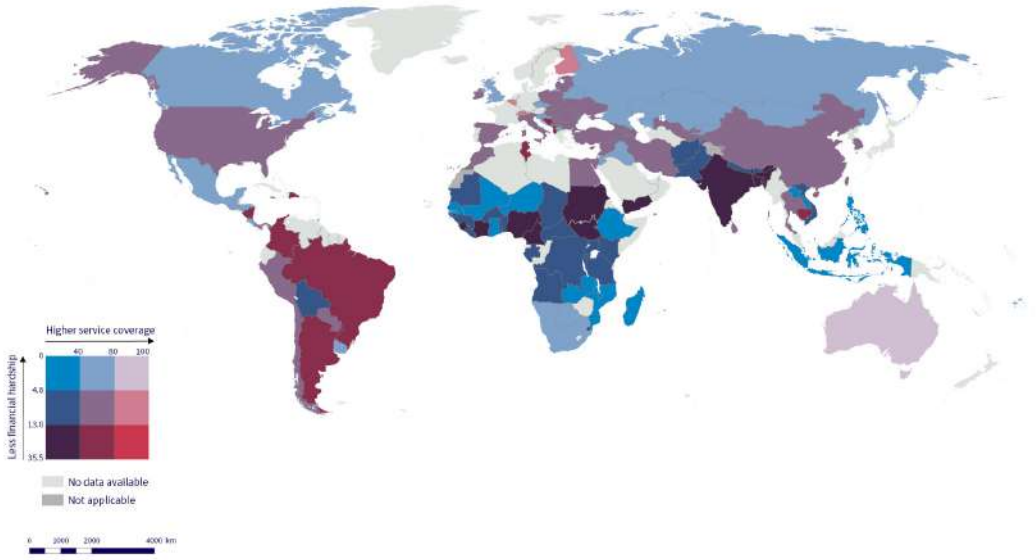
Fig. 3.1. Progress in service coverage (SDG 3.8.1) and catastrophic OOP health spending (SDG 3.8.2, 10% threshold), 2000–2021



Note: The top graph shows the global population-weighted average UHC SCI score (SDG 3.8.1). The higher the score, the better. The bottom graph shows the global population-weighted incidence rate of catastrophic OOP health spending, *defined as the proportion of the population with household OOP health expenditure exceeding 10% of the household budget (consumption or income). The lower the incidence, the better.

Source: SDG indicator 3.8.1: WHO global service coverage database, May 2023 *(1);* SDG indicator 3.8.2: WHO and World Bank global financial protection database, 2023 *(2,3).*

Fig. 3.2. Joint prevalence of service coverage (SDG 3.8.1) and catastrophic OOP health spending (SDG 3.8.2, 10% threshold), available joint estimates 2000–2009, the median year 2003

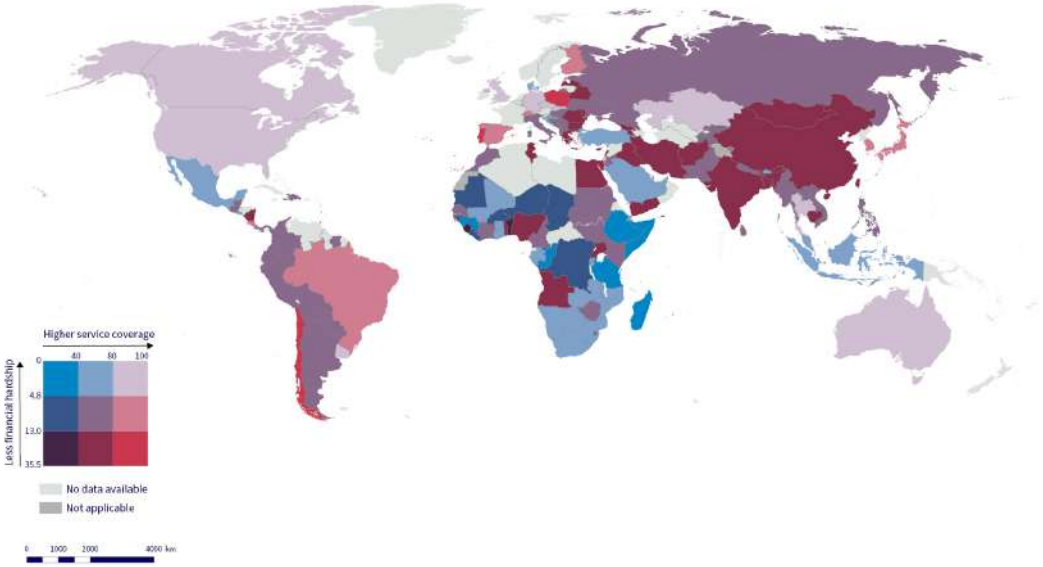


Note: SDG 3.8.1 and SDG 3.8.2 at the 10% threshold are matched to the same year; for countries with multiple years of joint estimates, the closest to the year 2000 is shown. SDG 3.8.2 at the 10% threshold is defined as the proportion of the population with household OOP health expenditure exceeding 10% of the household budget (consumption or income).

This map has been produced by WHO. The boundaries, colours, or other designations or denominations used in this map and the publication do not imply, on the part of the World Bank or WHO, any opinion or judgement on the legal status of any country, territory, city, or area or of its authorities, or any endorsement or acceptance of such boundaries or frontiers.

Source: SDG indicator 3.8.1: WHO global service coverage database, May 2023 *(1);* SDG indicator 3.8.2: WHO and World Bank global financial protection database, 2023 *(2,3).*

Fig. 3.3. Joint prevalence of service coverage (SDG 3.8.1) and catastrophic OOP health spending (SDG 3.8.2, 10% threshold), available joint estimates 2010–2021, median year 2017



Note: SDG 3.8.1 and SDG 3.8.2 at 10% threshold are matched to the same year; for countries with multiple years of joint estimates, the closest to the year 2000 is shown; SDG 3.8.2 at the 10% threshold is defined as the proportion of the population with household OOP health expenditure exceeding 10% of the household budget (consumption or income).

This map has been produced by WHO. The boundaries, colours, or other designations or denominations used in this map and the publication do not imply, on the part of the World Bank or WHO, any opinion or judgement on the legal status of any country, territory, city, or area or of its authorities, or any endorsement or acceptance of such boundaries or frontiers.

Source: SDG indicator 3.8.1: WHO global service coverage database, May 2023 *(1);* SDG indicator 3.8.2: WHO and World Bank global financial protection database, 2023 *(2,3).*

WHO's strategy for the period 2019–2023 aims to increase the number of people benefiting from UHC by 1 billion. Progress towards that objective is tracked through a single index combining an adaptation of the SDG 3.8.1 indicator for service coverage and SDG 3.8.2 at the 10% threshold (the proportion of the population with large household expenditures on health exceeding 10% of their household budget). Unsurprisingly, given the trends in service coverage and catastrophic OOP health spending just described, the world is not on track to meet either objective (see Box 3.1).

Box 3.1. Progress towards the Thirteenth General Programme of Work UHC billion target

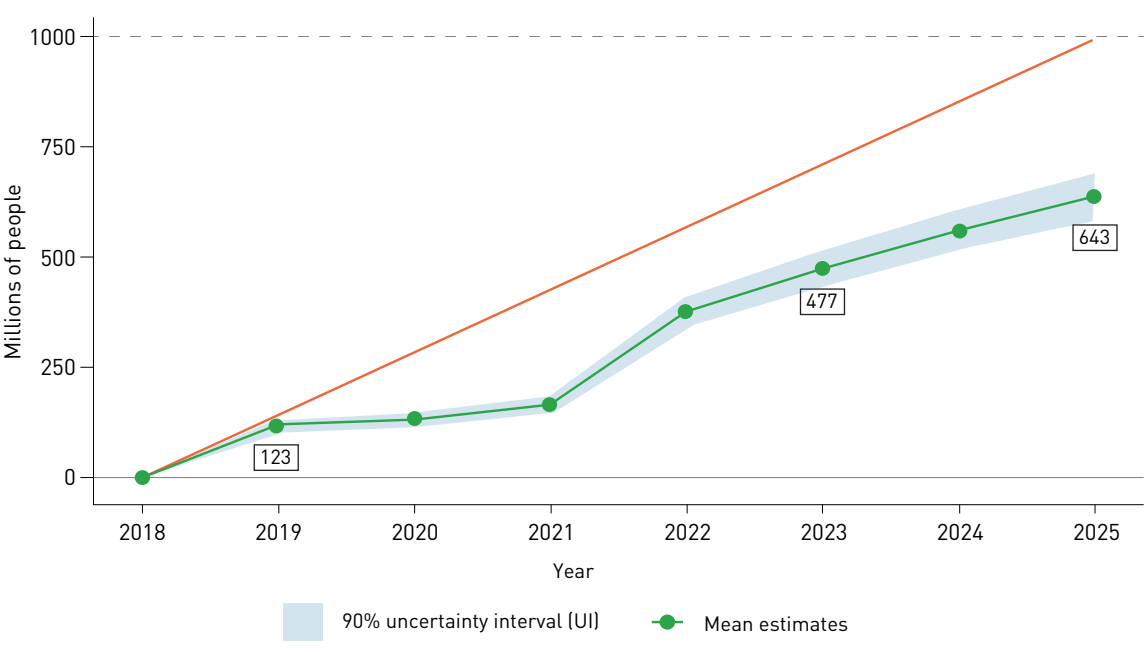
The Triple Billion targets were established to catalyse and track progress during the WHO Thirteenth General Programme of Work (GPW13). Each of the three targets aims to improve the health of a billion people over the course of GPW13: (i) 1 billion more people benefiting from UHC; (ii) 1 billion more people better protected from health emergencies; and (iii) 1 billion more people enjoying better health and well-being *(53)*. The initial GPW13 period was set for 2018–2023 and subsequently extended to 2025 under the recommendation of Member States.

The UHC billion target is a composite measure, constructed to estimate the number of additional people since 2018 that are covered by essential health services without experiencing undue financial hardship. It is calculated at the country-level by converting SDG 3.8.1 to the absolute number of people receiving essential services. This conversion follows the methodology established in the UHC Global Monitoring Report 2017 *(54)*, based on DHS data. The number of people receiving essential services is adjusted for financial hardship, using the proportion of people spending less than 10% of their household income on health services. The UHC billion contribution is calculated relative to 2018, and country-level contributions are summed across countries for a global estimate of the billion.

Current progress toward the UHC target is shown in Fig. 3.4 below. For 2023, 434 to 524 million additional people are estimated to be covered by UHC relative to 2018, with an expected value of 477 million. This range is forecast to rise to 586 to 696 million people in 2025, with an expected value of 643 million. Despite the extension to 2025, the world is still far short of the goal of 1 billion additional people covered by UHC by the end of GPW13 *(53)*.

Forecasting the triple billions requires modeling assumptions to be made to account for the impact of COVID-19. Estimates in Fig. 3.4 are derived from a two-stage probabilistic forecasting model. This consists of a baseline forecast fit using pre-COVID historical data from 2000 to 2019, and a subsequent indicator-specific COVID-impact adjustments to these baseline forecasts. This adjustment is applied to the series from 2020 onward, with the assumption that values revert to the baseline forecast over time.

Fig. 3.4. GPW13: UHC billions estimates



Source: Triple Billion progress. World Health Organization; 2023 *(4)*.

3.2 Joint progress by country income level

The World Bank income group classification[17] is used to assess progress made on the UHC indicators by countries of different income levels (see Annexes 5 and 12). Comparisons of estimates between 2015, the beginning of the SDG era, and 2019 show that within all income groups, there was a deterioration or lack of progress in at least one dimension of service coverage and an increase in the rates of the population with catastrophic OOP spending at the 10% level. While increases in the UHC SCI were observed across all income groups, this progress was minimal and driven by increases in the infectious disease sub-index, which was indeed the only index that increased between 2015 and 2019 in all income group classifications (see Table 3.1). The incidence of being pushed or further pushed into extreme poverty by OOP health spending substantially reduced in LICs and MICs, primarily driven by reductions in extreme poverty rates before the COVID-19 pandemic. However, when relative poverty is considered, trends in impoverishing OOP health spending are heterogeneous across income groups.

Overall, considering the trends during the 2015–2019 period across all service coverage dimensions and all indicators of financial hardship, two income groups stand out (see Table 3.1.) In LICs, there were improvements in all dimensions of service coverage except RMNCH, while at the same time, half of the financial hardship indicators signaled a deterioration. In UMICs, there was an improvement in three of the financial hardship indicators and no change in the incidence of impoverishing OOP health spending at the relative poverty line, while at the same time, there was a deterioration in NCDs and service access and capacity sub-indices. While these patterns suggest a negative association between the expansion of service coverage and financial hardship, more analysis is needed to understand what is driving this relationship.

The LICs and LMICs saw the largest improvements in the service coverage composite index. They also experienced the largest increases in catastrophic OOP health spending at the 10% threshold. In addition, these were the only income groups in which the incidence of catastrophic OOP spending at the 25% threshold increased. At the same time, the rate of people pushed or further pushed into relative poverty by OOP health spending increased by 1.9 percentage points in LMICs but did not change in LICs.

The high-income countries (HICs) experienced the least amount of change in the service coverage composite index between 2015 and 2019, improving by only one index point in the period. However, this is to be expected as the index scores are at a high level, and any changes will be relatively small compared to those with lower index scores. Regarding financial hardship, the rate of catastrophic OOP spending increased by 0.4 percentage points while the rate of people pushed or further pushed into relative poverty reduced by 0.4 percentage points.

[17] World Bank Income Groups (July 1, 2022 edition) *(55).* Annexes 5 and 13 show trends in UHC indicators by World Bank region.

Table 3.1. Changes in tracked service coverage and financial hardship indicators between 2015 and 2019 by World Bank income group classifications

	Service coverage					Financial hardship			
Income Group	UHC SCI (SDG 3.8.1)	Reproductive, maternal, newborn and child health	Infectious diseases	Noncommunicable diseases (NCDs)	Access and capacity	Catastrophic OOP spending, 10% threshold (SDG 3.8.2)	Catastrophic OOP spending, 25% threshold	Impoverishing OOP health spending, PPP US$2.15 a day	Impoverishing OOP health spending, 60% of median per capita consumption
Low-income	+4 (38 to 42)	No change (52)	+9 index point (35 to 44)	+4 index point (53 to 57)	+1 index point (25 to 26)	+0.7 ppts (6.7 to 7.4)	+0.1 ppts (1.4 to 1.5)	-3.3 ppts (19.4 to 16.1)	No change (14.4%)
Lower-middle-income	+5 (54 to 59)	No change (68)	+16 index point (44 to 60)	+4 index point (52 to 56)	-3 index point (57 to 54)	+1.5 ppts (14.2 to 15.7)	+0.6 ppts (4.7 to 5.3)	-1.6 ppts (8.9 to 7.3)	+1.9 ppts (12.7 to 14.6)
Upper-middle-income	+2 (75 to 77)	+1 index point (84 to 85)	+10 index point (67 to 77)	-1 index point (61 to 60)	-3 index point (57 to 54)	-1.1 ppts (16.4 to 15.3)	-0.4 ppts (4.3 to 3.9)	-1.6 ppts (2.3 to 0.7)	No change (21.8%)
High-income	+1 (84 to 85)	No change (89)	+4 index point (84 to 88)	+1 index point (69 to 69)	-2 index point (97 to 95)	+0.4 (6.9 to 7.3)	No change (52)	No change (52)	-0.4 (11.6 to 11.2)

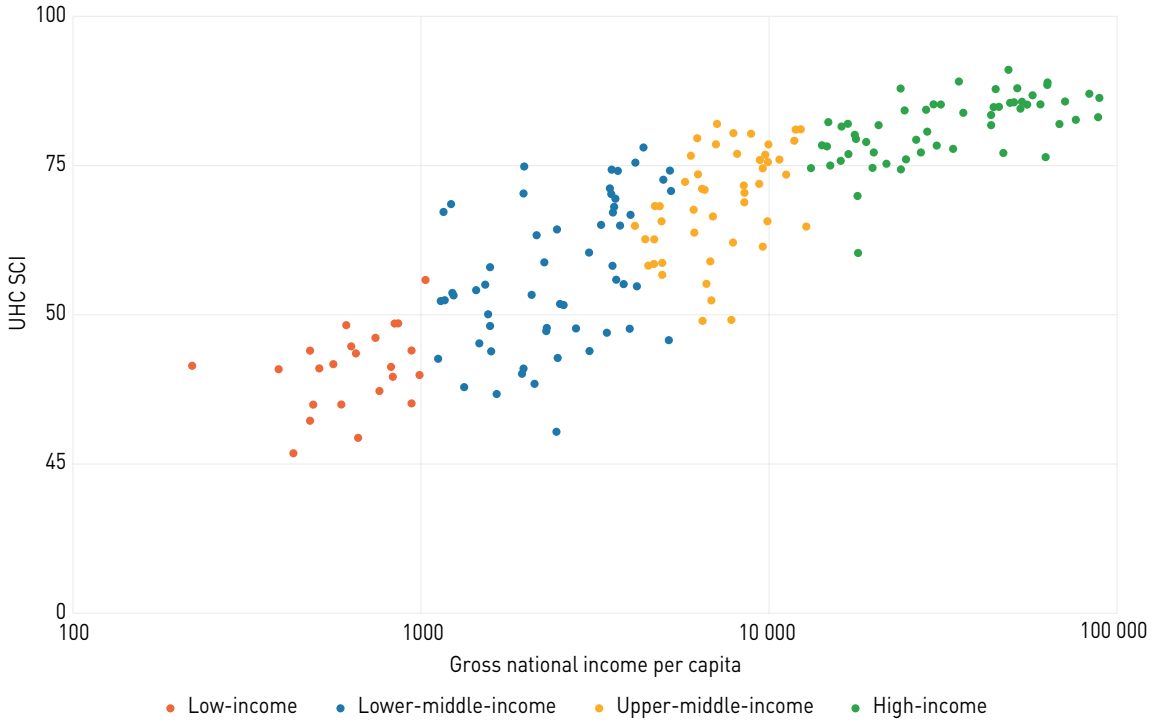
Note: OOP, out-of-pocket.

Source: World Bank Income Groups (July 1, 2022 edition) *(55);* SDG indicator 3.8.1: WHO global service coverage database, May 2023 *(1);* SDG indicator 3.8.2: WHO and World Bank global financial protection database, 2023 *(2,3).*

3.2.1 Recent evidence on income inequality in service coverage and financial hardship between countries

The cross-sectional relationship between the economic status of a country and the coverage of essential health services within its population in 2021 is illustrated by gross national income (GNI) per capita and UHC SCI (see Fig. 3.5). Countries with higher GNI per capita also tend to have higher SCI scores. Considering World Bank income groups, the average 2021 SCI score in countries in the highest income group (SCI=85) was over twice as high as countries in the lowest income group (SCI=42).

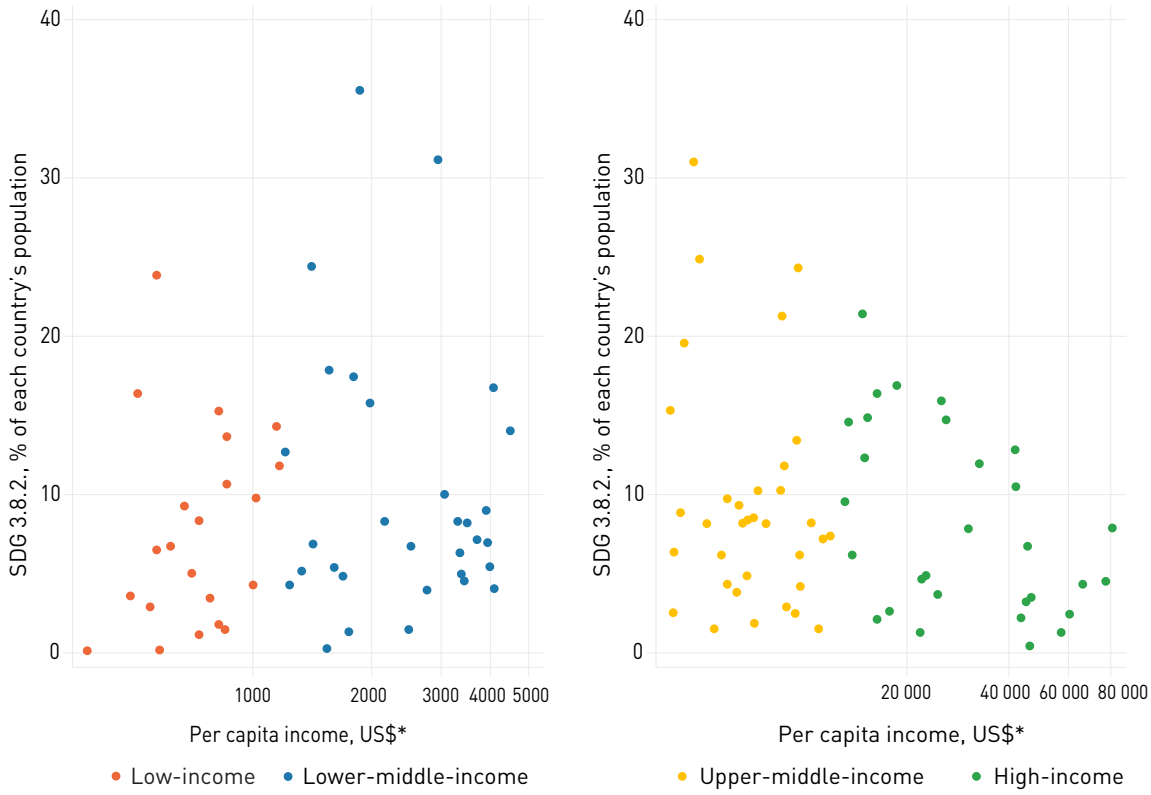
Fig. 3.5. Correlation between GNI per capita and UHC SCI in log scale, by World Bank income group, 2021



Sources: On the vertical axis – *SDG indicator 3.8.1: WHO global service coverage database, May 2023 (1); On the horizontal axis –* GNI per capita using Atlas method, current (US$), 2021 *(56).*

The cross-sectional relationship between the economic status of a country as measured by GNI per capita and the incidence of catastrophic OOP health spending (SDG 3.8.2 indicator at the 10% threshold) without controlling for any other country characteristic is less strong and more heterogenous than with the SCI (see Fig. 3.6). The direction of the association varies by country income group (see Fig. 3.6): across LICs and LMICs, those with higher GNI per capita tend to have a higher proportion of the population spending more than 10% of their household budget on OOP health spending, while the opposite is observed across HICs. This opposite overall association is consistent with the fact that in LICs and LMICs, OOP spending for health plays a much greater role in the funding landscape of each country's health system than in HICs, where public spending is predominant *(57)*. Hence within LICs and LMICs, people living in countries with higher GNI per capita spend more OOP on health, which leads to higher catastrophic OOP health spending. In HICs, on the other hand, as GNI per capita increases, people's contribution to the health system tends to be captured more often through pre-paid pooling arrangements rather than directly at the point of care. The unconditional relationship is the weakest in UMICs. But within each country's income group, there were large disparities in the incidence of catastrophic and impoverishing OOP health spending.

Fig. 3.6. Correlation between gross national income (GNI) per capita and the incidence of catastrophic OOP health spending as tracked by SDG indicator 3.8.2 at the 10% threshold in log scale, by World Bank income group, most recent year within 2015–2019



Note: * GNI per capita using the Atlas method. World Bank income group classification matched the year of the most recent estimate available for SDG 3.8.2 within the 2015–2019 period.

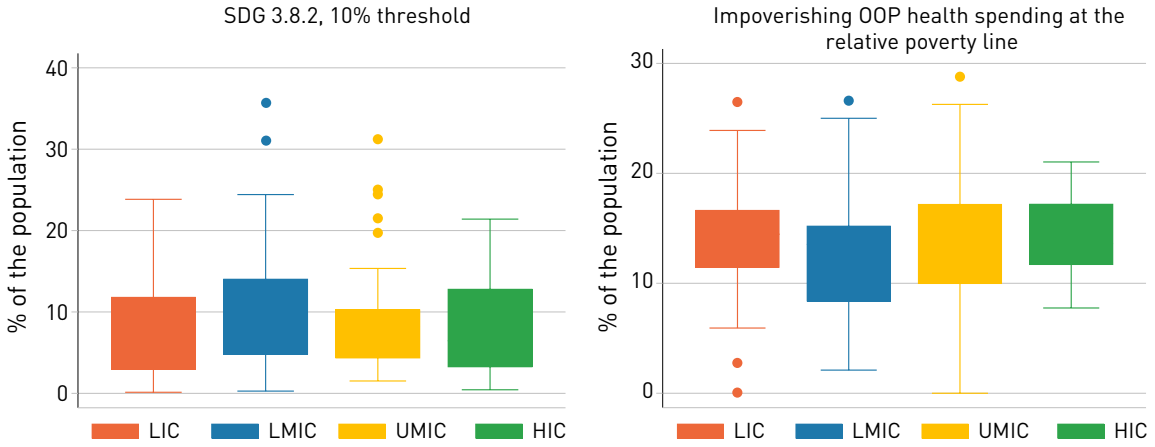
Sources: SDG 3.8.2 data from the Global database on financial protection assembled by WHO and the World Bank, 2023 *(2,3)*; GNI data source: World Development Indicators *(56)*.

In the most recent years, during 2015–2019, the incidence of catastrophic OOP health spending varied the most across HICs with an interquartile range (IQR) of 9.6 and the least in UMICs (IQR=5.9), which also had the highest median incidence followed by LMICs (see Fig. 3.7a). The median incidence of impoverishing OOP health spending at the relative poverty line was the highest in LICs and HICs, but it varied the most across UMICs (IQR=7.2) and the least across LICs (IQR=5.2) (see Fig. 3.7b). The incidence of impoverishing OOP health spending at the extreme poverty line was, on average, 5.4 times higher in LICs than in LMICs; the median and interquartile ranges were 17.2 and 2.9 times higher, respectively (Figure 3.7c). Overall, when considering who faced catastrophic and impoverishing OOP health spending jointly, financial hardship was the highest in the lowest consumption quintile and the lowest in the top quintile consumption across all income groups (see Fig. 3.7d).

Fig. 3.7. Distribution of the incidence of catastrophic and impoverishing OOP health spending across countries, by World Bank income group, most recent year within 2015–2019

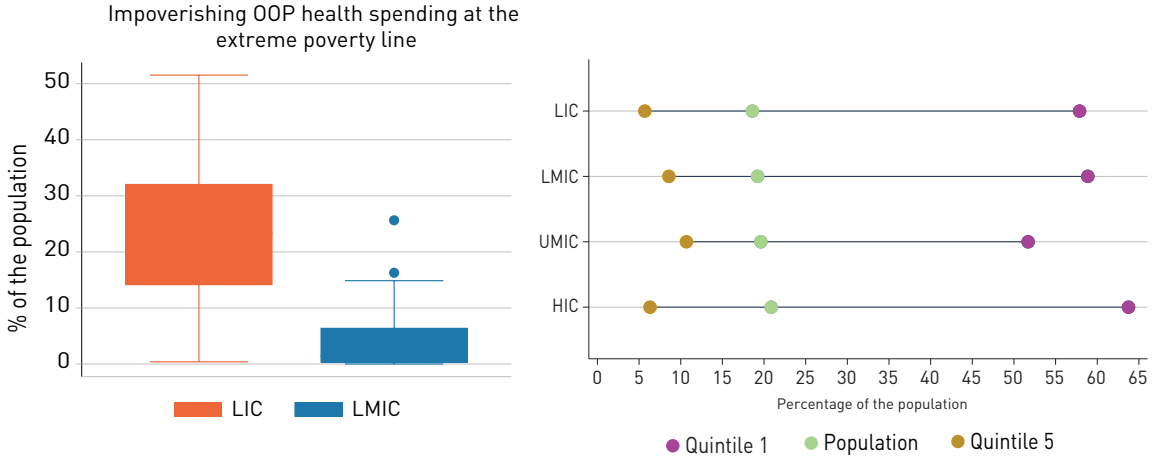
a. Incidence of catastrophic OOP health spending

b. Incidence of impoverishing OOP health spending at the relative poverty line



c. Incidence of impoverishing OOP health spending at the extreme poverty line

d. Incidence of financial hardship* by per capita consumption quintiles



Note: Financial hardship means catastrophic and impoverishing OOP health spending. World Bank income group classification matched the year of the most recent estimate available for SDG 3.8.2 within the 2015–2019 period. Estimates by quintile are based on surveys from 92 countries.

Source: Global database on financial protection assembled by WHO and the World Bank, 2023 *(2,3)*.

One of the developing and often under-discussed challenges across all countries at all income levels in making future progress toward UHC is related to the increasingly aging population. Global population aging has led to considerable policy analysis and discussion, most often in connection with its economic (and health) consequences, about approaches to address the growing health care needs of an aging population and the related burden of NCDs. That said, the aging population is less often the subject of analyses compared to other age groups, such as children. Biological aging does not happen at the same speed for all – with the onset of chronic health conditions possibly at an earlier age in LICs, where the rate of population aging is highest *(58)*, and where health systems may be at different stages of progress towards UHC. Older adults are more likely to have multimorbidity and poor outcomes from health care *(59)*. Additionally, where available and where older adults can access services, the quality of primary health care (PHC) services is not always adequate to optimize health *(60)*. The available evidence points to important levels of unmet health care needs in general for the older population (see Box 3.2). Ensuring that everyone has access to quality education, health care, and decent work

opportunities throughout the life course can help ease pressures on public pension budgets and other aging-related expenditures and reduce inequalities among older persons *(58)*. Aging is likely to lead to a financing gap over time. Old-age dependency ratios, which is a measure of older adults (65+ years) in relation to the working-age population, are particularly high in some regions (Fig. 3.9)*(61)*,[18] and will continue to increase everywhere as life expectancies are expected to rise. If countries address this by promoting healthy aging (so that costs at older ages are lower on average) and by broadening the revenue base to be less affected by shifting age demographics, then there will be no major financing gap. But if there is no anticipation or countries decide to fill the gap through private financing, especially through OOP health spending, financial protection will worsen. And as discussed in Chapter 2, older populations already experience the highest rates of catastrophic OOP health spending, while multi-generational households, which include older members, experience the highest rates of impoverishing OOP health spending. Rising dependency ratios can have adverse economic impacts on future growth, savings rates, and taxes without concurrent shifts in social support systems to accommodate the aging population *(62)*. But countries can use different tools *(63)* to understand what is possible to reduce or avoid the financing gap using public funding *(64)*.

Box 3.2. Aging population and unmet needs

The current levels of unmet health care need among older persons are concerning. This is especially true in lower-middle-income countries, where rapid population aging is projected over the coming decades. Moreover, the prevalence of one or more concurrent chronic conditions is also rising within health systems not designed to readily address multimorbidity *(65)*. Even in high-income countries and those who have achieved higher levels of service coverage and financial protection, there is considerable unmet need in older populations (see Fig. 3.8 below).

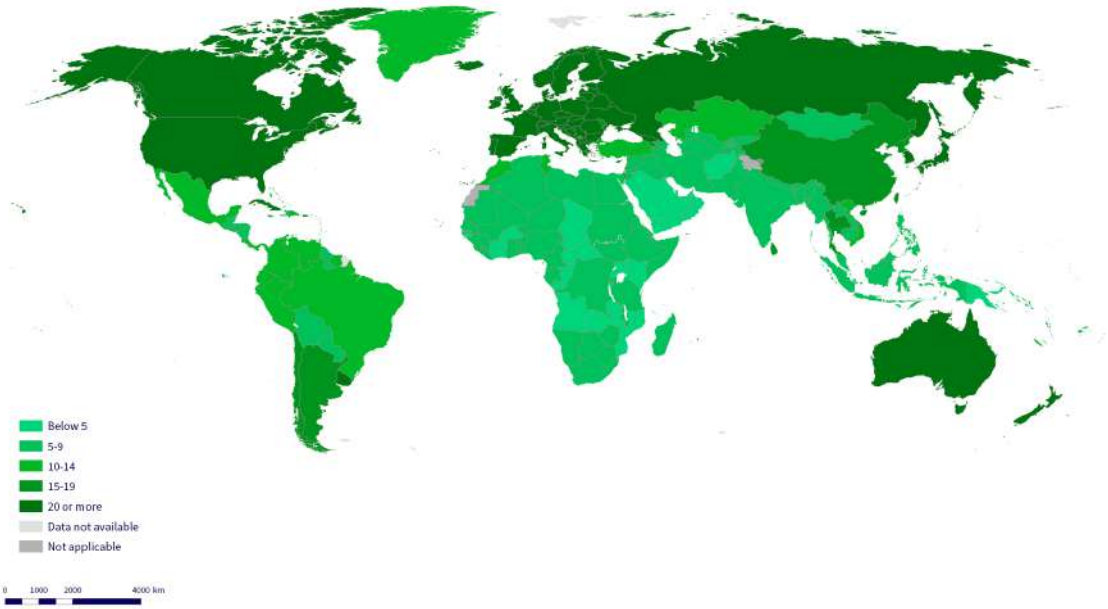
Fig. 3.8. Unmet need prevalence in population aged 60+ years, by WHO region

Note: Data based on self-reported information from the survey for 20 lower-middle-income countries; 19 upper-middle-income countries, and nine high-income countries. Country income groups are based on the latest World Bank income classification. The horizontal line corresponds to the median across countries within each income group shown.

Source: World Values Survey conducted in 2010 and 2017, based on analysis presented in Kowal, et al. *(65)*.

[18] Based on an assessment of World Bank staff estimates based on age distributions of United Nations Population Division's World Population Prospects, 2022 revision *(61)*.

Fig. 3.9. Old-age dependency ratio, 2019



Note: The old-age dependency ratio is the number of individuals aged 65+ years per 100 people of working age, defined as those aged 20–64 years. This map has been produced by WHO. The boundaries, colours, or other designations or denominations used in this map and the publication do not imply, on the part of the World Bank or WHO, any opinion or judgement on the legal status of any country, territory, city, or area or of its authorities, or any endorsement or acceptance of such boundaries or frontiers.

Source: World Bank staff estimates based on age distributions of United Nations Population Division's World Population Prospects, 2022 revision (*61).*

Prevalence of unmet needs for health services by socioeconomic stratification is an important indicator to monitor inequity in access to health care – especially where barriers are cost-related.

A systematic review and meta-analysis found that 10.4% (95% CI, 7.3–13.9) of the older population had unmet needs for health care. The common reasons for unmet health care needs were cost of treatment, lack of health facilities, lack of/conflicting time, health problem not viewed as serious, and mistrust/fear of provider *(26)*. However, most of the studies included in this analysis were from higher income countries. A study from Thailand found the main reasons for high prevalence of unmet needs among older people across three services (in-patient, outpatient and dental care services) were waiting times and lack of transport *(66)*.

Several policy responses can be enacted that, "...interact and reinforce each other, for example, with longer working lives promoting higher income taxes and receipts, improving both the private and public ability to provide health and long-term care. Additionally, the earlier the policy and institutional reforms are initiated, the smoother will be the macroeconomic adjustment path to accommodating an older population." *(67)*

3.3 Unpacking the potential effect of multiple crises on UHC

The potential negative impacts of long-range issues, such as demographic shifts and epidemiological transitions, are compounded by multiple shocks and global crises. Building on the evidence of the initial impact of the health and economic shock of COVID-19, improving UHC will continue to face challenges in the years to come in the absence of clear and deliberate policies to protect and prioritize public spending on health. COVID-19 set off a massive and widespread global economic crisis, which was even deeper than previous recent crises *(56)*. Despite a rebound in economic growth following the pandemic *(68)*, new geopolitical development and macroeconomic shocks – including inflation and monetary responses to inflation, Russia's invasion of Ukraine, and the COVID-19 debt overhang – will continue to place pressure on public financing and household budgets alike *(69)*.

The 2020 economic contraction triggered declining revenues, but many countries put into place exceptional spending policies, including for health *(49)*. These increases were financed by deficits that contributed to rising debt levels, with the "long-COVID" debt servicing overhang particularly acute in LICs and MICs *(56)*. In many countries, the size of economic activity, along with the general government expenditure per capita post interest payments will not recover to pre-COVID levels for several years, with clear pressures on fiscal space, including for health. There are concerns even now about the sustainability of increased public spending on health, with indications already of a washing-out effect by 2022.

The spending prioritization of health during the COVID-19 crisis highlights the potential for this deliberate policy choice in the future as a key mechanism to increase public spending for health and support progress toward UHC *(70)*. This prioritization and focus on increasing overall government revenues is also needed to counter-balance inflationary pressures *(68)* that will only worsen the impact for households having to pay for OOP health care spending, in particular for the poorest and most vulnerable. Longer-term cost concerns include a combined increased cost of living, along with a higher cost of inputs and raw materials, that come at a time marked by increasing poverty rates *(40)* along with structural issues associated with increasing NCD burdens, aging populations and the cost of natural disasters induced by climate change. All of these factors point to a need for deliberate public action to expand service coverage and provide protection against the financial hardship effects of OOP expenditure on health, especially for the poorest and most vulnerable.

4

Progress at the regional level

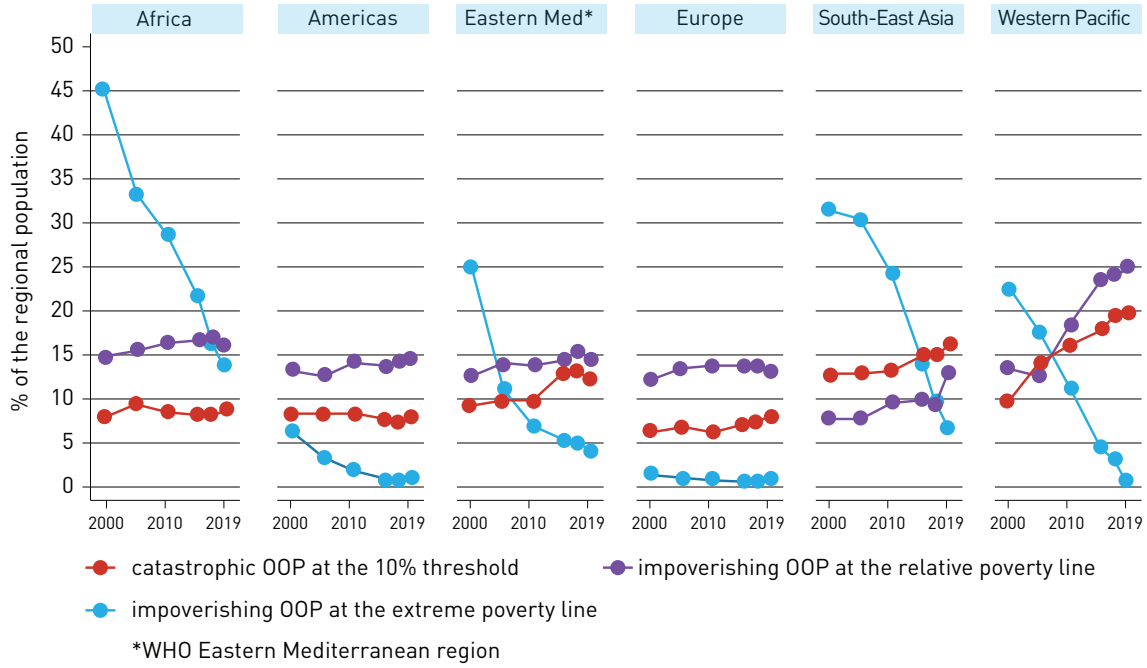
Key findings

- Between 2000 and 2015, most regions made year-after-year progress in service coverage concurrently with an increase in the incidence of catastrophic OOP health spending. Since 2015, the expansion of service coverage either stagnated or was slower than pre-2015 gains, while catastrophic OOP health spending continued to increase as fast before and after 2015.
- Regional differences in joint progress are mostly driven by differences in starting points rather than differences in trajectories.
- The gains made in expanding service coverage for infectious diseases slowed markedly across all regions in recent years, while at the same time, there was relatively little or no improvements to coverage related to noncommunicable diseases, as well as aspects of service capacity and access. Across regions, reducing financial hardship requires countries to address gaps in population coverage, gaps in the coverage of outpatient medicines and gaps caused by user charges through better design of coverage policy supported by increased levels of public spending on health.

4.1 Progress at the regional level

While there was substantial regional variation in the levels of SDGs 3.8.1 and 3.8.2 when the SDGs began in 2015, all regions have since shown the same pattern of stagnating service coverage and worsening catastrophic OOP health spending. Moreover, when considering impoverishing OOP health spending at the relative poverty line, trends also worsened everywhere. Indeed, the incidence of both catastrophic and impoverishing OOP health spending at the relative poverty line followed the same parallel increasing pattern in most regions. This clearly signals that OOP health spending is a major concern in most regions but especially for those living in relative poverty as the incidence of impoverishing OOP health spending is higher or converging towards the rate of catastrophic health spending (South-East Asia Region) (see Fig. 4.1). Moreover, in the African, Eastern Mediterranean, and Western Pacific Regions (where extreme poverty has been a concern), as the reduction in impoverishing OOP health spending for those living near or in absolute poverty occurred, impoverishing OOP health spending at the relative poverty line steadily increased and sometimes even completely surpassed it (Western Pacific Region) (see Fig. 4.1).

Fig. 4.1. Progress in the incidence of catastrophic and impoverishing OOP health spending by WHO region, 2000–2019



Note: WHO regional classification is used. The relative poverty line is defined as 60% of the median per capita consumption or income in each country. The extreme poverty line corresponds to 2017 PPP US$ 2.15 a day per person.

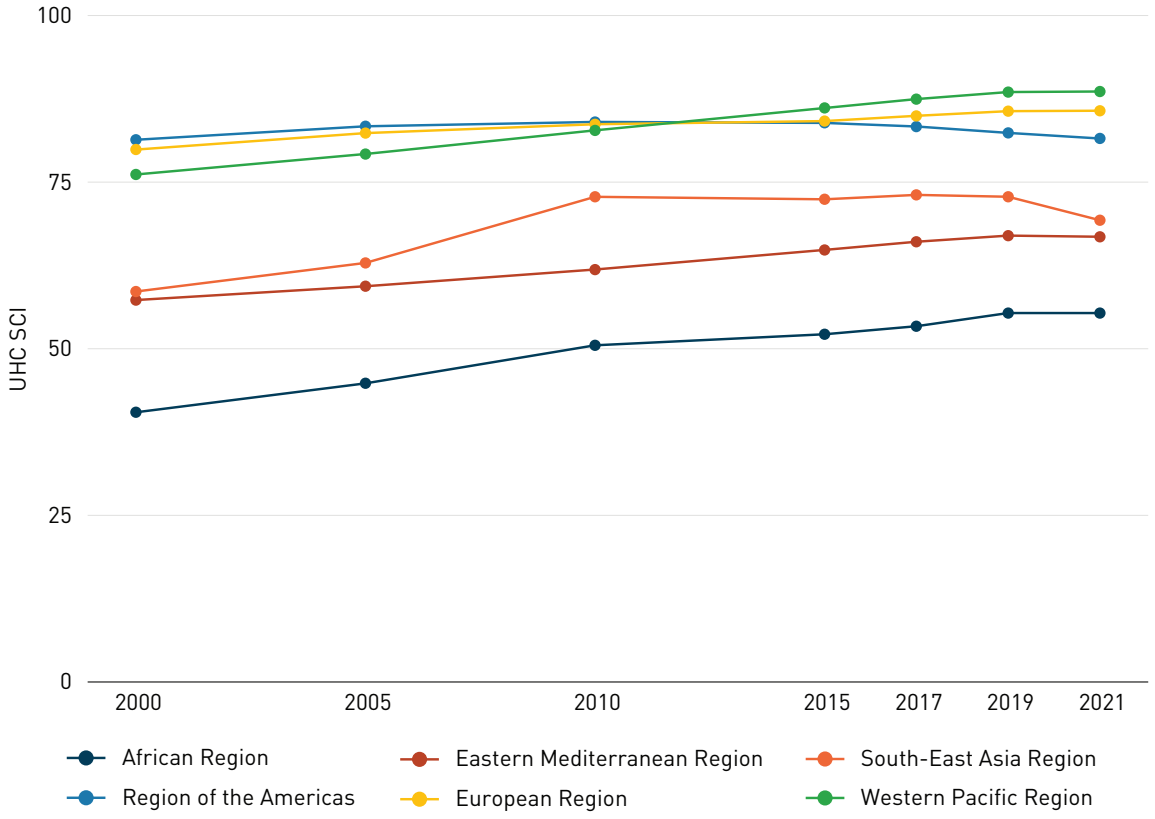
Source: Global database on financial protection assembled by WHO and the World Bank, 2023 *(2,3)*.

In terms of dimensions of service coverage, there was substantial variation between regions across the sub-indices (see Fig. 4.2). Overall, however, since 2000, the massive global efforts to alleviate the burden of infectious diseases, especially HIV, TB, and malaria, drove rapid expansions of service coverage, but the progress has markedly slowed in recent years. The other components of UHC service coverage without similar global endeavours, such as those related to NCDs and health service capacity and access, have seen relatively minimal or no progress over the same timeframe.

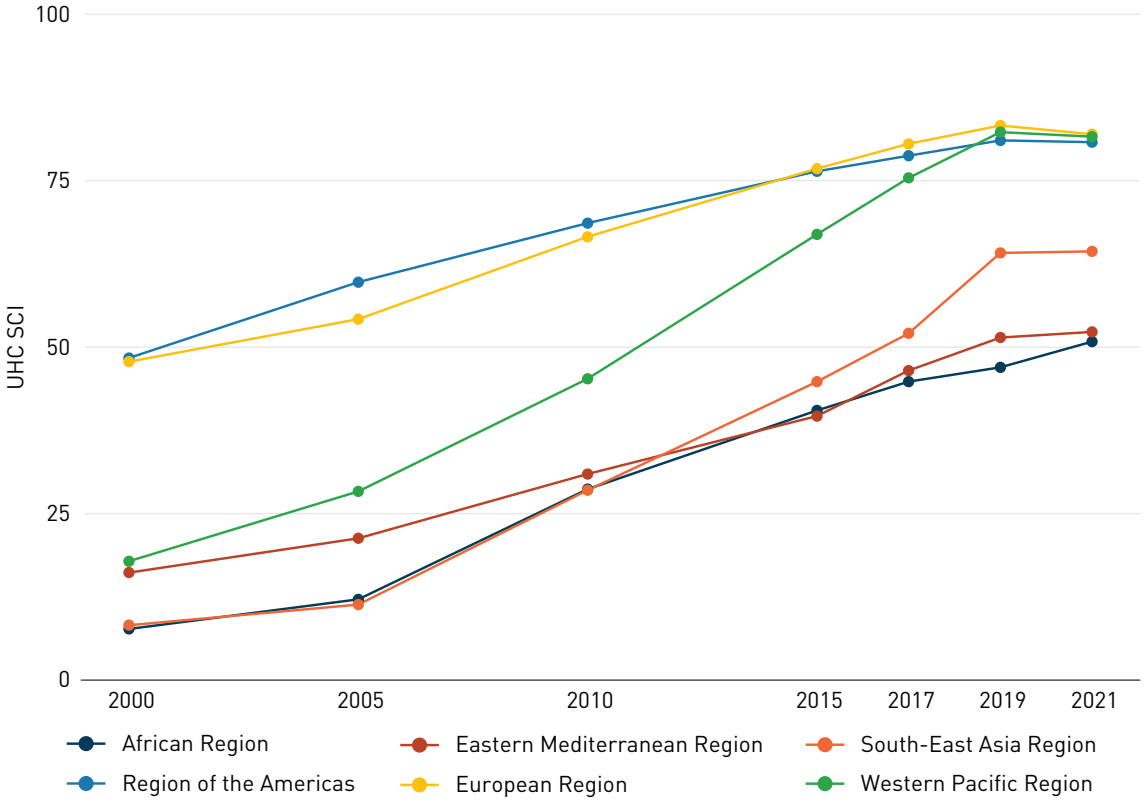
Causes of this overall lack of progress vary by region, and more insights are provided in the next sub-section, but addressing them overall requires context-specific policies. However, in general, significant advances toward UHC require an acceleration in the expansion of all essential health services, especially those with minimal progress to date. Proactive policy efforts are needed to decrease financial hardship from OOP payments – specifically, public health funding needs to increase further and be used more efficiently with the objective of providing financial protection in addition to better service coverage, coverage for medicines extended, and remove co-payments/user-charges for the poor.

Fig. 4.2. Progress by SCI sub-index and by WHO region, 2000–2021

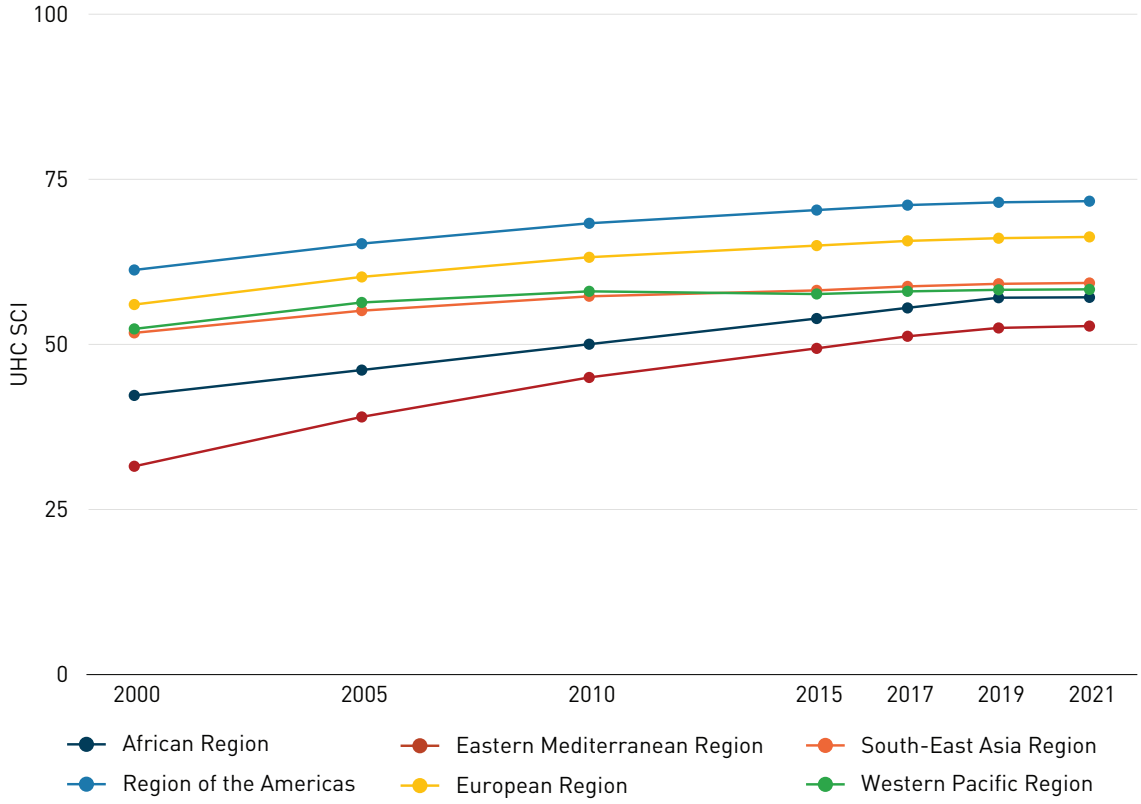
a. RMNCH sub-index



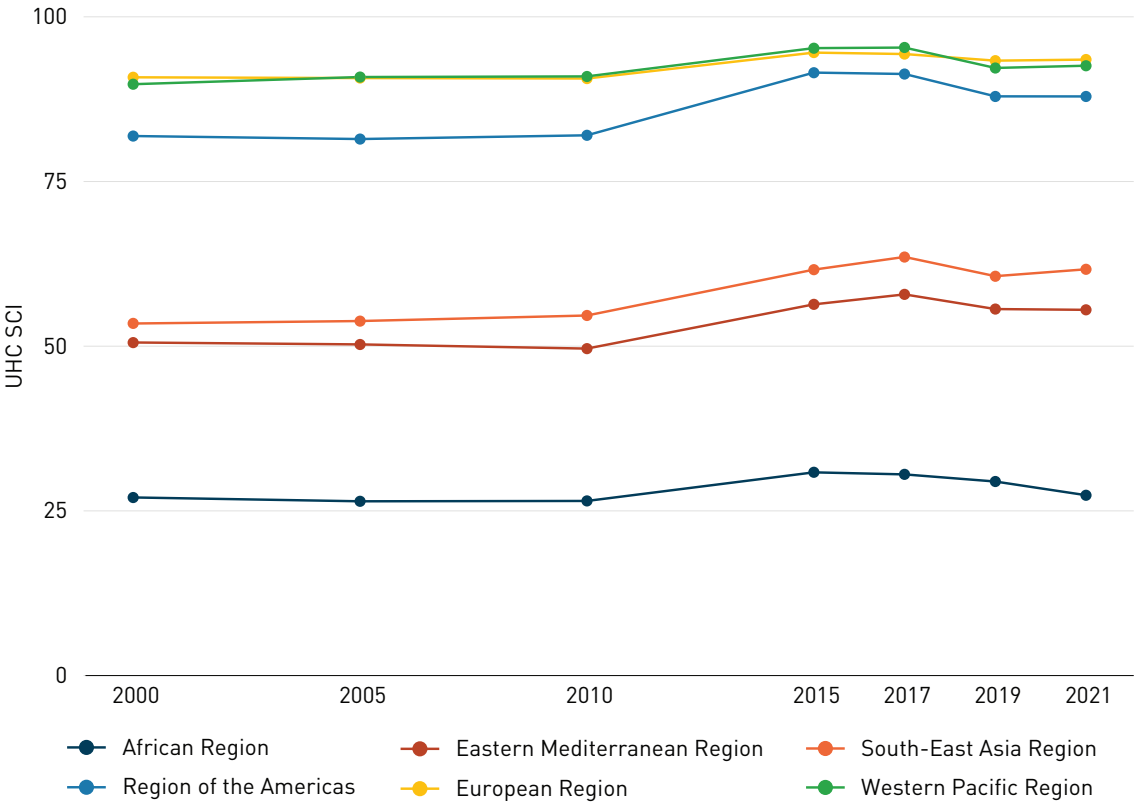
b. Infectious diseases sub-index



c. Noncommunicable diseases (NCDs) sub-index



d. Service access and capacity sub-index

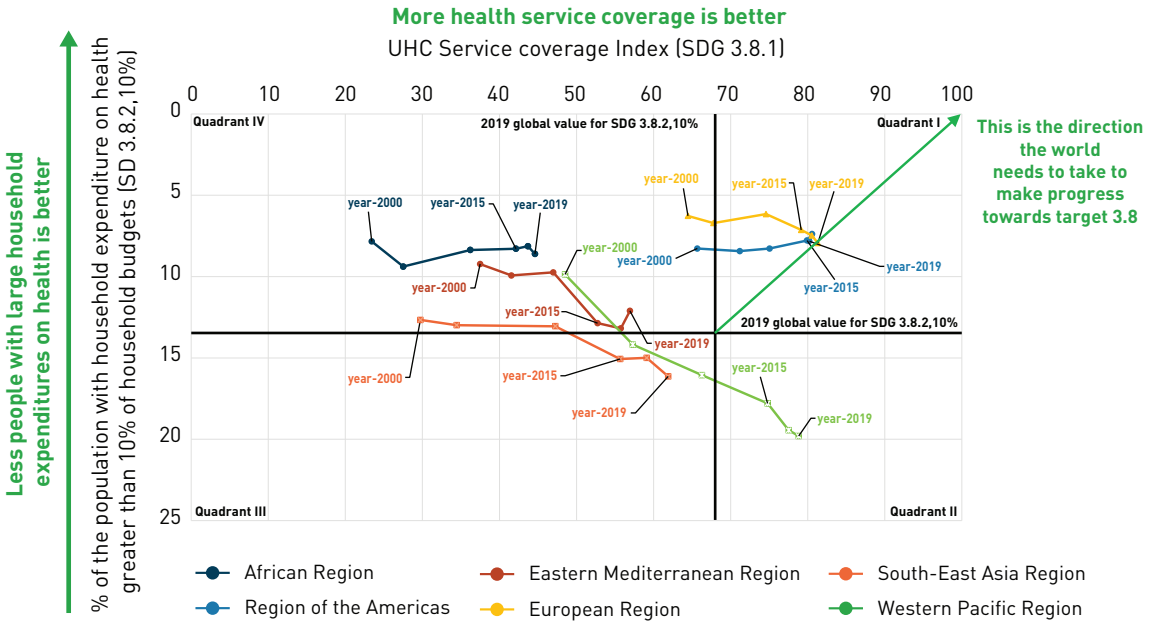


Source: WHO global service coverage database, May 2023 *(1).*

4.1.1 Joint progress at the regional level

The most recent information on both service coverage and catastrophic OOP health spending at global and regional levels is from 2019. WHO regions are classified into four groups, indicated by the quadrants to differentiate those with high/low levels of services coverage and catastrophic OOP health spending relative to the global 2019 corresponding values visible in Fig. 4.3. For comparison, the dark lines indicate the global aggregate values for each indicator. Each panel of the figure shows that between 2000 and 2015, most regions started in one quadrant and made yearly progress in service coverage concurrently with an increase in the incidence of catastrophic OOP health spending. Since 2015, the increase in the service coverage score was lower than between pre-2015 gains, while catastrophic OOP health spending continued to increase. Regional differences in joint progress are mostly driven by differences in starting points rather than differences in trajectories (see Fig. 4.3). The following sections describe region-specific progress and challenges in relation to their 2019 performance on both dimensions of UHC, starting with the WHO Region of the Americas and the European Region (quadrant I), then the Western Pacific Region (quadrant II), South-East Asia Region (quadrant III) and concluding with the Eastern Pacific and African (quadrant IV) Regions.

Fig. 4.3. Joint progress on SDG 3.8.1 and SDG 3.8.2, by WHO region



Quadrant I in Fig. 4.3 includes WHO regions with relatively high service coverage and low catastrophic OOP health spending

In the WHO Region of the Americas and the European Region, service coverage is relatively high, while the incidence of catastrophic OOP health spending is relatively low compared to the global values in 2019 (see Fig. 4.3). Despite this relatively good performance, there are some concerns.

Trends in service coverage, as measured by SDG 3.8.1 UHC SCI, showed stagnating service coverage levels from 2019 and 2021 in the Americas, threatening to reverse progress made in recent decades from a score of 66 in 2000 to 80 in 2019 (see Fig. 4.3). Three of the sub-indices in the Americas were above 80 by 2019, indicating high levels of coverage for indicators related to RMNCH, infectious diseases, and service access and capacity (see Fig. 4.2). The NCD sub-index saw slow yet steady progress through 2015 but slowed in the subsequent years (see Fig. 4.2).

The incidence of catastrophic OOP health spending at the 10% threshold stagnated between 2000 and 2010 at around 8.3%, while service coverage was increasing fast, and then fell to 7.4% in 2017, while service coverage was still on the rise, albeit at a slower pace. Between 2017 and 2019, there were signs of worsening as service coverage stagnated, but the proportion of the population spending

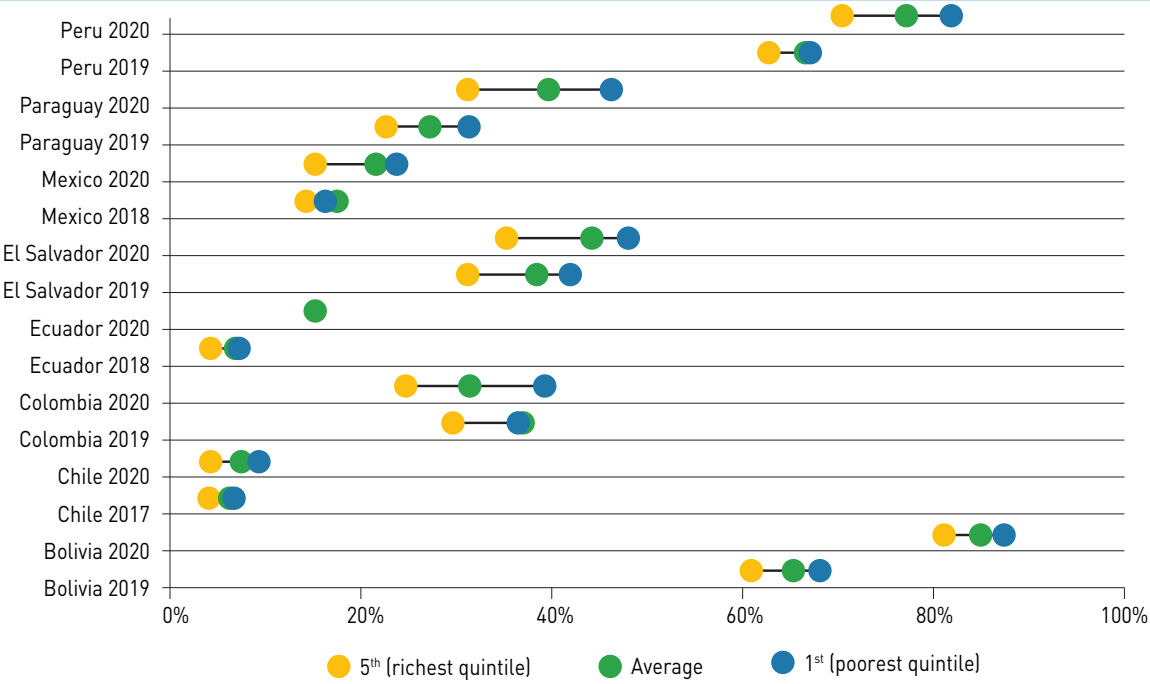
more than 10% of their household budget on OOP health expenses increased to 7.8% in 2019 (i.e. 79 million people incurred catastrophic OOP health spending at the 10% threshold). The incidence of impoverishing OOP health spending at the extreme poverty line was almost seven times lower in 2019 (0.9% of the population) than in 2000 (6.1% of the population), but at the relative poverty line, it increased almost continuously from 13.2% in 2000 to 14.5% 2019 (see Fig. 4.1).

The COVID-19 pandemic worsened existing barriers to accessing health services (see Box 4.1) and created new ones. The effects of the pandemic on the provision of essential health services, combined with the socioeconomic crisis, indicate a significant worsening of access conditions, leading to delayed and forgone care, expressed by a higher incidence of unmet needs due to supply-side and demand-side barriers.

Box 4.1. Unmet needs and multiple barriers to access in the WHO region of the Americas

According to the latest household survey data, a higher percentage of the population in eight countries with available data have unmet health care needs. On average, the percentage of the population reporting this issue increased from 34.1% in the pre-pandemic period to 41.5% in 2020 (see Fig. 4.4 below). Additionally, it is evident that population groups with lower incomes more frequently experience unmet health needs (see Fig. 4.4). The same pattern was observed among the rural population and those with lower educational levels *(71)*.

Fig. 4.4. Unmet health care needs, by income quintile, 2017–2019 vs 2020, evidence from eight countries

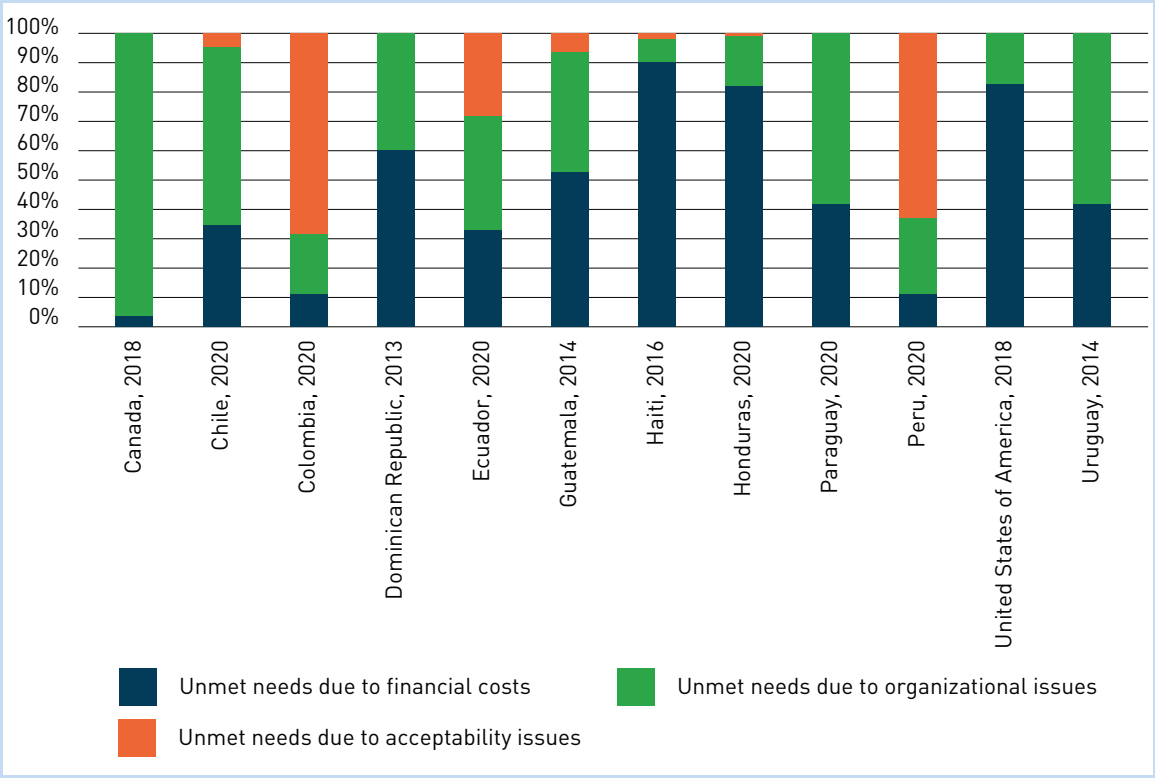


Source: Pan American Health Organization; 2023 *(71)*.

Access barriers are not uniformly present among countries or within the population of each country. While survey data do not provide a comprehensive view of all barriers, they help illustrate it. For example, in Colombia and Peru, the relative weight of access barriers reveals that **acceptability-related barriers** (such as lack of trust in health personnel, language, and cultural preferences) are reported more frequently than other types of difficulties. However, in Honduras, Paraguay, and the United States**, financial accessibility** remains one of the main challenges for access (see Fig. 4.5). **Organizational barriers** (such as long waiting times and excessive paperwork) are consistently present in all countries and, as shown in Fig. 4.5, are more prevalent in Canada, Chile, and Uruguay.

The interplay of access barriers can be more important than the individual impact of each factor, emphasizing the intricate and multifaceted nature of accessing services. For instance, when examining a combination of qualitative and quantitative data from four countries under study (Colombia, Guyana, Honduras, and Peru), the identification of various access barriers became evident. The lack of trust in health care personnel, cultural aspects, and gender roles and relationships comprise most mentioned access problems, which are exacerbated by a lack of intercultural skills among health personnel and inadequacy of service delivery models. Another type of barrier was the inadequate availability and distribution of health personnel, compounded by inadequate supplies and medications, primarily in the first level of care settings and hard-to-reach zones. Financial barriers often arise from indirect costs and co-payments, particularly affecting vulnerable populations and those living in rural areas. In addition, organizational barriers result from a variety of factors, including inadequate service hours, lack of adherence to schedules, poor management of waiting lists, and lack of coordination in health service delivery. Finally, problems related to geographic accessibility exist in all countries, forcing a significant portion of the rural population to travel long distances to access health services.

Fig. 4.5. Distribution of unmet health care needs by type of reported access barriers, evidence from 12 countries



Source: Pan American Health Organization; 2023 *(71).*

In the WHO European Region, despite consistent gains in the UHC SCI, the pace of progress slowed down in the years after 2015 (see Fig. 4.3). The composite index gains were largely driven by the infectious diseases sub-index, while the relative lack of progress observed across service access and capacity as well as RMNCH sub-indices was due to the high level of coverage (>80 index points) already observed in 2000 (see Fig. 4.2). Service coverage for NCDs experienced slow gains and was the only sub-index to remain below 80 (UHC SCI = 66) in 2019 (see Fig. 4.2).

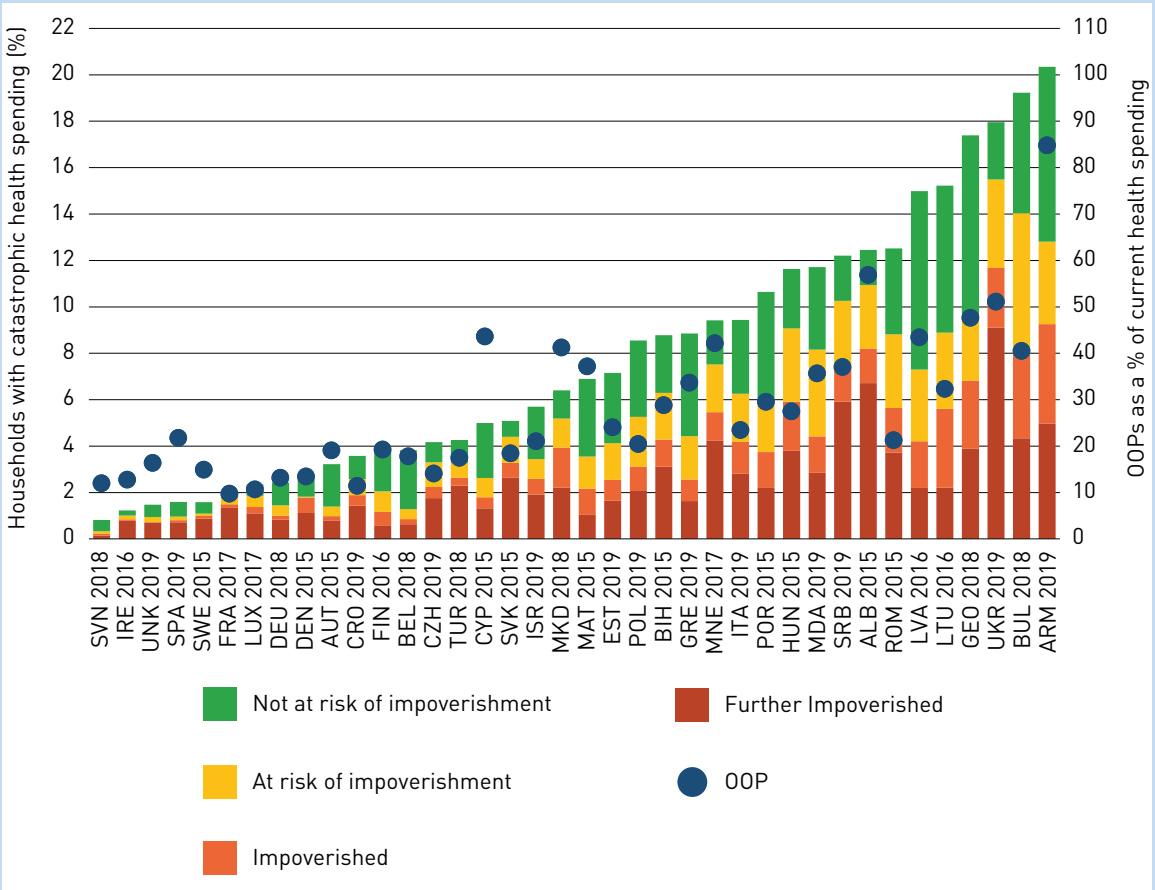
The incidence of catastrophic health spending, as tracked by SDG indicator 3.8.2, increased by 1.6 percentage points between 2000 and 2019 to reach 7.9% of the population spending more than 10% of their household budget on OOP health expenses (i.e. 74 million people). The incidence of impoverishing health spending at the relative poverty line increased by 1 percentage point during the same period, but with a bending curve, affecting 13.3% of the regional population in 2019 (124 million people pushed or further pushed into poverty) (see Fig. 4.1). Impoverishing health spending

at the extreme poverty line was the lowest in all regions probably because the value of the US$ 2.15 a day per person in 2017 PPP used to determine an absolute subsistence level is too low for most of the UMICs and HICs concentrated in this Region. But despite this relatively good prospect related to impoverishing health spending based on absolute and relative global poverty lines compared to other regions, regional indicators show that catastrophic health spending in Europe is heavily concentrated in households with the lowest incomes (see Box 4.2).

Box 4.2. Spotlight on universal population coverage in the WHO European Region: a pre-requisite for financial protection, but not a guarantee

In the WHO European Region, a capacity to pay approach to monitor financial hardship shows that the incidence of catastrophic health spending is closely linked to the OOP payment share of current spending on health (Fig. 4.6 below). This, in turn, is influenced by the coverage policy – the way in which health coverage is designed and implemented *(44)*.

Fig. 4.6. Breakdown of households with catastrophic health spending by risk of impoverishing health spending and the out-of-pocket payment share of current spending on health, 2019 or latest available year before COVID-19



Notes: OOP, out-of-pocket. Catastrophic health spending is defined here as the share of households with OOP payments greater than 40% of household capacity to pay. Capacity to pay for health care is defined as total household consumption minus a standard amount to cover basic needs (food, housing and utilities). A household is impoverished if its total consumption falls below the poverty line after OOP payments; further impoverished if its total spending is below the poverty line before OOP payments; and at risk of impoverishment if its total spending after OOP payments comes within 120% of the poverty line. The poverty line is a relative poverty line reflecting basic needs (food, housing and utilities).

Source: WHO Barcelona Office for Health Systems Financing *(72)* and WHO Regional Office for Europe (2019) *(44)*.

In the European Region, the following three gaps in coverage are associated with weaker financial protection *(44)*:

i. Significant gaps in *population coverage* in countries that base entitlement to health care on payment of contributions to a social health insurance scheme;

ii. Gaps in primary care linked to limited *coverage of primary care treatment* (medicines, medical products and dental care). Across countries in the European Region, catastrophic health spending is driven by OOP payments for outpatient medicines, medical products and dental care (data not shown). Data on catastrophic health spending and unmet need together shows that dental care often leads to financial hardship for richer households and unmet need for households with low incomes (see below), while outpatient medicines lead to both financial hardship and unmet need for households with low incomes. Due to unmet need, catastrophic health spending may be underestimated in poorer households.

iii. Gaps in primary care linked to the *presence and poor design of user charges* (co-payments).

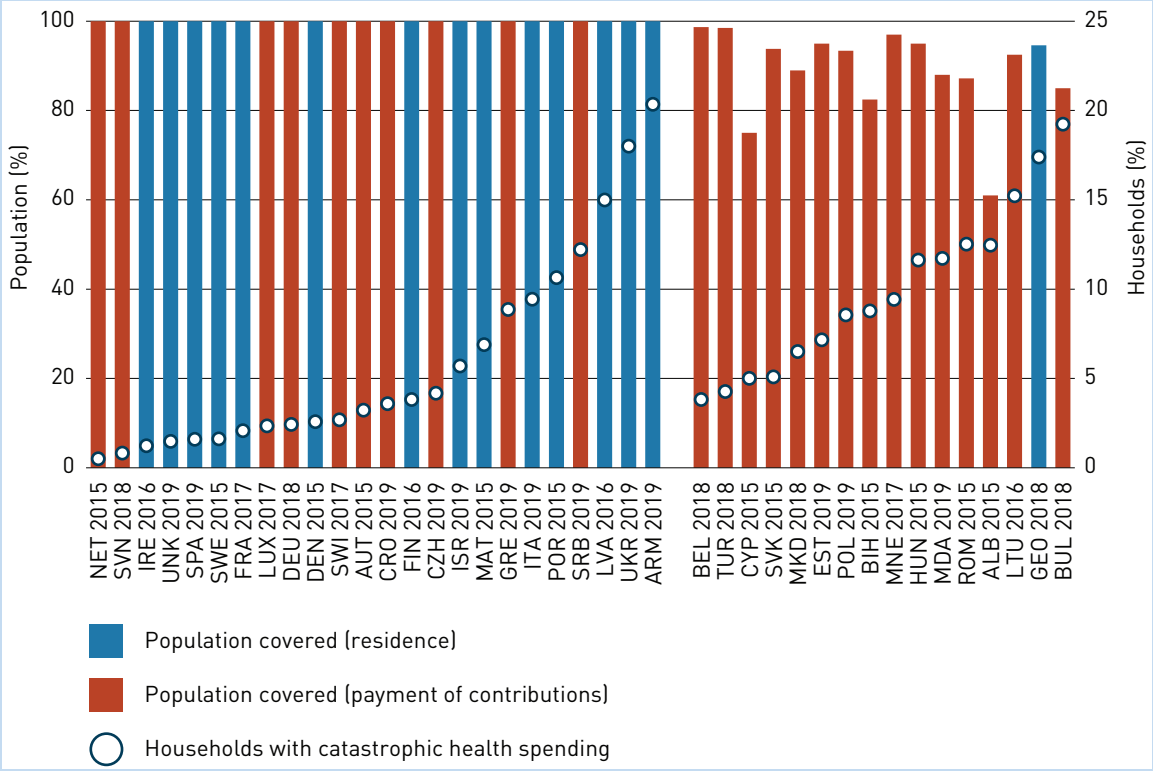
All three gaps have a disproportionate effect on people with chronic conditions and people with low incomes: those that are further impoverished, impoverished or at risk of impoverishment after OOP payments (see Fig. 4.6). Populations that lack coverage usually have access to emergency care, treatment of some communicable diseases, and in a few instances, primary care visits, but they rarely have access to treatment in primary care or non-urgent specialist care, which is particularly problematic for people with chronic conditions *(44,73)*. Gaps in population coverage are therefore likely to lead to substantial unmet needs, as well as financial hardship, and to inefficiencies in the use of health care – for example, when people self-treat using over-the-counter medicines, do not adhere to prescribed medicines or turn to resource-intensive emergency services *(74–78)*.

Many countries in Europe have significant gaps in population coverage (see Fig. 4.7 Countries with universal (100%) or near universal (over 99%) population coverage (on the left of the figure) are more likely to have low levels of catastrophic health spending than those with significant gaps (those on the right of the figure). This suggests that universal population coverage is a pre-requisite for financial protection. It does not guarantee financial protection, however, because the incidence of catastrophic health spending ranges from under 1% of households to over 20% in countries that cover the whole population.

Gaps in population coverage are determined on the basis for entitlement to publicly financed health care. Significant gaps are much more likely to occur in countries that base entitlement on payment of contributions to a social health insurance (SHI) scheme (the red columns in Fig. 4.7), than in countries that base entitlement on residence (the blue columns). Most countries with contributory SHI schemes penalise people who do not pay the required contributions by restricting their access to some or all publicly financed health care. This approach is most likely to cause significant gaps in coverage in countries with weak tax systems and a sizeable informal economy *(79)*. Populations that are not covered are typically those who face financial or administrative barriers to paying contributions, even when they are required to do so, because they lack work or their work is precarious – temporary, insecure and poorly paid. Precarious employment is a growing problem in Europe *(80)*. By choosing to exclude people who do not pay contributions, countries are using the health system to tackle a taxation problem, but there is no evidence to suggest that health systems are effective in addressing weaknesses in tax collection or reducing informality in the labour market *(81)*.

In many countries in Europe, progress towards UHC requires changes to the basis for entitlement so that all residents – not just legal residents *(44)* – are automatically covered; and problems with tax collection can be dealt with by the tax agency rather than the health system. The experience of countries like France and Spain shows how this can be achieved. France changed the basis for entitlement to its social health insurance scheme from employment and payment of contributions to residence in 2000, in response to growing youth unemployment *(43)*. In 2012, at the height of the economic crisis in Europe, Spain changed its basis for entitlement from residence to payment of social security contributions – a move that restricted access to health care for undocumented migrants, with tragic consequences *(82)*. In 2018, Spain reverted to residence-based entitlement for all residents, including undocumented migrants, making it perhaps the only country in Europe to give undocumented migrants entitlements similar to other residents *(72)*.

Fig. 4.7. Population coverage, the main basis for entitlement and catastrophic health spending, 2019 or latest available year before COVID-19



Note: The share of the population covered is for the same year as catastrophic health spending and does not necessarily reflect the current situation (e.g. in Cyprus). Countries are ranked by the incidence of catastrophic health spending in two groups. Countries on the left: population coverage is universal (100%) or near universal (>99%). Countries on the right: population coverage is <99%. Blue: the main basis for entitlement is residence. Red: the main basis for entitlement is payment of contributions.

Source: WHO Barcelona Office for Health Systems Financing *(72)* and WHO Regional Office for Europe (2019) *(44)*.

Quadrant 2 in Fig. 4.3 includes WHO regions with relatively high service coverage and high catastrophic OOP health spending

Over the past two decades, the UHC SCI in the Western Pacific Region has increased by 30 points to 79 by 2019. The levels and trends of the regional averages are population-weighted and are therefore primarily driven by populous countries in the Region, with large improvements in China driving in the regional estimates. In particular, RMNCH, infectious diseases, and service access and capacity sub-indices are amongst the highest index scores compared to all other regions. Among Pacific Island Countries, the level of service coverage tends to be lower than the regional trends (see Annex 5).

During the same period, the average regional incidence of catastrophic health expenditure (measured at a 10% threshold) experienced the highest increase, from 9.9% in 2000 to 19.8% in 2019, though a deceleration of the growth is indicated between 2017 and 2019, which is to be observed with caution. On average, the non-Pacific Island Countries in the Region experience higher levels of financial hardship, however, the performance varies by country. For example, Australia and Malaysia have kept the incidence of catastrophic health expenditure at a relatively low level (less than 2.5%) as per the latest data, whereas in China, Cambodia, and Mongolia it is higher than the global average (13.5%), and the trends are worsening in recent years. On the other hand, available evidence suggests that the share of OOP spending as of current health spending at the system level is relatively low in the Pacific Island Countries. However, the monitoring of financial protection at the household level has been lacking and/or out of date.

The overall regional progress was lately stalled due to the impact of the COVID-19 pandemic. Health systems and the workforce were overstretched during COVID-19, leading to major service disruptions. Many countries and territories in the Western Pacific Region reported disruptions to essential health services, and as evidenced globally, the vulnerable populations may have been

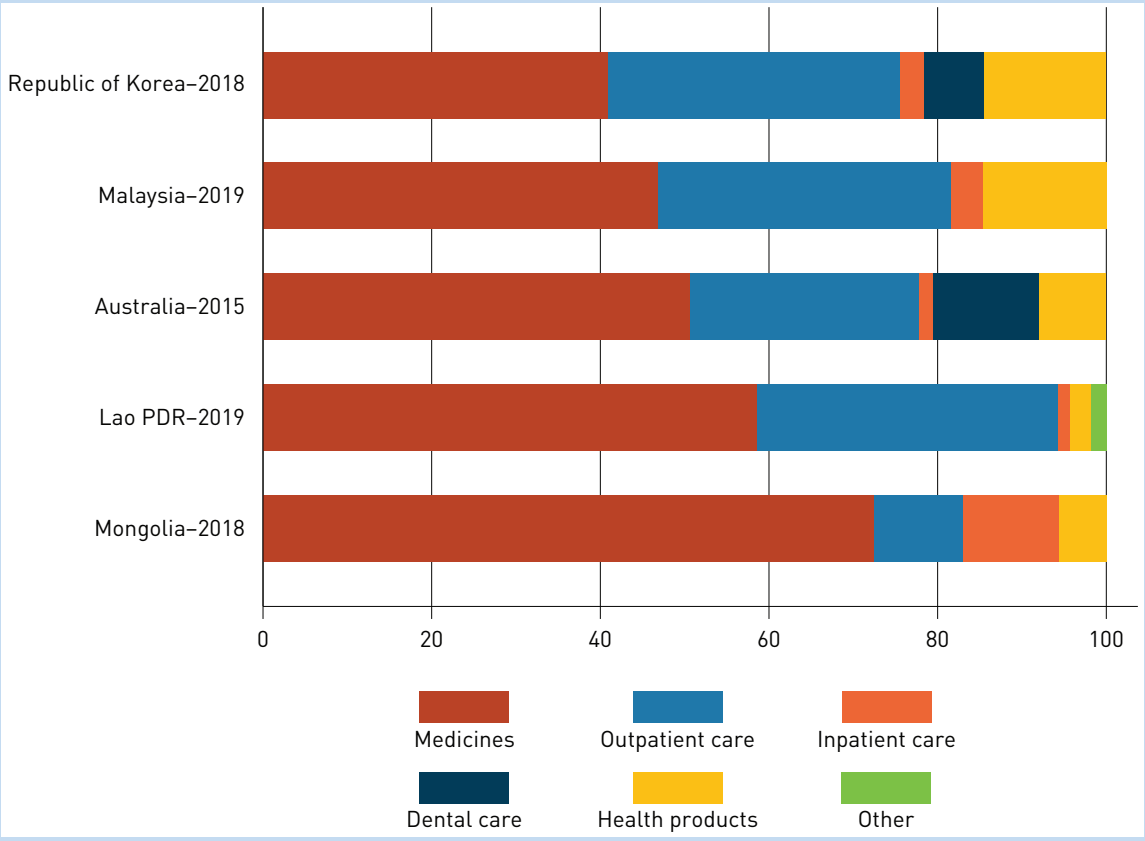
worst impacted. This calls for building more resilient health systems for health security and UHC, particularly focusing on health access and equity. Three countries had financial hardship data available to inform the impact of COVID-19 on households within the country contexts (see Chapter 2 and Annex 17). Mongolia observed a sharp increase in the incidence of catastrophic OOP health spending (at the 10% threshold) in 2021 (14.0%) compared to the pre-pandemic year 2018 (7.2%), while such an increase in Japan has been mild (from 10.5% in 2019 to 11.1% in 2021). On the contrary, in Viet Nam, the incidence of catastrophic OOP health spending dropped from 10.0% (2019) to 8.5% (2020) in the first year of the pandemic.

Box 4.3. Medicines were the main driver of out-of-pocket (OOP) health spending in countries with available data in the WHO Western Pacific Region

Based on the most recent available evidence for five countries, medicines accounted for 41% of OOP spending in the Republic of Korea (2018) and over 70% in Mongolia (2018) (see Fig. 4.8). Other countries in the Region also showed similar patterns for OOP spending on medicines, such as Japan (2019, 47%) and the Philippines (2012, 62%). The literature shows that medicines as a driver for OOP spending is more evident among the poorest *(83–86)*. In the Philippines (2012) *(85)*, 75% of OOP spending by the poorest quintile was on medicines, whereas for the richest quintiles it was 58%. In Mongolia (2018) *(84)*, medicines accounted for over 82% of the OOP spending of the poorest quintiles.

Extension of benefit packages to cover essential medicines with minimum co-payments can significantly reduce financial hardship, especially among the poor. Regular updates to the list of essential drugs according to the increasing needs of patients will help to ensure adequate supplies *(87,88)*. Regular updating is especially important given the demographic and epidemiologic shift to focus on chronic care conditions. Also, including private providers/pharmacies in the system, prioritizing generic prescriptions *(89)*, and increasing access to health care services to reduce self-medication can contribute to reducing OOP on medicines.

Fig. 4.8. Composition of OOP health spending, the latest year available, evidence from various countries



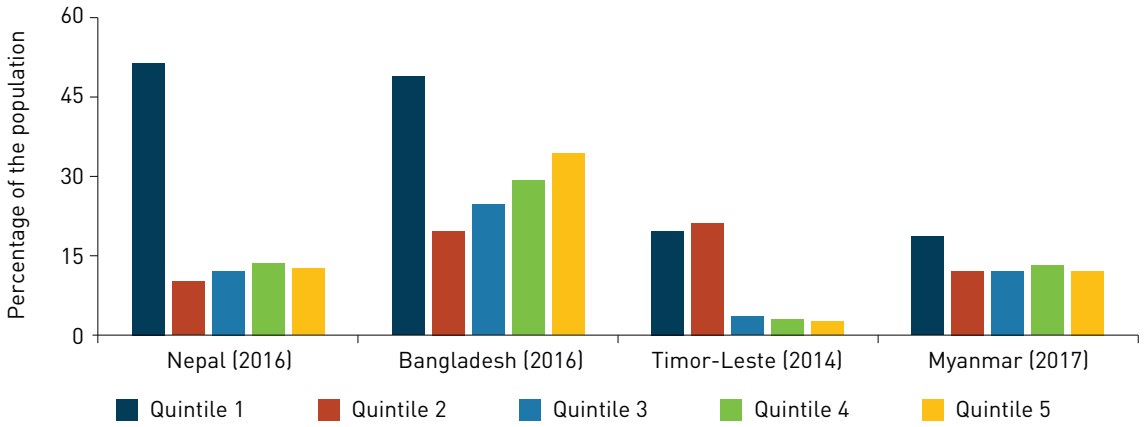
Source: Background data prepared by WHO for the forthcoming WHO Western Pacific Region report on financial protection *(90)*.

Quadrant 3 in Fig. 4.3 includes WHO regions with relatively low service coverage and high catastrophic OOP health spending

While countries in the South-East Asia Region achieved significant progress in providing essential health services as captured by the UHC SCI, which increased by 32 index points from 30 in 2000 to 62 in 2019, the Region is still behind global progress (see Annex 3). The infectious disease sub-index saw the greatest gains between 2000 and 2019, increasing from 8 in 2000 to 64 in 2021 (see Fig. 4.2). The slowest pace of improvement was in the NCD sub-index, from 32 in 2000 to 53 in 2019, which could be attributed to suboptimal public health investments in the relevant interventions and strengthening of underlying data systems to monitor progress. RMNCH services were disrupted during the pandemic years resulting in a slight drop in the sub-index estimated value from 73 in 2019 to 69 in 2021 (see Fig. 4.2).

Based on the latest available estimates, the South-East Asia Region continued to be the second worst-performing Region in the world on catastrophic OOP health spending (SDG indicator 3.8.2, 10% threshold; see Fig. 4.1). When looking at the trends, there has been an overall marginal worsening in catastrophic OOP health spending between 2015 and 2019. However, some countries have managed to stop or even decrease the rise in catastrophic OOP health spending. Notably, in Thailand, the proportion of the population spending more than 10% of the household budget on OOP health care continuously reduced from 5.6% in 2000 to 2.2% in 2017 to 1.9% by 2019. There has been a remarkable decline in the proportion of impoverished households. The level of impoverishment due to OOP health spending (living with less than PPP US$ 1.90 a day per person) decreased from almost 30% in 2000 to 18.7% in 2010. This further reduced to 12.4% in 2015 and 6% in 2017. Based on data from four countries *(91),* people in the poorest and near poor quintiles face the highest rates of financial hardship (catastrophic, impoverishing, or both at the same time) – ranging from less than 20% in Myanmar and Timor Leste for the first quintile to over 45% in Nepal and Bangladesh (see Fig. 4.9).

Fig. 4.9. Incidence of financial hardship across per capita consumption quintiles, most recent estimate available, selected countries



Note: Q, quintile. Incidence of financial hardship is defined as the proportion of the population incurring catastrophic OOP health spending (SDG indicator 3.8.2 at the 10% threshold), impoverishing OOP health spending or both withut double counting. All countries in this figure had rates of impoverishing OOP health spending exceeding 2%.

Source: Background data prepared by WHO for the 2022 update of the WHO South-East Asia report on universal health coverage (*91).*

Health systems in the South-East Asia Region have been significantly funded through OOP health spending, with more than half of the countries in the Region spending more than one-third of their current health spending from household OOP expenses. Out-of-pocket spending was predominantly driven by spending on medicines based on the most recent data available across countries in the Region. Despite reports of service disruptions[19] *(92)* during the two years of the COVID-19 pandemic, the regional UHC SCI sustained the 2019 value estimate of 62 in 2019 and 2021. Evidently, variations

[19] In 2020, 90% of countries report disruptions to essential health services since COVID-19 pandemic *(92).*

in the pace of progress prevail among countries of the Region, with the UHC SCI ranging between 52 (for Bangladesh, Myanmar, and Timor-Leste) and 82 (for Thailand).

Between 2020 and 2021, based on data from four countries in the Region, almost 50% of households reported reducing consumption of goods (essential or non-essential) during the pandemic, which means less capacity to pay for health care *(91).* Data from five countries showed that many households did not seek care for financial reasons between 2020 and 2021 *(91).* At the same time, less capacity to pay for health care could lead to more people being impoverished by OOP health spending and/or higher rates of catastrophic health spending among those paying OOP for health. Also, country-specific trends between 2015, 2019, and 2021 showed that four countries witnessed a slight decline in their UHC SCI (see Annex 3); at least some of which can be attributed to the direct and indirect impacts of COVID-19 disruptions. To mitigate the impact of COVID-19 pandemic disruptions and consequences, the South-East Asia Region countries leveraged digital health technologies, such as telemedicine, to ensure the continuity of essential health services, and real-time dashboards from the Health Management Information System (HMIS) to ensure continuity of services. With health services now returning to previous levels of service delivery, whilst continuing to harness the power of digital health technologies and prioritizing PHC approach, countries in the South-East Asia Region are expected to progress toward a resilient health system and UHC.

Quadrant IV in Fig. 4.3 includes WHO regions with relatively low service coverage and low catastrophic OOP health spending

In the WHO African and Eastern Mediterranean Regions, both service coverage and the incidence of catastrophic OOP health spending are relatively low compared to the global values in 2019 (see Fig. 4.3). There are, however, some important differences in the joint trajectories between these two regions.

Over the past two decades, there was noted improvement in the service coverage dimension of UHC in the WHO African Region, rising from 23 in 2000 to 44 in 2021 (see Annex 5) without many changes in the incidence of catastrophic OOP health spending over the whole 2000–2019 period (see Annex 11). The stagnating pattern in the overall service coverage index between 2019 and 2021 is likely due to a combination of factors, such as gaps in PHC approach implementation, lack of resources allocated to health, and the negative impact of the COVID-19 pandemic on the provision and utilization of essential health services in the Member States. Improvements in service coverage were mainly driven by the gains observed in infectious diseases, with limited progress observed in the other sub-indices over the past decade (see Fig. 4.2). It can be inferred from the sub-indices that the expansion of RMNCH and NCD services has not made significant strides in progress, whereas service capacity and access have, in fact, declined. The overall stagnating trend in UHC SCI is indicative of the system's drive that has been heavily focused on programmes, with limited investments in system-wide approaches, anchored on the delivery of services for a person. In addition, there remain gaps in the implementation of a comprehensive essential health care package, with only 17 of 47 countries (29%) engaged in developing, reviewing, or implementing comprehensive Essential Health Service Packages (EHSPs) *(93)*.[20] This suggests that most African countries continue implementing basic health packages, traditionally focused on limited interventions.

The overall plateauing incidence of catastrophic spending at the 10% threshold between 2000 and 2017 in the Africa Region from 7.8% (52 million people) to 8.6% (85 million people), is mostly due to a large increase during the first five years of the Millenium Development Goals (MDGs), almost completely offset subsequently between 2005 and 2017. But between 2017 and 2019, the incidence increased to 8.6%, i.e. 95 million people (poor and non-poor) spent more than 10% of their household budget on OOP health spending. Even if the African Region has the lowest proportion of the population facing catastrophic OOP health spending compared to other regions (see Fig. 4.1), its incidence of impoverishing OOP health spending is the highest at the extreme poverty line and one of the highest at the relative poverty line at any given point in time (see Fig. 4.1). These two results related to financial hardship are consistent with the fact that overall health systems were underfunded in the Region with little spent on health from all sources (people, governments, the private sector): the current health expenditure across all Member States averages US$ 54 per capita and with general government health expenditure averaging US$ 14.8 per capita. They are also consistent with the large concentration of extreme poverty in the Region.

[20] Assessment from WHO African Regional Office, as of June 2023, built on information provided in tracking universal health coverage *(93).*

Analysis at the country level shows that the regional average value appears to be driven by a third of the countries (those with numbers higher than the regional average). Country data also show an extensive range in catastrophic spending, from 0.2% in Gambia to 35.5% in Angola (see Annex 17). Three countries (Angola, Cameroon, and Nigeria) are in the top ten in terms of catastrophic and impoverishing spending (see Annexes 14 and 17).

COVID-19-related impact on service coverage is multidimensional *(94)* – with countries experiencing delays in access and disruptions in the provision of services due to physical, socioeconomic, and financial barriers (including loss of income). COVID-19 has likely contributed to worsening financial protection due to various factors, including loss of income due to public health measures, and reduced public sector fiscal space with an impact on health sector budgets. Moving forward, the African Region has prioritized focus on reorganizing health services delivery to align resources with UHC expectations. The application of the PHC approach and its implications on strategic and operational levels are being unpacked to provide concise guidance to Member States on how service delivery systems could be organized to address the population's needs. This will include guidance on how countries can better define their set of essential services, identify the suitable set of modalities for delivery, and ensure the system's readiness whilst applying a PHC approach. The paradigm shift towards a holistic PHC approach for UHC requires a strong political will and investments in health systems.

In the Eastern Mediterranean Region, the increase in service coverage was concurrent to an almost continuous increase in the incidence of catastrophic OOP health spending. Indeed, the UHC SCI increased by 19 points to 57 between 2000 and 2019 (see Fig. 4.3). The most substantial increase since 2000 was in the infectious disease sub-index (an increase of 35 points), with slower increases of less than 10 points across the RMNCH, NCDs, and health service capacity and access sub-indices over the same time period (see Fig. 4.2).

The incidence of catastrophic OOP health spending at the 10% threshold worsened every year from 9.2% in 2000 (45 million people) to 13.2% in 2017 (94 million people) and then decreased to 12.1% in 2019. By then, 89 million people (poor and non-poor) faced catastrophic health spending as they spent more than 10% of their household budget on OOP health spending. Impoverishing OOP health spending at both the relative and extreme poverty line are of concern in the Region (see Fig. 4.1). Medicines and private outpatient care have been dominant in all countries of the Region *(95)* except Iran, where the costs seemed to vary according to insurance schemes and hospital types *(96)*. Medicines were the main drivers of OOP health spending in the LICs and MICs from the Eastern Mediterranean Region. For example, medicines accounted for more than half of the OOP health spending in the occupied Palestinian territory, including east Jerusalem 2016 (65%), Somalia 2017 (69%), Afghanistan 2016 (56%), Pakistan 2015 (53%), and almost 40% in Tunisia 2015 (38%).[21] Financial barriers to access prior to the pandemic are also likely to be high in the Region, and where that occurs, financial hardship indicators may be low simply because people cannot afford to pay for the health care they need (see Box 4.4).

Given the protracted emergencies in many countries of the Region, the COVID-19 pandemic had precipitated more complicated health system challenges that included foreign aid availability, lack of supplies and resources due to competition from HICs, and the geopolitics that discriminated against the fair distribution of vaccines, drugs, and supplies. In addition, the competing emergencies and priorities added to the disruption of already fragile services in countries of the Region. As of 2019, almost 30 million displaced people, accounting for more than half of all displaced persons globally, originate from this Region *(98)*. The situation is particularly difficult because there are increased needs for health care due to crises, while at the same time, household incomes tend to reduce. While it is essential to maintain essential public health services, domestic public revenues also tend to fall due to lower economic growth, higher inflation, and lower tax revenue to GDP ratios (due to a lack of trust and capacity).

[21] Background data prepared by WHO for the 2021 update of the WHO and World Bank global financial protection database *(97)*.

Box 4.4. Catastrophic OOP health spending and financial barriers to access health care in the Eastern Mediterranean Region

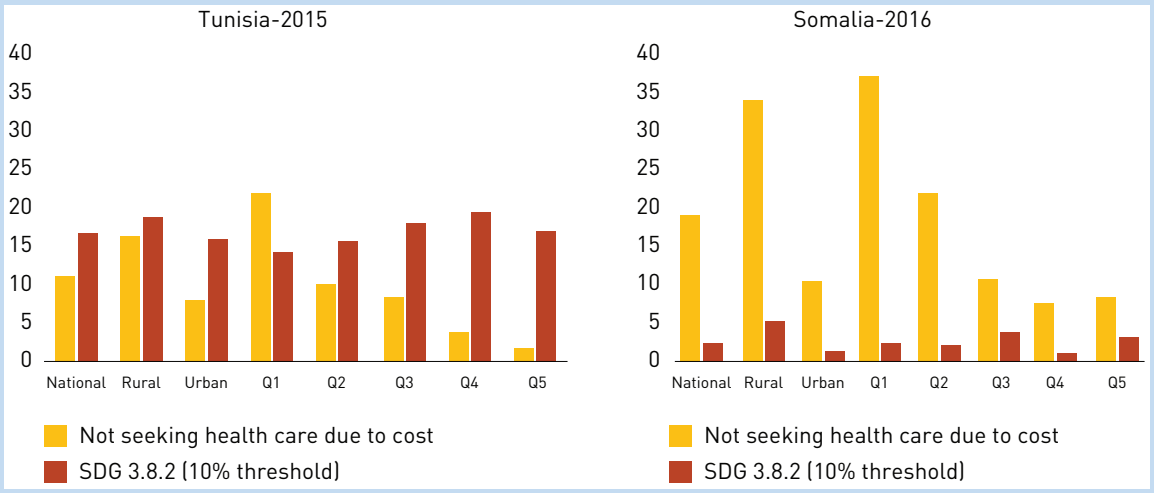
Total number of people facing financial barriers to access health care in the Eastern Mediterranean Region was uncounted prior to the COVID-19 pandemic, but was certainly not marginal, especially among the poorest

Data about barriers is scarce, but when available, it is very powerful in contextualizing findings. For some countries, the incidence of catastrophic OOP health spending is low because people do not access health care (see Fig. 4.10 below, Somalia at the national level), but for some, it is high because people access health care (Tunisia). In Tunisia (2015), the incidence of catastrophic OOP health spending was high, at more than 15% of the population, while the level of financial barriers among those who did not utilize health care when needed was 11% (see Fig. 4.10 below). In Somalia (2016), the incidence of catastrophic OOP health spending was very low (2%), but the rate of people forgoing health care due to the costs was 18%. This information is very useful to contextualize the findings on financial hardship, as a similar incidence of catastrophic OOP health spending at the national level may imply different policy recommendations in the end depending on the level of health service utilization.

The highest rates of forgone care due to costs were always found in the lowest quintile (37% in Somalia, 4% in Tunisia) and rural areas (see Fig. 4.10 below). Differences in the rates of financial barriers between the highest and lowest quintiles are much stronger than differences between rates of catastrophic OOP health spending (see Fig. 4.10 below). The literature also found this regressive pattern in utilization of health care related to the needs in the occupied Palestinian territory, including east Jerusalem and Lebanon *(95)*.

Disparities in financial barriers to access health care also exist among other dimensions. According to the literature, for instance, financial barriers were the main reason for forgoing care among people aged 60 years old and more in Morocco (2019) *(99)*, among women in rural Upper Egypt (2009) *(100)* or among people with disability in Iran (2016) *(101)*.

Fig. 4.10. Financial barriers and catastrophic OOP health spending incidence in Somalia and Tunisia



Note: In Tunisia, the rate of "not seeking health care due to cost" is calculated among populations who are suffering from non-chronic diseases and needed health care in previous year. In Somalia, the rate is calculated among people who report any type of disease during the past two months.

Source: Background data prepared by WHO for the 2023 update of the WHO and World Bank global financial protection database *(2,3)*.

4.2 Regional summary

The progress in expanding service coverage and financial protection towards UHC has varied across regions during the SDG era. However, these regional differences in joint progress were mostly driven by differences in starting points in 2015 rather than differences in trajectories, which were stagnating or worsening across all regions. This chapter has shown that the causes of this overall lack of progress vary and thus point to the need for context-specific policies to address gaps in service coverage and financial protection. The COVID-19 pandemic has impacted each region in different ways, but all have faced extremely challenging circumstances in terms of providing service coverage and financial protection. In general, future progress toward UHC requires a reversal in the current trajectories through an acceleration in the expansion of all essential health services, especially those with minimal progress to date. Progress will continue to be held back in the absence of clear and deliberate policy choices to protect and prioritize public spending on health across all regions.

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Annexes

Annex 1 Methods to calculate universal health coverage (UHC) service coverage index (SCI), Sustainable Development Goal (SDG) 3.8.1, and additional analyses

1. Calculation of UHC SCI (SDG 3.8.1)

Input data

Fourteen indicators are used to calculate SDG 3.8.1. The indicators are drawn from four key areas related to health service coverage: reproductive, maternal, newborn, and child health (RMNCH), infectious diseases, noncommunicable diseases, and service access and capacity. Details about the indicators are shown in Table A1.1. The main difference from the 2021 data release is the change in the indicator for prevention of cardiovascular disease, from the prevalence in non-elevated blood pressure to the prevalence of treatment among adults with hypertension. For information on the availability of primary data for each indicator, refer to Box 1.2 in Chapter 1.

Table A1.1 Tracer areas and indicators used in the calculation of the UHC SCI (SDG 3.8.1)

Tracer area	Indicator	Population	Type	Data source
Reproductive, maternal, newborn, and child health (RMNCH)				
Family planning	Demand satisfied with modern methods	Married women aged 15–49	Service coverage	United Nations Department of Economic and Social Affairs (DESA), Population Division. Estimates and projections of family planning indicators, 2022 revision (https://www.un.org/development/desa/pd/data/family-planning-indicators, accessed 2 August 2023)
Pregnancy and delivery care	Antenatal care (ANC), 4+ visits	Women with a live birth in in a given time period	Service coverage	WHO Sexual and Reproductive Health and Research (SRH). Monitoring and surveillance global database (2022) (https://www.who.int/teams/sexual-and-reproductive-health-and-research-(srh)/monitoring-and-surveillance, accessed 2 August 2023)
Child immunization	Diphtheria tetanus toxoid and pertussis (DTP) immunization, three doses	Children one year of age	Service coverage	WHO/UNICEF estimates of national immunization coverage (WUENIC), (2022 revision) (https://www.who.int/teams/immunization-vaccines-and-biologicals/immunization-analysis-and-insights/global-monitoring/immunization-coverage/who-unicef-estimates-of-national-immunization-coverage, accessed 2 August 2023)
Child treatment	Care-seeking behaviour for suspected acute respiratory infection	Children under five years old	Service coverage	UNICEF global database (https://data.unicef.org/, accessed 2 August 2023)
Infectious diseases				
Tuberculosis (TB) treatment	TB treatment coverage	TB incident cases	Service coverage	WHO Global Tuberculosis Programme (2022 revision) (https://www.who.int/teams/global-tuberculosis-programme/data, accessed 9 August 2023)

Tracer area	Indicator	Population	Type	Data source
Human immunodeficiency virus (HIV) therapy	HIV antiretroviral treatment (ART) coverage	People living with HIV	Service coverage	UNAIDS/WHO Global Health Observatory data repository, 2022 revision (https://apps.who.int/gho/data/node.main.626, accessed 9 August 2023)
Malaria prevention	Insecticide-treated net (ITN) use	Population living in malaria-endemic areas	Service coverage	WHO Global Malaria Programme treatment and intervention coverage (2022 revision) (https://www.who.int/data/gho/data/themes/topics/indicator-groups/indicator-group-details/GHO/malaria-treatment-intervention-coverage, accessed 9 August 2023)
Water and sanitation	Population with access to at least basic sanitation	Total population	Service coverage	WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP) estimates (2023 revision) (https://washdata.org/, accessed 2 August 2023)
Noncommunicable diseases				
Prevention of cardiovascular diseases (CVDs)	Prevalence of treatment for hypertension	Adults aged 30–79	Service coverage	WHO NCD RisC Group estimates (2021 revision), published in the WHO Global Health Observatory (https://www.who.int/data/gho/data/indicators/indicator-details/GHO/prevalence-of-treatment-(taking-medicine)-for-hypertension-among-adults-aged-30–79-with-hypertension, accessed 9 August 2023)
Management of diabetes	Mean fasting plasma glucose (FPG)	Adults aged 18+	Proxy	WHO NCD RisC Group estimates (2016 revision), published in the WHO Global Health Observatory (https://www.who.int/data/gho/data/indicators/indicator-details/GHO/mean-fasting-blood-glucose-age-standardized-estimate, accessed 9 August 2023)
Tobacco control	Tobacco use	Adults aged 15+	Proxy	WHO Tobacco Free Initiative (TFI) estimates (2023 revision), published in the WHO Global Health Observatory (https://apps.who.int/gho/data/node.main.TOBAGESTDCURR, accessed 9 August 2023)
Service capacity and access				
Hospital access	Hospital beds density	Total population	Proxy	Administrative systems/health facility reporting systems compiled by WHO
Health workforce	Health worker density: comprising physicians, psychiatrists, and surgeons	Total population	Proxy	WHO National Health Workforce Accounts (NHWA) data portal (https://apps.who.int/nhwaportal/, accessed 9 August 2023)
Health security	International Health Regulations (IHR) core capacity index	Total number of attributes (not a population-based indicator)	Proxy	Electronic IHR State Parties Self-Assessment Annual Reporting Tool (e-SPAR) (2022 revision) (https://extranet.who.int/e-spar, accessed 2 August 2023)

Imputation and missing data

In the absence of data for each Member State, for each calendar year and for each indicator, imputation of missing values is necessary. To impute missing values in the SCI analysis, a twofold approach is pursued. First, data are extended for missing years; and second, data are extended in instances where no data are available. In the first step, the missing data are inferred by way of simple interpolation between observed values and constant extrapolation outside the range of observed values. For example, if a country has data for 2013 and 2016, linear interpolation is used to fill missing values for years 2014 and 2015, and constant extrapolation is used to fill missing values before 2013 using the 2013 value and after 2016 using the 2016 value. In the second step, for every Member State that does not have data for a given indicator and when estimates do not already exist, a regional median is calculated for each calendar year. By default, regions are based on UN SDG sub-regions. However, when there are not enough countries within UN SDG sub-regions with available data, other groupings can be used. This imputation rule for countries with no data, however, does not apply to care seeking for suspected pneumonia, as this indicator is not typically measured in HICs with well-established health systems. For countries without observed data, coverage was estimated from a regression that predicts coverage of care seeking for symptoms of acute respiratory infection (on the logit scale) as a function of the log of the estimated under-five all-causes mortality rate from the WHO Maternal and Child Epidemiology Estimation (WHO-MCEE) group.

Conversion and rescaling

To build an index, all tracer indicators need to be placed on the same scale, with 0 being the lowest value and 100 being the optimal value. For most indicators, this scale is the natural scale of measurement (for example, antenatal care coverage, four or more visits). However, for a few indicators, conversion and/or rescaling are required to obtain appropriate values on a scale from 0 to 100.

Conversion

The prevalence of tobacco use is converted into prevalence of tobacco non-use, so that an increase means an improvement.

Rescaling

- Rescaling based on a non-zero minimum to obtain finer resolution. Prevalence of tobacco non-use is capped at a minimum threshold, corresponding to the maximum observed across all Member States.
  - Prevalence of tobacco non-use: rescaled value = (X–30)/(100–30)*100
- Rescaling for a continuous measure. Mean fasting plasma glucose (FPG), which is a continuous measure (units of mmol/L), is converted to a scale of 0 to 100 using the minimum theoretical biological risk (5.1 mmol/L) and observed maximum across countries (7.4 mmol/L).
  - Mean FPG: rescaled value = (7.4 – original value)/(7.4–5.1)*100
- Maximum thresholds for rate indicators. Hospital bed density and health workforce density are both capped at maximum thresholds, and values above this threshold are held constant at 100. These thresholds are based on minimum values observed across Organisation for Economic Co-operation and Development (OECD) countries.
  - hospital beds per 10 000: rescaled value = minimum (100, original value / 18*100)
  - physicians per 1000: rescaled value = minimum (100, original value / 0.9*100)
  - psychiatrists per 100 000: rescaled value = minimum (100, original value / 1*100)
  - surgeons per 100 000: rescaled value = minimum (100, original value / 14*100)

Computation of the index

Once all tracer indicator values are on a scale of 0 to 100, geometric means are computed within each of the four health services areas, and then a geometric mean is calculated from those four values (see Fig. 1.3 in Chapter 1). The health worker density indicator is calculated as the geometric mean of rescaled values for physicians, psychiatrists and surgeons.

Global and regional aggregates

Regional and global aggregates use United Nations population estimates at the country level to compute a weighted average of country values for the index. This is justified because UHC is a property of countries, and the index of essential services is a summary measure of access to essential services for each country's population. United Nations population estimates at country level are used to ensure consistency and comparability of estimates within countries and between countries over time.

2. Population not covered by essential health services

The UHC SCI is first calculated as the geometric mean of fourteen tracer indicators on an annual basis for each country, as described at the beginning of this annex. As an index score, the SCI **is not** also the percentage of the population who are covered by a set of essential services within a country. However, building on previous conceptual approaches to estimating the population covered by essential health services,[22] the index score was assumed to be an indication of the average coverage of the indicators with a country. This average coverage was then converted to the percentage of people with full coverage (defined as receiving most needed services) in each country. The conversion is based on a set of equations derived from household survey data from low- and lower-middle-income countries. Finally, for each country, 100%-the percentage of population with full coverage (i.e. the percentage of population without full coverage) was multiplied by the total population to obtain the number of people not covered by essential services in each country. All country values were summed for each year to determine the same metric at the global level. The estimated global population not covered by essential services was divided by the global population for each year to determine the percentage of the population not covered by essential services.

3. Decomposition of service coverage index

Decomposition methods have been developed to understand how summary measures vary due to component factors *(3–5)*. In the context of the UHC SCI, these methods were used to determine the extent to which individual indicators contribute to overall changes in the the SCI over time.

The calculation of the of the SCI between time t_1 and time t_2 can be represented by the function F which takes as input the 14 tracer indicators i^1,i^2,...i^{14} and financial hardship fh.

$$
\begin{aligned}
U_{t_1} &= F\left(i_{t_1}^1, i_{t_1}^2, \ldots, i_{t_1}^{14}, fh_{t_1}\right) \\
&= \text{UHC single measure at time } t_1 \\
U_{t_2} &= F\left(i_{t_2}^1, i_{t_2}^2, \ldots, i_{t_2}^{14}, fh_{t_2}\right) \\
&= \text{UHC single measure at time } t_2 \\
\left(U_{t_2} - U_{t_1}\right) \cdot Pop_{t_2} &= \text{UHC SCI}
\end{aligned}
$$

[22] This analysis combined two previously published methods: Tracking universal health coverage: 2017 global monitoring report *(1)* and Thirteenth General Programme of Work *(2)*.

The stepwise replacement algorithm by Andreev, et al. *(4)* as implemented in the stepwise replacement function from the DemoDecomp R package *(6)* is used to calculate the contributions of individual parameter changes to the overall SCI. This works by replacing each element of parameters by the corresponding parameter at.

$$
\begin{aligned}
U^*_{i^1} &= F\left(i^1_{t_2}, i^2_{t_1}, \ldots, i^{14}_{t_1}, fh_{t_1}\right) \\
\delta_{i^1} &= \left(U^*_{i^1} - U_{t_1}\right) \cdot Pop_{t_2} = \text{Contribution due to changes in indicator } i^1 \\
&\ldots \\
U^*_{fh} &= F\left(i^1_{t_2}, i^2_{t_2}, \ldots, i^{14}_{t_2}, fh_{t_1}\right) \\
\delta_{fh} &= \left(U^*_{fh} - U_{t_1}\right) \cdot Pop_{t_2} = \text{Contribution due to changes in indicator } fh
\end{aligned}
$$

A property of this algorithm is that the individual parameter contributions sum to the aggregate SCI.

$$
\begin{aligned}
\left(U_{t_2} - U_{t_1}\right) \cdot Pop_{t_2} &= \text{UHC SCI} \\
&= \delta_{i^1} + \delta_{i^2} + \ldots + \delta_{i^{14}} + \delta_{fh}
\end{aligned}
$$

The stepwise replacement decomposition algorithm was run separately for each location. Decomposed contributions were then aggregated to the regional and global level.

4. RMNCH composite coverage index

The RMNCH composite coverage index summarizes the level of coverage across the spectrum of RMNCH interventions *(7,8).* This composite coverage index is distinct from the RMNCH sub-index of the UHC SCI (SDG 3.8.1) in that it only considers household survey data and therefore includes a different suite of indicators compared to the UHC SCI. It is calculated as a weighted arithmetic average of eight indicators in four stages of the continuum of care: reproductive health (demand for family planning satisfied); maternal health (antenatal care coverage – at least four visits – and birth attended by skilled health personnel); child immunization (Bacillus Calmette–Guérin (BCG), measles and diphtheria, tetanus and pertussis (third dose) immunization coverage); and management of childhood illnesses (oral rehydration therapy for diarrhoea and care seeking for suspected childhood pneumonia symptoms).

$$
\text{RMNCH composite coverage index} = \frac{1}{4}\left(\text{FPS} + \frac{\text{SBA+ANCS}}{2} + \frac{\text{2DPT3 +MSL+BCG}}{4} + \frac{\text{ORT+CPNM}}{2}\right)
$$

where FPS is family planning needs satisfied, SBA is skilled birth attendant, ANCS is antenatal care with skilled provider, DPT3 is three doses of diphtheria–pertussis–tetanus vaccine, MSL is measles vaccination, BCG is BCG (TB) vaccination, ORT is oral rehydration therapy for children with diarrhoea, and CPNM is care seeking for pneumonia.

5. Cluster level small area estimation of RMNCH sub-index

Cluster level small area estimation (SAE) methods were used to estimate each of the four tracer indicators of an RMNCH sub-index at the first administrative unit in available household surveys in sub-Saharan Africa. In this framework the responses for each survey enumeration area (cluster) are modeled directly with terms included to account for the complex household survey sampling design. Details for the general cluster level SAE model and the implementation in the SUMMER R package *(9,10)* are described in DHS Spatial Analysis Reports No. 21*(11).*

For each tracer indicator the number of eligible individuals n_c, and events Y_c for each cluster c are tabulated and modeled with an over dispersed Binomial model.

$$Y_c | p_c, d \sim \text{BetaBinomial}(n_c, p_c, d)$$
$$p_c = \text{expit}(a + \gamma \times I(s_c \in urban) + e_{i[S_c]} + S_{i[S_c]})$$

The model includes two district-level (i) random effects: an independent and identically distributed random effect $e_{i[S_i]}$, and an intrinsic conditional autoregressive (ICAR) component $S_{i[S_i]}$. A binary variable is included to account for the household survey urban–rural stratification so that a is the intercept for rural clusters and $a + y$ is the intercept for urban clusters. District level probabilities p_i were then calculated using the proportion of households in each district that are rural q_i and urban $1 - q_i$.

$$p_i = [q_i \times \text{expit}(a + e_i + S_i)] + [(1 - q_i) \times \text{expit}(a + \gamma + e_i + S_i)]$$

Finally, the UHC RMNCH sub-index for each district was calculated as the geometric mean of the four tracer indicators.

Annex 2 Universal health coverage (UHC) service coverage index (SCI), Sustainable Development Goal (SDG) 3.8.1, its four sub-indices, and tracer indicators, by country, 2021

	RMNCH				Infectious diseases			
Country	Family planning methods satisfied by modern methods	Antenatal care, 4+ visits	Child immunization (DTP3)	Care-seeking behaviour for ARI	Tuberculosis treatment+	HIV anti-retroviral therapy+	Insecticide treated nets use[3]	Access to at least basic sanitation
Afghanistan	46	24	66	68	66	10		54
Albania	8	78	≥80	≥80	56	53		≥80
Algeria	72	70	≥80	47	79	≥80		≥80
Andorra	67	≥80	≥80	≥80	≥80	≥80		≥80
Angola	29	61	45	49	55	41	14	52
Antigua and Barbuda	79	≥80	≥80	≥80	≥80	62		≥80
Argentina	≥80	≥80	76	≥80	≥80	72		≥80
Armenia	44	≥80	≥80	≥80	52	42		≥80
Australia	≥80	≥80	≥80	≥80	≥80	≥80		≥80
Austria	≥80	≥80	≥80	≥80	≥80	≥80		≥80
Azerbaijan	32	76	≥80	32	57	61		≥80
Bahamas	≥80	≥80	75	≥80	≥80	68		≥80
Bahrain	58	≥80	≥80	≥80	≥80	63		≥80
Bangladesh	73	37	≥80	46	≥80	31		59
Barbados	77	≥80	≥80	≥80	≥80	60		≥80
Belarus	71	≥80	≥80	≥80	51	70		≥80
Belgium	≥80	≥80	≥80	≥80	≥80	≥80		≥80
Belize	71	≥80	≥80	67	63	48		≥80
Benin	29	52	76	29	54	≥80	56	19
Bhutan	80	80	≥80	74	67	42		78
Bolivia (Plurinational State of)	58	≥80	70	≥80	53	56		68
Bosnia and Herzegovina	32	≥80	73	≥80	45	70		≥80
Botswana	≥80	73	≥80	14	39	≥80		≥80
Brazil	≥80	≥80	68	50	76	73		≥80
Brunei Darussalam	76	≥80	≥80	≥80	≥80	≥80		≥80
Bulgaria	66	≥80	≥80	≥80	57	60		≥80
Burkina Faso	55	47	≥80	56	69	≥80	45	24
Burundi	46	49	≥80	58	54	≥80	58	46
Cabo Verde	77	≥80	≥80	53	≥80	≥80		≥80
Cambodia	63	76	≥80	69	45	≥80		71
Cameroon	38	65	69	30	50	78	59	43
Canada	≥80	≥80	≥80	≥80	≥80	≥80		≥80
Central African Republic	35	41	42	35	45	67	54	14
Chad	22	31	58	18	57	75	52	13
Chile	≥80	≥80	≥80	≥80	≥80	68		≥80
China	≥80	≥80	≥80	≥80	75	≥80		≥80
Colombia	≥80	≥80	≥80	64	65	74		≥80
Comoros	38	49	≥80	38	47	61	68	36
Congo	43	79	77	28	55	23	66	21
Cook Islands	65	≥80	≥80	≥80	1	55		≥80
Costa Rica	≥80	≥80	≥80	80	65	66		≥80
Côte d'Ivoire	40	51	76	44	59	76	71	36
Croatia	57	≥80	≥80	≥80	≥80	77		≥80
Cuba	≥80	79	≥80	≥80	66	72		≥80
Cyprus	56	≥80	≥80	≥80	≥80	≥80		≥80

Noncommunicable diseases			Service capacity and access			Service coverage index sub-indices				
Hypertension treatment+	Diabetes prevalence*+	Tobacco non-use+	Hospital beds density+	Health workforce[4]	International Health Regulations core capacity index	RMNCH	Infectious diseases	Noncommunicable diseases	Service capacity and access	UHC SCI (SDG 3.8.1)
46	≥80	67	20	26	41	47	33	65	28	41
32	≥80	68	≥80	≥80	76	48	67	60	≥80	64
39	≥80	70	≥80	≥80	77	68	≥80	61	≥80	74
55	≥80	55	≥80	≥80	41	≥80	≥80	65	74	79
25	78	≥80	42	6	40	45	36	54	21	37
50	67	≥80	≥80	74	52	≥80	≥80	66	73	76
41	≥80	65	≥80	≥80	65	≥80	≥80	61	≥80	79
28	71	64	≥80	≥80	≥80	77	59	50	≥80	68
48	≥80	≥80	≥80	≥80	≥80	≥80	≥80	72	≥80	≥80
54	≥80	62	≥80	≥80	71	≥80	≥80	69	≥80	≥80
42	61	66	≥80	≥80	≥80	51	69	55	≥80	66
53	66	≥80	≥80	≥80	55	≥80	≥80	67	≥80	77
42	57	79	≥80	79	≥80	≥80	≥80	57	≥80	76
38	69	50	49	26	68	59	53	51	44	52
60	71	≥80	≥80	71	56	≥80	≥80	72	73	77
48	≥80	56	≥80	≥80	≥80	≥80	71	61	≥80	79
59	≥80	67	≥80	≥80	67	≥80	≥80	72	≥80	≥80
45	≥80	≥80	57	78	46	78	64	71	59	68
25	≥80	≥80	25	5	39	43	47	61	17	38
26	62	65	≥80	35	52	≥80	60	47	57	60
49	≥80	≥80	75	47	56	72	59	73	58	65
49	≥80	50	≥80	≥80	38	64	67	62	72	66
41	73	72	≥80	24	34	54	66	60	43	55
62	≥80	≥80	≥80	≥80	≥80	73	≥80	76	≥80	≥80
57	68	77	≥80	54	67	≥80	≥80	67	71	78
52	≥80	44	≥80	≥80	72	≥80	67	59	≥80	73
21	≥80	80	11	6	54	60	50	55	15	40
25	≥80	≥80	39	2	38	59	60	59	14	41
36	61	≥80	≥80	51	57	76	≥80	57	66	71
37	≥80	70	41	22	57	74	65	64	37	58
19	69	≥80	≥80	6	41	48	56	49	28	44
73	≥80	≥80	≥80	≥80	≥80	≥80	≥80	≥80	≥80	≥80
18	59	80	56	3	31	38	39	44	17	32
24	≥80	≥80	25	1	40	29	41	59	11	29
58	≥80	58	≥80	≥80	73	≥80	≥80	67	≥80	≥80
39	72	63	≥80	≥80	≥80	≥80	≥80	56	≥80	≥80
55	≥80	≥80	≥80	≥80	69	≥80	77	76	≥80	≥80
25	≥80	71	≥80	13	41	50	51	56	37	48
24	77	79	≥80	5	51	52	36	52	29	41
42	27	66	≥80	75	59	≥80	17	42	76	46
70	≥80	≥80	65	≥80	67	≥80	75	≥80	76	≥80
23	≥80	≥80	22	6	54	51	58	59	19	43
54	≥80	47	≥80	≥80	75	≥80	≥80	62	≥80	80
61	80	74	≥80	≥80	≥80	≥80	76	71	≥80	≥80
55	≥80	50	≥80	≥80	64	≥80	≥80	65	≥80	≥80

Country	RMNCH				Infectious diseases			
	Family planning methods satisfied by modern methods	Antenatal care, 4+ visits	Child immunization (DTP3)	Care-seeking behaviour for ARI	Tuberculosis treatment+	HIV anti-retroviral therapy+	Insecticide treated nets use[3]	Access to at least basic sanitation
Czechia	≥80	*≥80*	≥80	≥80	≥80	*78*		≥80
Democratic People's Republic of Korea	≥80	*≥80*	41	*≥80*	66	*18*		≥80
Democratic Republic of the Congo	28	*56*	65	*34*	70	≥80	58	16
Denmark	≥80	*≥80*	≥80	≥80	≥80	*≥80*		≥80
Djibouti	51	*26*	59	*≥80*	80	31	9	67
Dominica	≥80	*≥80*	≥80	63	1	*62*		*80*
Dominican Republic	≥80	*≥80*	≥80	*≥80*	67	55		≥80
Ecuador	≥80	*80*	72	≥80	66	74		≥80
Egypt	≥80	*≥80*	≥80	*68*	60	40		≥80
El Salvador	≥80	≥80	79	*≥80*	62	59		≥80
Equatorial Guinea	29	*67*	53	*54*	42	41	32	*66*
Eritrea	30	*57*	≥80	*45*	60	71	35	*12*
Estonia	77	*≥80*	≥80	≥80	≥80	*68*		≥80
Eswatini	≥80	*76*	77	*60*	47	≥80		64
Ethiopia	63	*43*	65	*30*	73	78	14	9
Fiji	65	*≥80*	≥80	68	56	45		≥80
Finland	≥80	≥80	≥80	≥80	≥80	*≥80*		≥80
France	≥80	*≥80*	≥80	≥80	≥80	*≥80*		≥80
Gabon	43	*78*	75	*68*	42	54	12	50
Gambia	41	*77*	≥80	*64*	57	33	41	48
Georgia	51	*≥80*	≥80	*74*	62	71		≥80
Germany	≥80	*≥80*	≥80	≥80	≥80	*≥80*		≥80
Ghana	48	*≥80*	≥80	*56*	30	71	55	25
Greece	62	*≥80*	≥80	≥80	46	70		≥80
Grenada	77	*73*	72	77	50	*62*		*≥80*
Guatemala	70	*≥80*	79	*52*	65	73		70
Guinea	34	*58*	47	*69*	79	52	43	30
Guinea-Bissau	51	*≥80*	67	*48*	33	45	20	28
Guyana	54	*≥80*	≥80	*≥80*	62	63		≥80
Haiti	48	*67*	51	*35*	57	≥80		37
Honduras	80	*≥80*	77	*70*	62	56		≥80
Hungary	79	*≥80*	≥80	≥80	≥80	*55*		≥80
Iceland	≥80	*≥80*	≥80	≥80	*≥80*	≥80		≥80
India	76	*58*	≥80	56	67	65		74
Indonesia	≥80	*≥80*	67	*75*	45	28		≥80
Iran (Islamic Republic of)	76	*≥80*	≥80	*76*	60	30		≥80
Iraq	57	*68*	78	*44*	55	*29*		≥80
Ireland	*≥80*	*≥80*	≥80	≥80	≥80	*≥80*		≥80
Israel	69	*≥80*	≥80	≥80	≥80	79		≥80
Italy	67	≥80	≥80	≥80	≥80	*≥80*		≥80
Jamaica	≥80	*≥80*	≥80	*≥80*	61	47		≥80
Japan	59	*≥80*	≥80	≥80	≥80	*67*		≥80
Jordan	57	*≥80*	77	*61*	47	*53*		≥80
Kazakhstan	74	*≥80*	≥80	*≥80*	68	64		≥80
Kenya	79	*62*	≥80	*66*	57	78	50	36
Kiribati	47	*67*	≥80	*≥80*	60	*55*		45
Kuwait	67	*≥80*	≥80	≥80	≥80	*58*		≥80
Kyrgyzstan	66	*≥80*	≥80	*60*	54	50		≥80
Lao People's Democratic Republic	72	*62*	75	*40*	58	*54*		79
Latvia	77	*≥80*	≥80	≥80	≥80	39		≥80
Lebanon	62	*≥80*	67	*74*	≥80	66		≥80
Lesotho	≥80	*77*	≥80	*58*	32	≥80		50

Noncommunicable diseases			Service capacity and access			Service coverage index sub-indices				
Hypertension treatment+	Diabetes prevalence*+	Tobacco non-use+	Hospital beds density+	Health workforce[4]	International Health Regulations core capacity index	RMNCH	Infectious diseases	Noncommunicable diseases	Service capacity and access	UHC SCI (SDG 3.8.1)
63	≥80	56	≥80	≥80	76	≥80	≥80	68	≥80	≥80
43	≥80	75	≥80	≥80	77	73	47	69	≥80	68
26	≥80	≥80	44	8	43	43	48	60	24	42
26	79	75	≥80	≥80	≥80	≥80	≥80	54	≥80	≥80
25	≥80	≥80	79	14	41	52	35	58	35	44
46	55	≥80	≥80	59	63	79	17	60	72	49
53	≥80	≥80	79	≥80	65	≥80	69	75	≥80	77
49	≥80	≥80	72	≥80	66	79	76	73	78	77
44	≥80	65	63	≥80	≥80	≥80	62	62	78	70
63	≥80	≥80	65	≥80	≥80	≥80	69	79	≥80	78
26	61	≥80	≥80	20	34	49	44	50	41	46
24	≥80	≥80	55	20	41	52	36	60	36	45
39	≥80	58	≥80	≥80	74	≥80	≥80	58	≥80	79
34	≥80	≥80	≥80	9	41	73	65	62	33	56
16	≥80	≥80	18	7	72	48	29	52	21	35
35	26	67	≥80	42	54	79	61	39	61	58
51	≥80	69	≥80	≥80	≥80	≥80	≥80	67	≥80	≥80
52	≥80	52	≥80	≥80	≥80	≥80	≥80	65	≥80	≥80
29	67	≥80	≥80	35	33	64	34	54	48	49
28	≥80	≥80	64	8	44	64	44	58	28	46
48	45	55	≥80	≥80	63	71	72	49	≥80	68
63	≥80	69	≥80	≥80	≥80	≥80	≥80	73	≥80	≥80
37	≥80	≥80	38	10	46	69	41	71	26	48
60	≥80	52	≥80	≥80	71	≥80	68	68	≥80	77
47	77	≥80	≥80	62	66	75	66	68	74	70
36	79	≥80	24	55	45	71	69	62	39	59
23	≥80	≥80	17	7	47	50	48	58	18	40
27	≥80	≥80	56	2	46	60	30	62	17	37
47	77	≥80	≥80	75	≥80	79	71	67	≥80	76
28	≥80	≥80	≥80	22	54	49	57	63	49	54
58	≥80	≥80	37	34	58	79	66	79	42	64
52	≥80	55	≥80	≥80	70	≥80	78	64	≥80	79
71	≥80	≥80	≥80	≥80	76	≥80	≥80	≥80	≥80	≥80
30	≥80	61	≥80	35	≥80	68	69	54	64	63
19	≥80	46	75	34	64	78	48	44	55	55
48	≥80	≥80	≥80	≥80	≥80	≥80	55	69	≥80	74
44	≥80	74	72	51	46	61	54	64	55	59
41	≥80	70	≥80	≥80	66	≥80	≥80	66	≥80	≥80
53	≥80	70	≥80	≥80	≥80	≥80	≥80	72	≥80	≥80
54	≥80	67	≥80	≥80	72	≥80	≥80	71	≥80	≥80
51	≥80	≥80	≥80	61	≥80	≥80	63	71	79	74
48	≥80	71	≥80	≥80	≥80	≥80	≥80	69	≥80	≥80
58	67	50	76	≥80	52	70	62	58	70	65
70	64	67	≥80	≥80	≥80	≥80	75	67	≥80	≥80
16	≥80	≥80	74	16	57	74	53	51	41	53
15	30	42	≥80	22	64	71	53	27	52	48
56	53	74	≥80	≥80	≥80	≥80	≥80	60	≥80	78
42	≥80	64	≥80	≥80	42	76	64	61	75	69
32	≥80	55	73	11	51	60	63	56	34	52
51	≥80	47	≥80	≥80	69	≥80	68	59	≥80	75
49	72	45	≥80	≥80	66	71	≥80	54	≥80	73
44	≥80	65	72	13	37	75	51	66	32	53

Country	RMNCH				Infectious diseases			
	Family planning methods satisfied by modern methods	Antenatal care, 4+ visits	Child immunization (DTP3)	Care-seeking behaviour for ARI	Tuberculosis treatment+	HIV anti-retroviral therapy+	Insecticide treated nets use[3]	Access to at least basic sanitation
Liberia	43	≥80	66	58	46	61	51	22
Libya	38	≥80	73	≥80	49	41		≥80
Lithuania	71	≥80	≥80	≥80	≥80	41		≥80
Luxembourg	≥80	≥80	≥80	≥80	≥80	76		≥80
Madagascar	68	60	55	52	59	15	59	14
Malawi	≥80	50	≥80	71	55	≥80	47	47
Malaysia	57	≥80	≥80	≥80	65	55		≥80
Maldives	33	≥80	≥80	74	44	23		≥80
Mali	43	43	77	35	66	53	74	48
Malta	74	≥80	≥80	≥80	≥80	78		≥80
Marshall Islands	72	68	≥80	66	58	55		≥80
Mauritania	26	38	68	43	65	38	37	53
Mauritius	57	78	≥80	76	58	26		≥80
Mexico	≥80	≥80	78	73	68	61		≥80
Micronesia (Federated States of)	61	≥80	72	69	80	55		≥80
Monaco	≥80	≥80	≥80	≥80	≥80	≥80		≥80
Mongolia	71	≥80	≥80	76	19	38		70
Montenegro	32	75	≥80	≥80	≥80	58		≥80
Morocco	75	61	≥80	70	≥80	≥80		≥80
Mozambique	55	51	61	56	≥80	71	51	36
Myanmar	78	59	37	59	33	70		74
Namibia	79	62	≥80	68	58	≥80		36
Nauru	51	54	≥80	69	≥80	55		66
Nepal	62	78	≥80	≥80	41	72		≥80
Netherlands (Kingdom of the)	≥80	≥80	≥80	≥80	≥80	≥80		≥80
New Zealand	≥80	≥80	≥80	≥80	≥80	≥80		≥80
Nicaragua	≥80	63	≥80	67	60	53		73
Niger	40	38	≥80	59	64	≥80	77	15
Nigeria	37	57	56	39	44	≥80	45	45
Niue	38	≥80	≥80	70	1	55		≥80
North Macedonia	28	≥80	≥80	≥80	61	70		≥80
Norway	≥80	≥80	≥80	≥80	≥80	≥80		≥80
Oman	39	74	≥80	56	≥80	65		≥80
Pakistan	51	52	≥80	71	55	14		69
Palau	58	≥80	≥80	77	≥80	55		≥80
Panama	73	≥80	74	≥80	80	49		≥80
Papua New Guinea	50	49	31	63	68	65		19
Paraguay	≥80	78	70	≥80	≥80	66		≥80
Peru	68	≥80	≥80	50	59	80		78
Philippines	58	≥80	57	66	43	41		≥80
Poland	70	79	≥80	≥80	≥80	72		≥80
Portugal	78	≥80	≥80	≥80	≥80	≥80		≥80
Qatar	64	≥80	≥80	≥80	≥80	58		≥80
Republic of Korea	≥80	≥80	≥80	≥80	≥80	76		≥80
Republic of Moldova	61	≥80	≥80	79	80	48		≥80
Romania	72	76	≥80	≥80	≥80	66		≥80
Russian Federation	74	≥80	≥80	≥80	≥80	51		≥80
Rwanda	75	47	≥80	65	69	≥80	57	66
Saint Kitts and Nevis	75	≥80	≥80	78	≥80	62		≥80
Saint Lucia	76	≥80	80	69	≥80	62		≥80
Saint Vincent and the Grenadines	≥80	70	≥80	79	55	62		≥80
Samoa	31	≥80	≥80	72	≥80	55		≥80

Noncommunicable diseases			Service capacity and access			Service coverage index sub-indices				
Hypertension treatment+	Diabetes prevalence*+	Tobacco non-use+	Hospital beds density+	Health workforce+	International Health Regulations core capacity index	RMNCH	Infectious diseases	Noncommunicable diseases	Service capacity and access	UHC SCI (SDG 3.8.1)
26	64	≥80	≥80	5	54	62	42	53	29	45
35	61	68	≥80	≥80	45	66	57	52	76	62
45	79	54	≥80	≥80	≥80	≥80	69	58	≥80	75
51	≥80	70	≥80	≥80	60	≥80	≥80	69	≥80	≥80
16	≥80	60	18	8	46	58	29	46	19	35
24	≥80	≥80	72	3	50	72	58	59	22	48
43	76	68	≥80	≥80	≥80	≥80	70	61	≥80	76
31	≥80	64	≥80	≥80	50	66	47	58	79	61
36	≥80	≥80	14	6	44	47	59	68	15	41
66	≥80	66	≥80	≥80	73	≥80	≥80	75	≥80	≥80
30	27	59	≥80	74	49	73	64	36	71	59
26	≥80	≥80	22	14	35	41	47	61	22	40
60	54	71	≥80	≥80	51	74	52	61	78	66
50	76	≥80	57	≥80	≥80	≥80	72	67	78	75
28	3	56	≥80	55	43	72	74	16	62	48
54	≥80	67	≥80	≥80	77	≥80	≥80	69	≥80	≥80
55	≥80	58	≥80	≥80	79	≥80	37	64	≥80	65
52	≥80	55	≥80	≥80	53	65	77	66	≥80	72
29	≥80	79	41	≥80	73	75	≥80	57	65	69
16	≥80	≥80	41	5	59	56	58	50	23	44
34	≥80	37	59	33	57	56	56	50	48	52
44	79	78	≥80	28	61	75	57	65	55	63
29	≥80	31	≥80	≥80	34	66	68	43	69	60
19	≥80	57	22	54	44	78	62	46	37	54
42	≥80	68	≥80	≥80	≥80	≥80	≥80	66	≥80	≥80
50	≥80	≥80	≥80	≥80	≥80	≥80	≥80	70	≥80	≥80
61	≥80	≥80	50	70	78	76	61	≥80	65	70
13	≥80	≥80	15	2	46	52	50	49	12	35
29	≥80	≥80	28	2	63	46	53	63	14	38
42	39	56	44	≥80	67	69	17	45	67	44
52	≥80	58	≥80	≥80	66	67	75	67	≥80	74
47	80	77	≥80	≥80	≥80	≥80	≥80	66	≥80	≥80
35	64	≥80	64	≥80	75	63	≥80	58	78	70
35	68	71	29	22	52	63	38	55	32	45
36	20	75	≥80	≥80	47	76	78	38	78	65
55	79	≥80	≥80	≥80	76	80	69	74	≥80	78
19	56	44	10	7	21	47	44	36	11	30
38	≥80	≥80	56	79	56	80	≥80	67	63	72
40	≥80	≥80	≥80	≥80	39	72	72	71	70	71
36	≥80	67	53	44	63	66	53	62	53	58
61	≥80	66	≥80	≥80	69	≥80	≥80	73	≥80	≥80
63	≥80	64	≥80	≥80	≥80	≥80	≥80	74	≥80	≥80
51	57	≥80	62	≥80	≥80	≥80	≥80	62	≥80	76
71	≥80	70	≥80	≥80	≥80	≥80	≥80	76	≥80	≥80
37	74	59	≥80	≥80	60	≥80	69	54	≥80	71
59	≥80	60	≥80	≥80	63	≥80	80	69	≥80	78
50	79	62	≥80	≥80	≥80	≥80	72	62	≥80	79
11	≥80	≥80	41	7	67	67	70	44	27	49
49	74	≥80	≥80	≥80	66	≥80	≥80	68	≥80	79
52	76	≥80	≥80	≥80	59	79	≥80	70	79	77
45	≥80	≥80	≥80	≥80	22	≥80	67	69	60	69
20	31	64	52	63	49	64	78	34	54	55

Country	RMNCH				Infectious diseases			
	Family planning methods satisfied by modern methods	Antenatal care, 4+ visits	Child immunization (DTP3)	Care-seeking behaviour for ARI	Tuberculosis treatment+	HIV anti-retroviral therapy+	Insecticide treated nets use[3]	Access to at least basic sanitation
San Marino	67	≥80	≥80	≥80	≥80	≥80		≥80
Sao Tome and Principe	60	≥80	≥80	≥80	32	≥80		48
Saudi Arabia	46	80	≥80	≥80	≥80	79		≥80
Senegal	54	56	≥80	48	70	79	50	60
Serbia	39	≥80	≥80	≥80	42	64		≥80
Seychelles	53	≥80	≥80	79	≥80	76		≥80
Sierra Leone	49	79	≥80	76	72	61	60	25
Singapore	77	≥80	≥80	≥80	≥80	80		≥80
Slovakia	78	≥80	≥80	≥80	≥80	77		≥80
Slovenia	78	≥80	≥80	≥80	≥80	≥80		≥80
Solomon Islands	53	65	≥80	79	≥80	55		35
Somalia	4	24	42	22	41	50	18	40
South Africa	≥80	76	≥80	66	57	74		77
South Sudan	19	17	49	48	72	27	52	16
Spain	≥80	≥80	≥80	≥80	≥80	≥80		≥80
Sri Lanka	74	≥80	≥80	52	48	66		≥80
Sudan	34	51	≥80	48	69	27	51	37
Suriname	67	68	72	≥80	50	17		≥80
Sweden	≥80	≥80	≥80	≥80	≥80	≥80		≥80
Switzerland	≥80	≥80	≥80	≥80	≥80	≥80		≥80
Syrian Arab Republic	61	64	48	77	≥80	38		≥80
Tajikistan	54	64	≥80	68	48	65		≥80
Thailand	≥80	≥80	≥80	80	70	≥80		≥80
Timor-Leste	52	77	≥80	70	50	55		57
Togo	42	55	≥80	39	≥80	76	77	19
Tonga	48	≥80	≥80	≥80	≥80	55		≥80
Trinidad and Tobago	65	≥80	≥80	74	≥80	65		≥80
Tunisia	70	≥80	≥80	≥80	59	29		≥80
Turkmenistan	76	≥80	≥80	51	63	61		≥80
Tuvalu	43	60	≥80	72	72	55		≥80
Türkiye	61	≥80	≥80	45	60	69		≥80
Uganda	59	57	≥80	71	≥80	≥80	65	21
Ukraine	71	≥80	78	≥80	59	62		≥80
United Arab Emirates	60	≥80	≥80	≥80	≥80	≥80		≥80
United Kingdom of Great Britain and Northern Ireland	≥80	≥80	≥80	≥80	≥80	≥80		≥80
United Republic of Tanzania	60	62	≥80	52	65	≥80	45	31
United States of America	≥80	≥80	≥80	≥80	≥80	≥80		≥80
Uruguay	≥80	≥80	≥80	≥80	≥80	71		≥80
Uzbekistan	≥80	≥80	≥80	68	64	51		≥80
Vanuatu	60	52	62	72	64	55		32
Venezuela (Bolivarian Republic of)	≥80	≥80	56	72	69	58		≥80
Viet Nam	77	≥80	≥80	73	46	72		≥80
Yemen	48	25	72	34	59	31		55
Zambia	70	64	≥80	75	≥80	≥80	49	36
Zimbabwe	≥80	72	≥80	48	54	≥80	31	35

Legend

- Very high coverage (≥80)
- High coverage (60–79)
- Medium coverage (40–59)
- Low coverage (20–39)
- Very low coverage (<20)
- Not applicable

Noncommunicable diseases			Service capacity and access			Service coverage index sub-indices				
Hypertension treatment+	Diabetes prevalence*+	Tobacco non-use+	Hospital beds density+	Health workforce[4]	International Health Regulations core capacity index	RMNCH	Infectious diseases	Noncommunicable diseases	Service capacity and access	UHC SCI (SDG 3.8.1)
54	≥80	58	≥80	≥80	29	≥80	≥80	68	66	77
29	≥80	≥80	≥80	26	35	80	53	63	45	59
41	35	≥80	≥80	≥80	≥80	75	≥80	49	≥80	74
21	≥80	≥80	40	11	60	59	64	56	30	50
58	≥80	43	≥80	≥80	68	75	64	63	≥80	72
55	48	71	≥80	≥80	48	79	≥80	57	78	75
20	≥80	≥80	22	3	51	72	51	55	14	41
61	≥80	76	≥80	≥80	≥80	≥80	≥80	77	≥80	≥80
64	≥80	55	≥80	≥80	64	≥80	≥80	66	≥80	≥80
52	≥80	69	≥80	≥80	78	≥80	≥80	68	≥80	≥80
14	51	48	78	17	51	70	54	33	41	47
26	≥80	≥80	48	2	33	17	35	61	14	27
46	68	71	≥80	74	68	76	69	61	80	71
25	≥80	≥80	48	4	54	29	36	59	22	34
54	≥80	60	≥80	≥80	80	≥80	≥80	68	≥80	≥80
36	≥80	69	≥80	44	64	76	66	60	66	67
23	≥80	68	37	17	44	51	43	54	30	44
50	79	≥80	≥80	≥80	46	73	43	68	72	63
40	≥80	66	≥80	≥80	≥80	≥80	≥80	64	≥80	≥80
56	≥80	64	≥80	≥80	≥80	≥80	≥80	67	≥80	≥80
44	≥80	77	79	51	58	62	68	65	62	64
33	77	59	≥80	≥80	57	69	67	53	≥80	67
44	≥80	68	≥80	≥80	≥80	≥80	≥80	67	≥80	≥80
24	≥80	44	≥80	12	60	70	54	47	42	52
20	≥80	≥80	32	7	57	52	55	57	23	44
26	11	56	≥80	58	55	77	77	26	68	57
47	65	≥80	≥80	≥80	53	≥80	≥80	64	75	75
37	77	65	≥80	64	66	≥80	55	57	75	67
46	48	≥80	≥80	≥80	≥80	78	73	59	≥80	75
20	43	49	≥80	19	61	65	69	35	48	52
58	≥80	56	≥80	≥80	≥80	69	74	66	≥80	76
18	≥80	≥80	28	11	68	68	55	55	27	49
49	≥80	63	≥80	≥80	65	≥80	71	65	≥80	76
37	68	≥80	≥80	≥80	≥80	≥80	≥80	61	≥80	≥80
48	≥80	78	≥80	≥80	≥80	≥80	≥80	68	≥80	≥80
15	≥80	≥80	35	4	56	63	53	51	20	43
70	73	67	≥80	≥80	≥80	≥80	≥80	70	≥80	≥80
55	75	69	≥80	≥80	65	≥80	≥80	66	≥80	≥80
44	77	75	≥80	≥80	65	≥80	68	63	≥80	75
14	32	75	≥80	20	74	61	48	32	51	47
63	≥80	≥80	55	≥80	75	73	73	80	74	75
30	≥80	65	≥80	53	64	80	67	58	70	68
36	≥80	71	32	12	55	41	46	62	28	42
24	≥80	79	≥80	9	56	74	61	57	38	56
36	≥80	≥80	≥80	11	59	71	48	67	40	55

[1] Values in italics correspond to imputed values.

[2] Country index values of 80 and over are reported as ≥80 for presentation purposes and to avoid comparisons that are not meaningful given the inability of the index to adequately distinguish between countries with high level of service coverage provision.

[3] Pertains only to countries with highly endemic malaria in sub-Saharan Africa.

[4] Geometric mean of the rescaled values for medical doctors, psychiatrists and surgeons.

* Proxy indicators.

+ Values have been rescaled for incorporation into the index calculations.

Note: The statistics shown in this table are based on the evidence available as of May 2023. They have been compiled primarily using publications and databases produced and maintained by the WHO or the United Nations groups. Wherever possible, estimates have been computed using standardized categories and methods in order to enhance cross-national comparability. This approach may in some cases result in differences between the estimates presented here and the official national statistics prepared and endorsed by individual countries. It is important to stress that these estimates are also subject to uncertainty, especially for countries with weak statistical and health information systems where the quality of underlying empirical data is limited. More details on the indicators and estimates presented here are available at the WHO UHC data portal: https://www.who.int/data/monitoring-universal-health-coverage. Due to the update of the entire underlying data series, the values of UHC SCI and its tracer indicators should not be compared to those reported in the previous editions of the UHC Global monitoring report.

Annex 3 Universal health coverage (UHC) service coverage index (SCI), Sustainable Development Goal (SDG) 3.8.1, by country, 2000–2021

Country	2000	2005	2010	2015	2017	2019	2021
Afghanistan	23	28	29	36	41	42	41
Albania	43	52	57	61	61	64	64
Algeria	56	61	67	74	74	74	74
Andorra	67	71	74	75	76	78	79
Angola	21	24	31	36	40	39	37
Antigua and Barbuda	54	67	73	78	77	75	76
Argentina	68	74	76	≥80	79	78	79
Armenia	44	51	60	67	69	70	68
Australia	≥80	≥80	≥80	≥80	≥80	≥80	≥80
Austria	70	77	≥80	≥80	≥80	≥80	≥80
Azerbaijan	42	38	51	62	64	67	66
Bahamas	54	71	73	77	79	79	77
Bahrain	60	64	68	73	74	76	76
Bangladesh	23	27	37	45	48	50	52
Barbados	54	72	75	≥80	≥80	79	77
Belarus	53	59	70	76	78	≥80	79
Belgium	77	≥80	≥80	≥80	≥80	≥80	≥80
Belize	47	58	64	69	68	69	68
Benin	21	22	33	35	34	35	38
Bhutan	35	37	44	53	56	60	60
Bolivia (Plurinational State of)	37	39	47	60	64	65	65
Bosnia and Herzegovina	44	61	62	68	70	67	66
Botswana	35	48	54	58	58	55	55
Brazil	68	73	76	≥80	≥80	≥80	≥80
Brunei Darussalam	49	64	70	75	78	77	78
Bulgaria	56	61	65	70	72	76	73
Burkina Faso	15	21	30	35	38	38	40
Burundi	19	24	33	40	40	42	41
Cabo Verde	43	54	63	68	70	69	71
Cambodia	24	37	50	56	60	58	58
Cameroon	22	28	33	42	43	43	44
Canada	74	79	≥80	≥80	≥80	≥80	≥80
Central African Republic	18	19	26	30	30	31	32
Chad	15	16	22	27	28	27	29

Country	2000	2005	2010	2015	2017	2019	2021
Chile	65	74	77	79	≥80	≥80	≥80
China	47	57	66	76	79	≥80	≥80
Colombia	52	63	68	78	≥80	≥80	≥80
Comoros	26	32	39	44	46	46	48
Congo	21	25	30	38	36	39	41
Cook Islands	47	50	61	63	63	63	46
Costa Rica	66	70	75	77	≥80	≥80	≥80
Côte d'Ivoire	22	25	33	43	44	41	43
Croatia	71	74	77	78	79	≥80	≥80
Cuba	56	71	78	≥80	≥80	≥80	≥80
Cyprus	51	67	70	78	≥80	≥80	≥80
Czechia	77	77	≥80	≥80	≥80	≥80	≥80
Democratic People's Republic of Korea	46	49	53	43	73	72	68
Democratic Republic of the Congo	21	23	30	37	40	40	42
Denmark	72	74	77	≥80	≥80	≥80	≥80
Djibouti	23	28	37	41	45	45	44
Dominica	49	60	66	70	70	72	49
Dominican Republic	51	57	70	75	75	75	77
Ecuador	51	58	68	77	78	79	77
Egypt	50	52	62	65	69	70	70
El Salvador	52	65	73	77	78	78	78
Equatorial Guinea	20	23	29	41	44	44	46
Eritrea	26	32	40	45	46	46	45
Estonia	60	62	72	77	78	79	79
Eswatini	36	44	51	55	60	58	56
Ethiopia	13	17	27	34	35	36	35
Fiji	42	50	52	60	59	59	58
Finland	75	≥80	≥80	≥80	≥80	≥80	≥80
France	79	≥80	≥80	≥80	≥80	≥80	≥80
Gabon	28	37	45	50	51	49	49
Gambia	29	36	41	43	44	46	46
Georgia	47	61	69	71	70	69	68
Germany	79	≥80	≥80	≥80	≥80	≥80	≥80
Ghana	24	26	35	44	45	46	48
Greece	69	73	75	78	79	79	77
Grenada	50	62	68	71	73	74	70
Guatemala	40	50	58	60	58	61	59
Guinea	16	19	26	33	36	39	40

Country	2000	2005	2010	2015	2017	2019	2021
Guinea-Bissau	19	23	29	37	38	36	37
Guyana	45	59	65	75	77	77	76
Haiti	27	33	42	51	53	53	54
Honduras	42	52	58	65	65	66	64
Hungary	70	72	73	78	79	79	79
Iceland	78	≥80	≥80	≥80	≥80	≥80	≥80
India	30	34	49	57	60	64	63
Indonesia	29	34	42	50	54	56	55
Iran (Islamic Republic of)	50	50	54	68	72	75	74
Iraq	52	53	53	56	57	58	59
Ireland	72	76	77	≥80	≥80	≥80	≥80
Israel	72	76	79	≥80	≥80	≥80	≥80
Italy	70	76	≥80	≥80	≥80	≥80	≥80
Jamaica	48	59	66	74	75	77	74
Japan	70	76	≥80	≥80	≥80	≥80	≥80
Jordan	65	68	72	70	70	67	65
Kazakhstan	56	64	70	77	79	≥80	≥80
Kenya	28	34	44	50	52	51	53
Kiribati	28	32	41	45	47	48	48
Kuwait	74	76	74	77	78	77	78
Kyrgyzstan	51	55	59	69	71	71	69
Lao People's Democratic Republic	25	33	40	47	51	51	52
Latvia	52	58	65	70	75	76	75
Lebanon	54	63	67	71	73	74	73
Lesotho	27	33	45	54	56	53	53
Liberia	20	23	33	37	40	43	45
Libya	55	59	62	61	66	64	62
Lithuania	51	57	63	70	72	75	75
Luxembourg	74	75	77	≥80	≥80	≥80	≥80
Madagascar	17	21	25	29	30	33	35
Malawi	22	28	38	42	48	48	48
Malaysia	52	64	69	75	77	78	76
Maldives	41	45	58	64	71	68	61
Mali	20	24	35	36	38	40	41
Malta	75	77	79	≥80	≥80	≥80	≥80
Marshall Islands	42	46	57	60	61	61	59
Mauritania	21	25	32	33	39	36	40
Mauritius	49	53	59	67	68	68	66

Country	2000	2005	2010	2015	2017	2019	2021
Mexico	56	61	66	74	74	74	75
Micronesia (Federated States of)	36	39	47	46	49	46	48
Monaco	73	78	≥80	≥80	≥80	≥80	≥80
Mongolia	46	49	59	66	67	67	65
Montenegro	60	64	67	69	71	72	72
Morocco	41	51	58	65	69	68	69
Mozambique	20	23	31	40	43	43	44
Myanmar	25	32	45	53	54	60	52
Namibia	39	49	57	63	63	62	63
Nauru	35	40	52	57	59	60	60
Nepal	20	25	37	47	45	50	54
Netherlands (Kingdom of the)	75	78	≥80	≥80	≥80	≥80	≥80
New Zealand	75	≥80	≥80	≥80	≥80	≥80	≥80
Nicaragua	47	53	66	71	73	73	70
Niger	15	19	30	32	33	34	35
Nigeria	20	24	34	39	39	43	38
Niue	42	44	53	59	61	63	44
North Macedonia	58	58	64	73	74	74	74
Norway	72	≥80	≥80	≥80	≥80	≥80	≥80
Oman	61	62	67	69	69	70	70
Pakistan	22	28	33	40	43	44	45
Palau	47	49	58	65	67	66	65
Panama	62	67	72	75	77	79	78
Papua New Guinea	25	26	33	36	33	30	30
Paraguay	48	59	68	72	73	74	72
Peru	48	59	70	76	75	75	71
Philippines	36	38	48	57	60	60	58
Poland	66	71	75	≥80	≥80	≥80	≥80
Portugal	74	≥80	≥80	≥80	≥80	≥80	≥80
Qatar	52	54	67	73	72	75	76
Republic of Korea	73	77	≥80	≥80	≥80	≥80	≥80
Republic of Moldova	51	54	63	70	71	72	71
Romania	69	72	74	78	78	79	78
Russian Federation	54	50	70	74	77	79	79
Rwanda	19	26	39	44	48	47	49
Saint Kitts and Nevis	53	66	72	76	76	77	79
Saint Lucia	49	62	68	74	74	77	77
Saint Vincent and the Grenadines	49	61	68	72	76	76	69

Country	2000	2005	2010	2015	2017	2019	2021
Samoa	41	39	48	53	54	55	55
San Marino	69	73	75	79	≥80	77	77
Sao Tome and Principe	33	37	47	52	55	60	59
Saudi Arabia	65	67	69	71	73	72	74
Senegal	21	25	37	45	49	51	50
Serbia	44	63	63	72	73	77	72
Seychelles	44	48	59	73	75	74	75
Sierra Leone	14	16	27	35	39	38	41
Singapore	64	70	≥80	≥80	≥80	≥80	≥80
Slovakia	65	73	76	≥80	≥80	≥80	≥80
Slovenia	73	74	77	≥80	≥80	≥80	≥80
Solomon Islands	31	32	40	45	47	46	47
Somalia	11	12	17	21	25	26	27
South Africa	43	51	63	70	71	71	71
South Sudan	18	19	23	27	30	31	34
Spain	69	74	78	≥80	≥80	≥80	≥80
Sri Lanka	44	48	55	61	65	66	67
Sudan	25	27	36	43	45	45	44
Suriname	45	58	65	71	72	72	63
Sweden	72	76	≥80	≥80	≥80	≥80	≥80
Switzerland	75	79	≥80	≥80	≥80	≥80	≥80
Syrian Arab Republic	46	52	58	60	62	62	64
Tajikistan	42	46	58	68	69	70	67
Thailand	43	59	68	76	≥80	≥80	≥80
Timor-Leste	28	31	41	47	50	50	52
Togo	19	25	30	40	43	41	44
Tonga	43	45	53	54	56	57	57
Trinidad and Tobago	53	66	72	77	77	76	75
Tunisia	44	58	61	63	65	68	67
Türkiye	57	64	66	76	77	77	76
Turkmenistan	54	62	68	72	73	74	75
Tuvalu	37	40	49	52	52	52	52
Uganda	22	28	36	43	46	48	49
Ukraine	53	54	65	69	71	77	76
United Arab Emirates	48	59	62	72	73	75	≥80
United Kingdom of Great Britain and Northern Ireland	72	79	≥80	≥80	≥80	≥80	≥80
United Republic of Tanzania	20	23	33	38	40	42	43
United States of America	78	≥80	≥80	≥80	≥80	≥80	≥80

Country	2000	2005	2010	2015	2017	2019	2021
Uruguay	65	70	78	≥80	≥80	≥80	≥80
Uzbekistan	55	56	68	73	74	75	75
Vanuatu	31	31	38	45	44	46	47
Venezuela (Bolivarian Republic of)	49	60	67	77	75	74	75
Viet Nam	37	44	59	68	70	69	68
Yemen	28	30	39	39	41	42	42
Zambia	28	34	45	52	53	54	56
Zimbabwe	30	31	46	56	57	55	55

Legend

Very high coverage (≥80)
High coverage (60–79)
Medium coverage (40–59)
Low coverage (20–39)
Very low coverage (<20)

Country index values of 80 and over are reported as ≥80 for presentation purposes and to avoid comparisons that are not meaningful given the inability of the index to adequately distinguish between countries with high level of service coverage provision.

Note: The statistics shown in this table are based on the evidence available as of May 2023. They have been compiled primarily using publications and databases produced and maintained by the WHO or the United Nations groups. Wherever possible, estimates have been computed using standardized categories and methods in order to enhance cross-national comparability. This approach may in some cases result in differences between the estimates presented here and the official national statistics prepared and endorsed by individual countries. It is important to stress that these estimates are also subject to uncertainty, especially for countries with weak statistical and health information systems where the quality of underlying empirical data is limited. More details on the indicators and estimates presented here are available at the WHO UHC data portal: https://www.who.int/data/monitoring-universal-health-coverage. Due to the update of the entire underlying data series, the values of UHC SCI and its tracer indicators should not be compared to those reported in the previous editions of the UHC Global monitoring report.

Annex 4 Universal health coverage (UHC) service coverage index (SCI), Sustainable Development Goal (SDG) 3.8.1 and its four sub-indices, by WHO region and World Bank income groups, 2021

Grouping	UHC SCI (SDG 3.8.1)	RMNCH	Infectious diseases	Noncommunicable diseases	Service capacity and access
Global	68	75	70	59	71
WHO Region					
African Region	44	55	51	57	27
Region of the Americas	≥80	≥80	≥80	72	≥80
Eastern Mediterranean Region	57	67	52	59	56
European Region	≥80	≥80	≥80	66	≥80
South-East Asia Region	62	69	64	53	62
Western Pacific Region	79	≥80	≥80	58	≥80
World Bank income group					
High income	≥80	≥80	≥80	69	≥80
Upper-middle income	79	≥80	≥80	61	≥80
Lower-middle income	58	68	60	55	55
Low income	42	52	45	57	26
World Bank Region					
East Asia & Pacific	75	≥80	77	57	≥80
Europe & Central Asia	≥80	≥80	≥80	66	≥80
Latin America & Caribbean	76	77	76	72	≥80
Middle East & North Africa	69	74	66	62	77
North America	≥80	≥80	≥80	71	≥80
South Asia	59	66	63	54	57
Sub-Saharan Africa	43	54	49	57	25

Legend

Very high coverage (≥80)
High coverage (60–79)
Medium coverage (40–59)
Low coverage (20–39)
Very low coverage (<20)

Index values of 80 and over are reported as ≥80 for presentation purposes and to avoid comparisons that are not meaningful given the inability of the index to adequately distinguish between countries with high level of service coverage provision.

Note: The statistics shown in this table are based on the evidence available as of May 2023. They have been compiled primarily using publications and databases produced and maintained by the WHO or the United Nations groups. Wherever possible, estimates have been computed using standardized categories and methods in order to enhance cross-national comparability. This approach may in some cases result in differences between the estimates presented here and the official national statistics prepared and endorsed by individual countries. It is important to stress that these estimates are also subject to uncertainty, especially for countries with weak statistical and health information systems where the quality of underlying empirical data is limited. More details on the indicators and estimates presented here are available at the WHO UHC data portal: https://www.who.int/data/monitoring-universal-health-coverage. Due to the update of the entire underlying data series, the values of UHC SCI and its tracer indicators should not be compared to those reported in the previous editions of the UHC Global monitoring report.

Source: World Bank Income Groups (July 1, 2022 edition) *(12)*.

Annex 5 Universal health coverage (UHC) service coverage index (SCI), Sustainable Development Goal (SDG) 3.8.1, by WHO region and World Bank income groups, 2000–2021

Grouping	2000	2005	2010	2015	2017	2019	2021
Global	45	50	58	65	67	68	68
WHO Region							
African Region	23	28	36	42	44	45	44
Region of the Americas	66	71	75	≥80	≥80	≥80	≥80
Eastern Mediterranean Region	37	42	47	53	56	57	57
European Region	64	68	75	79	≥80	≥80	≥80
South-East Asia Region	30	34	47	56	59	62	62
Western Pacific Region	49	57	66	75	78	79	79
World Bank income group							
High income	75	79	≥80	≥80	≥80	≥80	≥80
Upper-middle income	62	61	67	75	77	77	79
Lower-middle income	48	54	47	54	56	59	58
Low income	28	31	35	37	41	42	42
World Bank Region							
East Asia & Pacific	46	54	63	71	74	76	75
Europe & Central Asia	64	68	75	79	≥80	≥80	≥80
Latin America & Caribbean	58	65	70	77	77	77	76
Middle East & North Africa	50	54	60	65	67	68	69
North America	78	≥80	≥80	≥80	≥80	≥80	≥80
South Asia	28	33	45	54	57	59	59
Sub-Saharan Africa	22	26	35	41	42	43	43

Legend

- Very high coverage (≥80)
- High coverage (60–79)
- Medium coverage (40–59)
- Low coverage (20–39)
- Very low coverage (<20)

Index values of 80 and over are reported as ≥80 for presentation purposes and to avoid comparisons that are not meaningful given the inability of the index to adequately distinguish between countries with high level of service coverage provision.

Note: The statistics shown in this table are based on the evidence available as of May 2023. They have been compiled primarily using publications and databases produced and maintained by the WHO or the United Nations groups. Wherever possible, estimates have been computed using standardized categories and methods in order to enhance cross-national comparability. This approach may in some cases result in differences between the estimates presented here and the official national statistics prepared and endorsed by individual countries. It is important to stress that these estimates are also subject to uncertainty, especially for countries with weak statistical and health information systems where the quality of underlying empirical data is limited. More details on the indicators and estimates presented here are available at the WHO UHC data portal: https://www.who.int/data/monitoring-universal-health-coverage. Due to the update of the entire underlying data series, the values of UHC SCI and its tracer indicators should not be compared to those reported in the previous editions of the UHC Global monitoring report.

Source: World Bank Income Groups (July 1, 2022 edition) *(12)*.

Annex 6 Global standards to classify out-of-pocket (OOP) health spending

OOP health spending corresponds to expenditure by households on goods and services whose primary purpose is health care.

In 2019, the UN Statistical Division provided a revised classification of household health spending (COICOP 2018 division 06) *(13).* According to this classification, health spending is defined depending on its purpose clearly related to health. This new standard is a combination of the classification of health care functions (e.g. preventive versus curative, rehabilitative and long-term care services) used to compile National Health Accounts and the mode of provision of health care *(14).* The latter includes outpatient care, home care, long-term care and inpatient care services rather than hospital services, as hospitals can and do provide both outpatient and inpatient care services. An important feature of the revised classification is that it clearly identifies products and services critical for specific segments of the population (e.g. assistive products for the older population and people living with disabilities) or have become important during the pandemic. As an illustration, prevention and protective devices include masks; preventive goods and services include immunization services and the cost of the vaccine; alcohol for medical use; other preventive services such as medical check-ups and screening. It may not be clear whether to consider some services and goods spending as current health expenditure. The functional classification of health care sets the borderline according to purpose: whether the primary purpose of these services and goods is health and whether an application of medical knowledge and technology is involved. For instance, recreational activities, fitness training, or specific diets could have a health impact but are excluded from the health care consumption frame, as their primary purpose is generally related to well-being, unless they are part of activities recommended medically *(14)*. Similarly, nutritional supplements are part of the food category and should not be counted as OOP payments for health *(13).*

OOP payments correspond to spending by households: the source of funding is their income (including remittances), and/or savings, and/or loans *(14)*. OOP payments exclude payments reimbursed or covered by voluntary or private health insurance, nongovernmental organizations, or the government. Conditional cash transfers covering health expenditure made by households are defined as a specific government health financing scheme and not as a source of OOP health expenditure made by households *(14)*.

Annex 7 Differences between catastrophic and impoverishing OOP health spending

Out-of-pocket health spending is a source of financial hardship. Financial hardship is assessed by comparing either a household's OOP health spending to its ability to pay (metrics based on this approach are used to identify catastrophic health spending, see Annex 8) or its consumption levels (gross and net) of such spending relative to a poverty line (metrics based on this approach are used to identify impoverishing health spending).

For some people, the relative level of OOP health spending is a source of financial hardship (incidence of catastrophic health spending, see Annex 8). Within the SDG monitoring framework, the incidence of catastrophic health spending is measured as the proportion of the population with OOP health spending exceeding 10% or 25% of the household's total consumption or income (budget) *(15).* Wealthier households may be spending more than 10% (or 25%) of their budget on health care, which may lead to cutting consumption of other needs but not necessarily to below-subsistence levels. Less wealthy households may be spending less than 10% of their budget on health and still struggle to reach a decent living standard.

For some people, the absolute level of OOP health spending matters. SDG 3.8.2 indicators do not capture this, which is why indicators of impoverishing health spending are used alongside indicators of catastrophic health spending. Indicators of impoverishing health spending compare the absolute level of OOP health spending to the household's total consumption or income shortfall to the poverty line.

- If the shortfall is negative, the household is poor as the household budget is below the poverty line. In this case, any amount spent OOP on health is a source of financial hardship as OOP health spending deepens their poverty levels and forces people to make the difficult choice to either reduce their consumption of non-medical necessities further, even if for a short period of time, or engage in harmful coping mechanisms, such as distress sales of productive assets and indebtedness to try to limit the short-term adverse effect on their living standard *(16,17).* The proportion of the population further impoverished by OOP health spending corresponds to the poor spending any amount on health OOP as a proportion of the total population.
- If the consumption shortfall is positive, but the absolute level of OOP health spending exceeds it, people are impoverished by OOP health spending. Indeed, these are people with a household budget above the poverty line only because of OOP health spending, while their consumption of other goods and services than those related to health lies below the minimum living standard indicated by the poverty line. The proportion of the population impoverished by OOP health spending (pushed into poverty) is estimated as the change in the poverty head-count ratio resulting from the exclusion of OOP health spending from the indicator of household welfare *(18–21).*

The population incurring impoverishing health spending includes both those impoverished and those further impoverished. These two groups are always mutually exclusive.

To monitor financial hardship across the whole population at the global level, there is a need to identify those incurring relatively large OOP health payments regardless of their poverty status with SDG 3.8.2 indicators; those with OOP health spending exceeding the household consumption shortfall to the poverty line; and the poor who are further impoverished by any amount spent on health out of pocket.

Annex 8 Different ways of measuring catastrophic OOP health spending

There are alternative ways to monitor catastrophic OOP health spending. Some measures define OOP health spending as catastrophic when it exceeds a given percentage (10% or 25%) of *total consumption or income*. This so-called "budget share" approach is adopted in SDG 3.8.2 *(15).* Empirically, catastrophic spending is usually less concentrated among "poor people" (or more concentrated among "rich people") when the budget share approach is used. Some households may appear richer than they are because they have borrowed money to finance spending on health (or other items), but it can be safely assumed that households in the poorest quintile are genuinely poor.

Other studies relate health spending to consumption or income net of a deduction for spending on necessities rather than to total consumption or income. The argument is that everyone needs to spend at least some minimum amount on basic needs such as food, housing, and utilities, and these absorb a larger share of consumption or income for a poor household than a wealthy household. As a result, a poor household may not be able to spend much, if anything, on health care. In contrast, a wealthy household may spend 10% or 25% of its budget on health care and still have enough resources left over to meet its basic needs.

There are different approaches to deducting household spending on basic needs *(16, 21–25)*. Some measures deduct all of a household's actual spending on food *(21).* Some deduct a standard amount from a household's total resources to represent basic spending on food and to address the role of preferences in food spending *(22).* Some deduct the prevailing poverty line, which is essentially an allowance for all basic needs *(23).* Lastly, some deduct an amount representing spending on specific basic needs (food, housing, and utilities) – the approach used in the WHO European Region *(25)*. With all these measures, catastrophic health spending is more likely to be concentrated among poor households than with the budget share approach, and the last measure is particularly sensitive to financial hardship in poorer households.

To try and overcome this shortcoming of SDG indicator 3.8.2, systematic reporting on catastrophic health spending and impoverishing health spending is required using complementary definitions and interpreting them jointly (as illustrated in Chapter 2 of this report). This approach helps to monitor the impact of OOP health spending across the whole population at the global level.

Annex 9 Global and regional aggregation methods

Country-specific survey estimates are used to produce global and regional aggregates on financial hardship at different reference years. In relation to the previous global monitoring reports, the 2019 reference year is added for the first time. The estimated global and regional estimates for the earlier reference years are updated, given the larger data availability and minor methodological changes described below. To produce the aggregated estimates, rates are required for each country and territory for each reference year. Since household surveys with information on total consumption or income and OOP health expenditure are not available for every country and every year, rates in reference years need to be projected for each country and territory with missing primary data points. The projection into the reference years depends on the data availability for each country and using the following these steps:

1. **Case 1:** If a primary data point (estimate generated from a survey conducted in the country in the reference year) is available for the reference year, the survey estimate of the financial protection indicator is directly used.

2. **Case 2:** If a data point is not available for the reference year, but two data points exist before and after the reference year within a window of +/- 5 years around the reference year, the country's rate for the reference year is projected by a linear interpolation between the two years with the available data.

3. **Case 3:** If the conditions above are not met, but there are at least two data points for the country at any time since 2000, the reference year rate is predicted based on an estimated fixed effects regression model. In the regression model, a logarithm of the financial protection indicator is regressed on a logarithm of GDP per capita, the logarithm of the aggregate share of OOP health spending over final household consumption (OOP/C), year, and country fixed effects. The time trend (year coefficient) is interacted with the World Bank's income group classification for the corresponding year. A logarithm of the poverty head count is added to the regression as a dependent variable for the impoverishment indicators. In addition to the availability of at least two data points, the implementation of this approach also requires available data on all the model's dependent variables.

4. **Case 4:** If all the conditions listed above are unmet, the financial protection indicator is projected as the median among countries in the same World Bank income group for which reference year values are produced in one of the three approaches listed above (Cases 1–3). If a World Bank income group classification is not available for the country or territory, a regional reference group is used based on the United Nations Statistical Division M49 classification.

Table A9.1 below provides a country-level breakdown of all data points across the different indicators and categories just described and the population coverage of these countries in their respective reference years. For the reference year 2017, for example (column C), actual data points on catastrophic OOP expenditure are used for 39 countries (Case 1), and for an additional 28 countries, there are data points within the 2012–2022 window (Case 2). Although the reference group median (Case 4) is used to project rates in 104 countries and territories, they represent only 7% of the global population. The table shows the stark change in survey availability since 2020. Up to the 2017 reference year, estimates for most of the global population are based on data points within the +/- 5-year window (Case 1 or Case 2). For the 2019 reference year, predictions based on econometric modeling are used for 68% of the global population. Use of data from 2020 and 2021 to produce the estimates for the 2019 reference year, is a cause for concern given the impact of the COVID-19 pandemic. However, it would have a negligible impact on the results. Primary data estimates for the years 2020 and 2021 were available for only 21 countries, 16 of which with primary estimates for 2019. Therefore, the values from the pandemic period do not affect the estimated value for the reference year. The five other countries represent only 3.5% of the world's population. The 2019 estimates for these countries combine 2020 data with pre-pandemic data.

Table A9.1: Categories of data points used to construct global estimates of catastrophic and impoverishing OOP health spending

	[A]				[B]				[C]				[D]			
	Reference year 2010				Reference year 2015				Reference year 2017				Reference year 2019			
	Countries (No.)		Population coverage (%)		Countries (No.)		Population coverage (%)		Countries (No.)		Population coverage (%)		Countries (No.)		Population coverage (%)	
	C	*I*	*C*	*I*	*C*	*I*	*C*	*I*	*C*	*I*	*C*	*I*	*C*	*I*	*C*	*I*
(1) Reference year point **(Case 1)**	46	39	28	25	51	42	30	24	39	28	42	37	32	17	32	10
(2) At least two points within +/- 5 years band **(Case 2)**	49	42	54	52	45	32	52	47	28	14	34	25	4	1	4	2
(3) Prediction based on fixed effects model **(Case 3)**	38	32	11	10	38	41	11	15	66	68	16	23	95	89	68	70
(4) Projection as median of reference group **(Case 4)**	104	124	7	13	103	122	7	14	104	127	7	14	106	130	7	19

Notes: C, catastrophic health spending; I, impoverishing health spending at the 2017 PPP US$ 2.15 a day level. Data availability for global monitoring may not necessarily align with the availability of data at national or regional levels.

Source: Based on an analysis of the microdata from the Global database on financial protection assembled by WHO and the World Bank, 2023 *(26,27)*.

Methodological changes relative to the Global monitoring report 2021

While the approach to construct global and regional estimates is similar to that used in the Global monitoring report 2021, a few modifications to the methodology were implemented (see below).

1. There has been a change to the reference group used for Case 4. In the Global monitoring report 2021, the median among countries in the same UN region was used to project rates in the reference year if an estimate could not be produced using Cases 1–3. The current analysis uses the median among countries of the same income group (low income, lower-middle income, upper-middle income, high income). If an income group classification is unavailable for a country/territory for a reference year, the United Nations Statistical Division M49 regional grouping is used.

2. In the current regression model used to produce predictions under Case 3, country observations are weighted by population. The regression model used to produce the predictions for the Global monitoring report 2021 did not include these weights.

3. Income group-specific time trends were introduced by relating the year with the income group in the regression model used to produce predictions under Case 3.

Annex 10 Data availability

The available dataset used to produce this report and to calculate the global and regional estimates of financial hardship has expanded since the 2021 report. This 2023 report relies on 987 primary estimates for 167 countries or territories on catastrophic OOP health spending (compared to 903 primary estimates in 2021) and 856 primary estimates for 146 countries or territories on impoverishing OOP health spending (compared to 816 primary estimates in 2021) (see Tables A10.1 and A10.2 below). Primary estimates are based on household surveys collected by countries' national statistical offices on household OOP health expenditures and household total consumption expenditure or income. The additional primary estimates are used to produce regional and global estimates for the reference year 2019 that were not reported on previously and to update the regional and global estimates for the earlier reference years.

Altogether, the countries with validated primary estimates represent more than 92% of the world's population; half of the data points were collected after 2009. Comparing population coverage across WHO Regions, current dataset covers countries accounting for more than 90% of the regional population aggregates.

Globally, on average, there were 5.9 and 5.8 estimates (survey-years) per country available for catastrophic and impoverishing health spending indicators, respectively (see Table A10.3). The highest number of countries with just one estimate (survey-year) was in the WHO Western Pacific Region, followed by the WHO Region of the Americas, for both catastrophic and impoverishing health spending indicators. On average, globally, the frequency of estimates was every 4.5–4.7 years, with the highest frequency in the WHO European Region (every three years) and the lowest frequency in the WHO African Region (every 6.5–6.6 years).

Table A10.1 Availability of survey-based estimates for catastrophic OOP health spending (SDG 3.8.2 indicators)

	# observations	# countries	Median year	Median most recent year	Population coverage in 2019 (%)
Global	**987**	**167**	**2010**	**2016**	**96.5**
African Region	151	44	2010	2017	95.7
Region of the Americas	135	29	2010	2016	95.8
Eastern Mediterranean Region	78	20	2011	2017	98.5
European Region	465	48	2009	2016	90.2
South-East Asia Region	77	10	2010	2017	98.7
Western Pacific Region	81	16	2012	2017	99.1
Non-Member States	0	0			0

Note: Data availability for global monitoring, which may not necessarily align with the availability of data at national or regional levels.

Source: Based on an analysis of the microdata from the Global database on financial protection assembled by WHO and the World Bank, 2023 *(26,27)*.

Table A10.2 Availability of survey-based estimates for impoverishing OOP health spending (pushed and further pushed) at 2017 PPP US$ 2.15 a day level (SDG-related indicator of financial hardship)

	# observations	# countries	Median year	Median most recent year	Population coverage in 2019 (%)
Global	**856**	**146**	**2009**	**2016**	**92.4**
African Region	121	41	2010	2016	95.7
Region of the Americas	122	24	2010	2016	95.9
Eastern Mediterranean Region	67	16	2011	2016	98.5
European Region	437	47	2009	2016	90.2
South-East Asia Region	71	10	2010	2017	98.7
Western Pacific Region	38	8	2012	2018	99.1

Note: Data availability for global monitoring, which may not necessarily align with the availability of data at national or regional levels.

Source: Based on an analysis of the microdata from the Global database on financial protection assembled by WHO and the World Bank, 2023 *[26,27]*.

Table A10.3 Average number and frequency of survey-based estimates for catastrophic and impoverishing OOP health spending (pushed and further pushed) at 2017 PPP US$ 2.15 a day level

	Catastrophic OOP health spending (SDG 3.8.2 indicators)			Impoverishing OOP health spending at the 2017 PPP US$ 2.15 a day level (SDG-related indicator of financial hardship)		
	The average number of estimates per country	% countries with just one estimate	The average frequency of estimates (when more than one data point is available), in years	The average number of estimates per country	% countries with just one estimate	The average frequency of estimates (when more than one data point is available), in years
Global	**5.9**	**16.2**	**4.7**	**5.8**	**14.8**	**4.5**
African Region	3.4	11.4	6.6	3.0	14.6	6.5
Region of the Americas	4.7	27.6	5.4	5.1	20.8	5.2
Eastern Mediterranean Region	3.9	15.0	5.2	4.2	12.5	4.4
European Region	9.7	10.4	3.0	9.2	10.4	3.0
South-East Asia Region	7.7	20.0	3.8	7.2	20.0	3.7
Western Pacific Region	5.1	37.5	3.5	4.0	40.0	4.1

Source: Based on an analysis of the microdata from the Global database on financial protection assembled by WHO and the World Bank, 2023 *[26,27]*.

Joint distribution of catastrophic and impoverishing OOP health spending

A sample of 801 surveys covering 145 countries[23] was analysed for the joint distribution of catastrophic OOP health spending (at 10% threshold) and impoverishing OOP health spending (both for the population pushed into poverty and for the population further pushed into poverty) at a US$ 2.15 poverty line and a sample of 799 surveys covering 151 countries[24] at a relative poverty line definition.

Household types

Three disaggregation characteristics were considered to compare catastrophic and impoverishing OOP health spending across different types of households. The first two characteristics focus on the households' heads and distinguish individuals according to the sex of their households' heads (female or male) for the first one, and to the age of their households' heads (below 60 years, or 60 and above years) for the second one. The third characteristic aims to compare catastrophic health spending across households with different age compositions, for which four age-composition types were constructed: (i) the first age composition type includes households composed of people aged between 20 and 59 years. This age category includes only young adults and adults as per the latest recommended age classification *(28)*, but is referred to simply as "adults only" hereafter. The three other age composition types have already been defined and correspond to: (ii) "multi-generational households" (include adults living with people below 20 years old, children (0 to 9 years old) and/or adolescents (10 to 19 years old), as well as people aged 60 years old or more -older adults); (iii) adults living with children and/or adolescents, i.e. households with members aged 59 years old at most, and referred to as "younger households"; and (iv) adults living with at least one older person (60 years and older) and referred to as "older and only older households" (this latter group also includes households composed of only older people).

For analyses by sex and age of the household's head, data were available from 107 and 108 countries, respectively, with the most recent estimate available for the 2009–2020 period. In both samples, the median most recent year is 2016, representing 78% of the world population in 2019.[25] For analysis by household's age composition, data were available from 94 countries, with the most recent estimate available for the 2009–2020 period with a median most recent year of 2016.[26]

[23] 45 low income, 24 lower-middle income, 23 upper-middle income, and 47 high-income countries, based on the latest year of available estimates

[24] 47 low income, 24 lower-middle income, 22 upper-middle income, and 52 high-income countries, based on the latest year of available estimates

[25] For the sex of households' heads, among the 107 countries for which disaggregated data is available, 25 are low-income countries (where 86% of the 2019 population is represented), 36 lower-middle income (88%), 22 upper middle-income (74%) and 24 high-income countries (56%). For the age of households' heads, among the 108 countries for which disaggregated data is available, 25 are low-income countries, 38 lower-middle-income, 23 upper-middle-income, and 22 high-income countries; 2019 population representations within each income group are similar to the ones observed with heads' sex disaggregated data.

[26] 23 of these countries are low-income and 21 are upper-middle-income countries covering 81% and 74% of the 2019 population in each respective income group; 32 are lower-middle-income countries representing 41% of the 2019 population at that country income level; 18 are high-income but they account only for 27% of the 2019 high-income group population.

Annex 11 Financial hardship estimates by WHO regions

Table A11.1. Percentage of the population suffering catastrophic or impoverishing OOP health spending

WHO regions	Percentage of the population with catastrophic OOP health spending due to:											
	out-of-pocket health spending exceeding 25% of the household budget (SDG 3.8.2 at the 25% threshold)						out-of-pocket health spending exceeding 10% of the household budget* (SDG 3.8.2 at the 10% threshold)					
	2000	2005	2010	2015	2017	2019	2000	2005	2010	2015	2017	2019
Global	1.9	2.6	2.7	3.3	3.6	3.8	9.6	11.1	11.4	12.6	13	13.5
African Region	1.4	2.6	1.9	1.8	1.9	2.6	7.8	9.4	8.4	8.3	8.1	8.6
Region of the Americas	1.5	1.5	1.4	1.4	1.3	1.5	8.3	8.4	8.3	7.8	7.4	7.8
Eastern Mediterranean Region	1.3	1.5	1.7	2.4	2.7	2.2	9.2	9.9	9.7	12.9	13.2	12.1
European Region	0.9	1	1	1.1	1.2	1.3	6.3	6.7	6.2	7.1	7.5	7.9
South-East Asia Region	2.8	3	3.2	4.9	5.6	5.9	12.7	13	13.1	15.1	15	16.1
Western Pacific Region	2.2	4	4.6	4.8	5.3	5.3	9.9	14.2	16.1	17.8	19.4	19.8
Non-Member States	0.8	0.9	0.9	1.2	1.2	1.2	6.4	6.6	5.9	7	7	7.8
WHO regions	**Percentage of the population with impoverishing OOP health spending****											
	at the relative poverty line of 60% of median per capita consumption						at the extreme poverty line of 2017 PPP US$ 2.15 a day per person					
	2000	2005	2010	2015	2017	2019	2000	2005	2010	2015	2017	2019
Global	11.8	11.9	14.3	15.6	15.8	16.7	22.2	18.1	13.7	8.3	6.3	4.4
African Region	14.8	15.5	16.4	16.7	17	16.2	45.3	33.1	28.7	21.6	16.3	13.8
Region of the Americas	13.2	12.6	14.2	13.7	14.1	14.5	6.1	3.4	1.8	0.8	0.7	0.9
Eastern Mediterranean Region	12.6	14	13.8	14.4	15.3	14.6	25.2	11.3	6.9	5.3	5	4.2
European Region	12.3	13.4	13.6	13.6	13.6	13.3	1.4	1	0.9	0.6	0.6	0.7
South-East Asia Region	7.6	7.8	9.6	9.9	9.4	13	31.5	30.5	24.2	13.9	9.7	6.6
Western Pacific Region	13.4	12.5	18.5	23.6	24	24.8	22.6	17.7	11.1	4.5	3.1	0.6
Non-Member States	12	13.1	11.9	11.8	11.5	11.1	0.1	0	0	0	0	0

Notes: * it includes the population with out-of-pocket (OOP) health spending exceeding 25% of the household budget (SDG 3.8.2 at the 25% threshold). The difference between SDG 3.8.2 at 10% threshold and SDG 3.8.2 at the 25% threshold corresponds to the percentage of the population with OOP health spending greater than 10% but lower than 25% of the household budget. ** This total is obtained by adding up the percentage of the population impoverished and further impoverished by OOP health spending.

All aggregates were produced jointly by the WHO and the World Bank using the methods described in Annex 9. WHO and World Bank estimated values are based on standard definitions and methods to ensure cross-country comparability, which may not correspond to the methods used at national or regional levels to monitor catastrophic spending on health. These estimates are based on data availability for global monitoring, which may not necessarily align with the availability of data at national or regional levels.

Source: Global database on financial protection assembled by the WHO and the World Bank, 2023 *[26,27]*.

Table A11.2 Number of people suffering catastrophic or impoverishing OOP health spending (millions)

WHO regions	Number of people with catastrophic OOP health spending due to:											
	out-of-pocket health spending exceeding 25% of the household budget (SDG 3.8.2 at the 25% threshold)						out-of-pocket health spending exceeding 10% of the household budget* (SDG 3.8.2 at the 10% threshold)					
	2000	2005	2010	2015	2017	2019	2000	2005	2010	2015	2017	2019
Global	116.9	170.3	189.8	244.8	275.6	292.0	588.2	729.9	793.6	936.9	987.0	1042.9
African Region	9.2	20.0	16.7	18.2	20.2	28.7	52.3	71.3	72.8	82.6	85.4	95.1
Region of the Americas	12.2	13.0	13.4	14.0	13.2	15.3	68.6	74.2	76.8	75.8	73.2	78.9
Eastern Mediterranean Region	6.3	8.4	10.5	16.4	19.1	16.4	45.2	54.6	60.3	88.0	93.6	89.2
European Region	7.6	8.7	8.6	10.3	11.5	12.0	54.4	58.9	55.1	65.2	68.9	73.7
South-East Asia Region	44.1	50.8	58.5	95.4	110.5	119.2	200.1	222.0	238.3	292.0	297.1	326.2
Western Pacific Region	37.1	69.1	81.7	89.9	100.5	99.9	164.9	246.0	287.6	330.1	365.6	376.3
Non-Member States	0.3	0.4	0.4	0.5	0.5	0.5	2.5	2.7	2.4	3.0	3.0	3.4

WHO regions	Number of people with impoverishing OOP health spending**											
	at the relative poverty line of 60% of median per capita consumption						at the extreme poverty line of 2017 PPP US$ 2.15 a day per person					
	2000	2005	2010	2015	2017	2019	2000	2005	2010	2015	2017	2019
Global	724.5	779.3	993.8	1158.6	1195.9	1294.9	1365.3	1181.1	958.2	618.0	470.6	344.3
African Region	99.2	118.2	142.6	166.1	178.3	178.4	302.2	252.0	249.5	214.9	171.6	152.2
Region of the Americas	109.4	111.2	131.1	133.6	139.9	146.1	51.2	29.5	17.3	8.4	6.5	9.2
Eastern Mediterranean Region	62.1	77.2	85.7	99.2	109.6	108.0	124.0	62.3	43.1	36.3	35.9	30.6
European Region	107.0	117.7	122.1	124.9	126.3	123.6	12.0	8.8	8.1	5.0	5.1	6.2
South-East Asia Region	119.8	133.9	176.4	191.2	185.5	262.4	498.1	521.9	441.3	270.1	192.6	133.6
Western Pacific Region	222.6	216.1	331.1	439.0	451.7	471.9	377.4	306.2	198.8	83.2	58.7	12.3
Non-Member States	4.2	4.7	4.3	4.3	4.2	4.1	0.0	0.0	0.0	0.0	0.0	0.0

Notes: * it includes the population with out-of-pocket (OOP) health spending exceeding 25% of the household budget (SDG 3.8.2 at the 25% threshold). The difference between SDG 3.8.2 at 10% threshold and SDG 3.8.2 at the 25% threshold corresponds to the percentage of the population with OOP health spending greater than 10% but lower than 25% of the household budget. ** This total is obtained by adding up the percentage of the population impoverished and further impoverished by OOP health spending.

All aggregates were produced jointly by the WHO and the World Bank using the methods described in Annex 9. WHO and World Bank estimated values are based on standard definitions and methods to ensure cross-country comparability, which may not correspond to the methods used at national or regional levels to monitor catastrophic spending on health. These estimates are based on data availability for global monitoring, which may not necessarily align with data availability at national or regional levels.

Source: Global database on financial protection assembled by the WHO and the World Bank, 2023 *(26,27)*.

Annex 12 Financial hardship estimates by country income group

Table A12.1 Percentage of the population suffering catastrophic or impoverishing OOP health spending, %

Country income groups	Percentage of the population with catastrophic OOP health spending due to:											
	out-of-pocket health spending exceeding 25% of the household budget (SDG 3.8.2 at the 25% threshold)						out-of-pocket health spending exceeding 10% of the household budget* (SDG 3.8.2 at the 10% threshold)					
	2000	2005	2010	2015	2017	2019	2000	2005	2010	2015	2017	2019
Global	1.9	2.6	2.7	3.3	3.6	3.8	9.6	11.1	11.4	12.6	13	13.5
Low income	2.3	3	1.8	1.3	1.4	1.5	11.1	12.6	7.8	6.6	6.7	7.4
Lower-middle income	2	3.2	2.9	4.1	4.7	5.3	9.4	12.8	12.4	14.1	14.2	15.7
Upper-middle income	1.3	0.9	3.7	3.9	4.3	3.9	8	5.4	13.9	15.1	16.4	15.3
High income	1.1	1	0.9	1.1	1.1	1.1	6.9	6.8	6.1	6.8	6.9	7.3
Country income groups	**Percentage of the population with impoverishing OOP health spending****											
	at the relative poverty line of 60% of median per capita consumption						at the extreme poverty line of 2017 PPP US$ 2.15 a day per person					
	2000	2005	2010	2015	2017	2019	2000	2005	2010	2015	2017	2019
Global	11.8	11.9	14.3	15.6	15.8	16.7	22.2	18.1	13.7	8.3	6.3	4.4
Low income	10	10.7	13	14.6	14.4	14.4	38	31.9	28.8	27.4	19.5	16.1
Lower-middle income	13.1	12.1	12.1	12.2	12.7	14.7	17.9	15.6	20.7	11.9	8.9	7.3
Upper-middle income	14.6	15.1	17.9	21.6	21.8	21.8	5.9	2.2	7.9	3.3	2.3	0.7
High income	11.8	12.2	12.1	11.7	11.6	11.2	0	0	0	0	0	0

Notes:

* It includes the population with out-of-pocket (OOP) health spending exceeding 25% of the household budget (SDG 3.8.2 at the 25% threshold). The difference between SDG 3.8.2 at 10% threshold and SDG 3.8.2 at the 25% threshold corresponds to the percentage of the population with OOP health spending greater than 10% but lower than 25% of the household budget.
** This total is obtained by adding up the percentage of the population impoverished and further impoverished by OOP health spending.

All aggregates were produced jointly by the WHO and the World Bank using the methods described in Annex 9. WHO and World Bank estimated values are based on standard definitions and methods to ensure cross-country comparability, which may not correspond to the methods used at national or regional levels to monitor catastrophic spending on health. These estimates are based on data availability for global monitoring, which may not necessarily align with the availability of data at national or regional levels.

Source: Global database on financial protection assembled by the WHO and the World Bank, 2023 *(26,27)*.

Table A12.2 Number of people suffering catastrophic or impoverishing OOP health spending (millions)

Country income groups	Number of people with catastrophic OOP health spending due to:											
	out-of-pocket health spending exceeding 25% of the household budget (SDG 3.8.2 at the 25% threshold)						out-of-pocket health spending exceeding 10% of household the budget* (SDG 3.8.2 at the 10% threshold)					
	2000	2005	2010	2015	2017	2019	2000	2005	2010	2015	2017	2019
Global	116.9	170.3	189.8	244.8	275.6	292.0	588.2	729.9	793.6	936.9	987.0	1042.9
Low income	57.8	74.0	14.4	8.4	10.3	10.0	278.6	307.6	62.9	42.0	49.4	50.5
Lower-middle income	40.8	79.8	73.9	121.9	141.7	157.3	193.5	319.0	319.6	419.1	428.0	463.0
Upper-middle income	8.5	5.7	90.8	101.5	109.8	111.1	52.5	32.6	341.6	394.6	423.0	438.8
High income	9.6	10.6	10.6	13.0	13.7	13.6	62.4	69.1	68.8	81.0	86.4	90.4
Country income groups	**Number of people with impoverishing OOP health spending****											
	at the relative poverty line of 60% of median per capita consumption						at the extreme poverty line of 2017 PPP US$ 2.15 a day per person					
	2000	2005	2010	2015	2017	2019	2000	2005	2010	2015	2017	2019
Global	724.5	779.3	993.8	1158.6	1195.9	1294.9	1365.3	1181.1	958.2	618.0	470.6	344.3
Low income	250.6	259.9	104.3	93.6	105.6	98.4	956.3	775.6	231.1	175.0	142.3	109.7
Lower-middle income	269.0	302.3	310.5	363.5	382.1	431.6	367.9	388.8	531.1	355.1	269.2	214.4
Upper-middle income	96.1	91.2	440.5	562.2	562.7	625.3	38.7	13.5	192.8	87.5	58.8	19.8
High income	106.4	123.4	136.6	138.8	145.1	139.2	0.1	0.1	0.1	0.1	0.2	0.2

Notes:

* It includes the population with out-of-pocket (OOP) health spending exceeding 25% of the household budget (SDG 3.8.2 at the 25% threshold). The difference between SDG 3.8.2 at 10% threshold and SDG 3.8.2 at the 25% threshold corresponds to the percentage of the population with OOP health spending greater than 10% but lower than 25% of the household budget.
** This total is obtained by adding up the percentage of the population impoverished and further impoverished by OOP health spending.

All aggregates were produced jointly by the WHO and the World Bank using the methods described in Annex 9. WHO and World Bank estimated values are based on standard definitions and methods to ensure cross-country comparability, which may not correspond to the methods used at national or regional levels to monitor catastrophic spending on health. These estimates are based on data availability for global monitoring, which may not necessarily align with the availability of data at national or regional levels.

Source: Global database on financial protection assembled by the WHO and the World Bank, 2023 *(26,27)*.

Annex 13 Financial hardship estimates by World Bank region

Table A13.1 Percentage of the population suffering catastrophic or impoverishing OOP health spending, %

World Bank regions	Percentage of the population with catastrophic OOP health spending due to:											
	out-of-pocket health spending exceeding 25% of the household budget (SDG 3.8.2 at the 25% threshold)						out-of-pocket health spending exceeding 10% of the household budget* (SDG 3.8.2 at the 10% threshold)					
	2000	2005	2010	2015	2017	2019	2000	2005	2010	2015	2017	2019
Global	1.9	2.6	2.7	3.3	3.6	3.8	9.6	11.1	11.4	12.6	13	13.5
East Asia and Pacific	2	3.4	3.8	4.1	4.5	4.4	8.9	12.2	13.8	15.3	16.7	16.8
Europe and Central Asia	0.9	1	1	1.1	1.2	1.3	6.2	6.7	6.1	7.1	7.4	7.9
Latin America and Caribbean	1.7	1.8	1.8	1.8	1.7	1.9	9.8	10.2	10.4	9.8	9.1	9.9
Middle East and North Africa	1.8	2.3	2.3	3	3.2	2.7	11.6	13	12.4	15.7	15.8	14.1
North America	1	0.9	0.8	0.7	0.7	0.7	5.7	5.5	4.7	4.3	4.4	4.3
South Asia	3	3.2	3.4	5.3	6	6.4	13.7	14.1	13.9	16.3	16.2	17.7
Sub-Saharan Africa	1.4	2.6	2	1.9	2	2.6	8	9.5	8.6	8.6	8.3	8.8
World Bank regions	**Percentage of the population with impoverishing OOP health spending****											
	at the relative poverty line of 60% of median per capita consumption						at the extreme poverty line of 2017 PPP US$ 2.15 a day per person					
	2000	2005	2010	2015	2017	2019	2000	2005	2010	2015	2017	2019
Global	11.8	11.9	14.3	15.6	15.8	16.7	22.2	18.1	13.7	8.3	6.3	4.4
East Asia and Pacific	12.6	11.9	16.7	21.7	22.1	23.5	23	18.6	10.7	4.8	3.7	0.7
Europe and Central Asia	12.3	13.4	13.5	13.6	13.6	13.3	1.4	1	0.9	0.6	0.6	0.7
Latin America and Caribbean	15.1	14.3	16.6	16.9	17.2	17.7	9.8	5.3	2.9	1.4	0.9	1.4
Middle East and North Africa	11.6	13.8	14.6	14.8	16.3	15.2	2.9	3.7	2.3	1.3	2.8	3.2
North America	10	9.9	9.8	8.3	8.7	8.9	0	0	0	0	0	0
South Asia	7.8	8.3	10.2	9.5	8.9	11.9	36.1	30.4	25.8	15	10	7.5
Sub-Saharan Africa	15.1	15.8	16.5	16.7	17.1	16.1	46.7	34.3	29.4	22	16.7	13.9

Notes:

* It includes the population with out-of-pocket (OOP) health spending exceeding 25% of the household budget (SDG 3.8.2 at the 25% threshold). The difference between SDG 3.8.2 at 10% threshold and SDG 3.8.2 at the 25% threshold corresponds to the percentage of the population with OOP health spending greater than 10% but lower than 25% of the household budget.
** This total is obtained by adding up the percentage of the population impoverished and further impoverished by OOP health spending.

All aggregates were produced jointly by the WHO and the World Bank using the methods described in Annex 9. WHO and World Bank estimated values are based on standard definitions and methods to ensure cross-country comparability, which may not correspond to the methods used at national or regional levels to monitor catastrophic spending on health. These estimates are based on data availability for global monitoring, which may not necessarily align with the availability of data at national or regional levels.

Source: Global database on financial protection assembled by the WHO and the World Bank, 2023 *(26,27)*.

Table A13.2 Number of people suffering catastrophic or impoverishing OOP health spending (millions)

World Bank regions	Number of people with catastrophic OOP health spending due to:											
	out-of-pocket health spending exceeding 25% of the household budget (SDG 3.8.2 at the 25% threshold)						out-of-pocket health spending exceeding 10% of the household budget* (SDG 3.8.2 at the 10% threshold)					
	2000	2005	2010	2015	2017	2019	2000	2005	2010	2015	2017	2019
Global	116.9	170.3	189.8	244.8	275.6	292.0	588.2	729.9	793.6	936.9	987.0	1042.9
East Asia and Pacific	40.2	71.6	84.6	93.6	105.5	104.4	181.6	260.4	305.3	351.5	389.4	396.5
Europe and Central Asia	7.5	8.5	8.5	10.2	11.3	11.9	53.5	58.1	54.5	64.3	68.0	72.8
Latin America and Caribbean	9.1	10.0	10.8	11.4	10.6	12.6	51.1	56.6	61.1	60.8	57.5	63.6
Middle East and North Africa	5.9	8.2	9.0	13.4	14.6	12.8	37.3	45.9	49.4	69.3	72.1	66.9
North America	3.2	3.0	2.6	2.7	2.7	2.7	17.8	18.0	16.0	15.3	16.0	15.6
South Asia	41.7	48.9	56.9	94.6	109.9	118.7	193.2	217.7	231.1	289.2	295.2	328.7
Sub-Saharan Africa	9.3	20.1	17.4	18.9	21.0	28.8	53.6	73.0	76.0	86.3	88.6	98.7
	Number of people with impoverishing OOP health spending**											
	at the relative poverty line of 60% of median per capita consumption						at the extreme poverty line of 2017 PPP US$ 2.15 a day per person					
	2000	2005	2010	2015	2017	2019	2000	2005	2010	2015	2017	2019
Global	724.5	779.3	993.8	1158.6	1195.9	1294.9	1365.3	1181.1	958.2	618.0	470.6	344.3
East Asia and Pacific	259.2	253.0	368.6	497.2	514.3	551.6	470.8	398.4	236.1	109.5	86.5	18.4
Europe and Central Asia	105.9	116.6	120.8	123.4	124.7	122.1	12.0	8.8	8.1	5.0	5.1	6.2
Latin America and Caribbean	78.5	79.5	98.1	104.5	109.0	113.8	51.2	29.4	17.2	8.3	6.3	9.0
Middle East and North Africa	37.2	49.2	58.3	65.2	74.4	71.9	9.3	12.9	9.1	6.1	12.8	15.1
North America	31.4	32.4	33.5	29.6	31.4	32.7	0.1	0.1	0.1	0.1	0.2	0.2
South Asia	110.3	126.8	168.8	169.3	160.7	221.9	508.1	468.7	428.0	266.4	181.8	139.7
Sub-Saharan Africa	101.8	121.6	145.2	169.0	181.1	180.5	313.6	262.5	259.3	222.6	177.7	155.6

Notes:

* It includes the population with out-of-pocket (OOP) health spending exceeding 25% of the household budget (SDG 3.8.2 at the 25% threshold). The difference between SDG 3.8.2 at 10% threshold and SDG 3.8.2 at the 25% threshold corresponds to the percentage of the population with OOP health spending greater than 10% but lower than 25% of the household budget.
** This total is obtained by adding up the percentage of the population impoverished and further impoverished by OOP health spending.

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Source: Global database on financial protection assembled by the WHO and the World Bank, 2023 *(26,27)*.

Annex 14 Sustainable Development Goal-related indicators of impoverishing out-of-pocket health spending by country, most recent year available

		Impoverishing OOP health spending			
		At the 2017 PPP US$ 2.15 a day poverty line		At the relative poverty line of 60% of median consumption or income	
Country, area, or territory name	Latest year	(pushed into poverty) Increase in poverty headcount	(further pushed into poverty) Poor spending on health	(pushed into poverty) Increase in poverty headcount	(further pushed into poverty) Poor spending on health
Afghanistan**	2020	6.1	8.1	6.5	10.2
Albania	2017	0.1	0.1	1.8	8.3
Angola	2018	5.2	20.0	5.1	19.9
Argentina[1]	2004			2.0	10.0
Armenia**	2021	0.2	0.4	3.5	8.5
Australia***	2015	0.0	0.0	1.1	15.0
Austria	1999	0.0	0.0	1.3	8.5
Azerbaijan	2005	0.0	0.0	0.8	1.3
Bangladesh	2016	3.7	7.7	4.2	8.7
Barbados	2016	0.3	0.4	1.8	9.9
Belarus[1]	2020	0.0	0.0	2.6	10.3
Belgium	2009	0.0	0.0	2.2	11.3
Benin	2018	3.3	12.6	3.2	12.7
Bhutan	2017	1.2	0.2	1.6	4.2
Bolivia (Plurinational State of)	2021	0.1	1.0	0.8	10.5
Bosnia and Herzegovina	2015	0.0	0.0	1.9	7.8
Botswana	2015	0.2	3.4	0.6	7.3
Brazil	2017	0.2	0.9	2.0	19.9
Bulgaria	2018	0.0	0.0	4.4	12.4
Burkina Faso	2018	2.2	17.9	2.1	10.0
Burundi[1]	2013	1.4	53.9	1.2	15.5
Cabo Verde	2007	0.2	2.0	0.5	11.6
Cambodia**	2019			3.8	9.0
Cameroon	2014	2.1	22.1	1.6	26.5
Canada*[,2]	2019	0.2	0.4	0.9	16.1
Cayman Islands	2015			1.5	19.5
Central African Republic	2008	1.3	31.4	1.0	13.3
Chad	2018	2.7	19.1	1.8	11.5
Chile	2016	0.0	0.0	2.0	13.5

		Impoverishing OOP health spending			
		At the 2017 PPP US$ 2.15 a day poverty line		At the relative poverty line of 60% of median consumption or income	
Country, area, or territory name	Latest year	(pushed into poverty) Increase in poverty headcount	(further pushed into poverty) Poor spending on health	(pushed into poverty) Increase in poverty headcount	(further pushed into poverty) Poor spending on health
China	2018	0.9	1.8	4.7	23.9
Colombia	2016	0.3	1.1	1.2	12.2
Comoros	2014	1.0	14.4	1.9	19.3
Congo	2011			1.1	21.5
Costa Rica	2018	0.0	0.1	1.2	11.2
Côte d'Ivoire	2018	1.8	6.2	2.2	12.2
Croatia	2010	0.0	0.0	1.0	10.2
Cyprus	2015	0.0	0.0	3.2	14.0
Czech Republic**	2019	0.0	0.0	1.6	10.0
Democratic Republic of the Congo	2012	1.2	57.4	1.2	19.7
Denmark	2010	0.0	0.0	1.4	9.7
Djibouti	2017	0.1	2.1	0.1	2.8
Dominican Republic**	2018	0.0	0.1	1.7	11.7
Ecuador	2013	0.7	1.0	2.3	14.8
Egypt	2017	1.6	1.6	5.0	11.4
El Salvador	2019			0.6	6.5
Estonia	2010	0.0	0.0	1.0	6.4
Ethiopia	2018			0.8	9.6
Finland	2016	0.0	0.0	1.5	10.8
Gabon	2017	0.2	1.8	1.2	17.0
Gambia	2015	0.2	9.3	0.2	12.8
Georgia**	2021	1.5	1.8	5.0	13.1
Germany	2010	0.0	0.0	0.6	5.0
Ghana	2016	0.3	12.5	0.3	14.6
Greece	2016	0.0	0.0	2.5	10.8
Grenada**	2008	0.0	0.0	0.3	1.7
Guatemala	2014	0.9	2.2	2.2	13.2
Guinea	2018	1.6	11.5	2.1	15.3
Guinea-Bissau	2018	1.9	16.4	2.3	12.7
Haiti	2013	3.9	9.7	3.8	9.7
Honduras	2004			0.2	21.8
Hungary**	2018			2.4	15.7
Iceland	1995	0.0	0.0	1.4	9.8
India	2017			2.6	4.6

		Impoverishing OOP health spending			
		At the 2017 PPP US$ 2.15 a day poverty line		At the relative poverty line of 60% of median consumption or income	
Country, area, or territory name	Latest year	(pushed into poverty) Increase in poverty headcount	(further pushed into poverty) Poor spending on health	(pushed into poverty) Increase in poverty headcount	(further pushed into poverty) Poor spending on health
Indonesia[1]	2018	0.4	3.3	0.8	13.5
Iran (Islamic Republic of)*	2021	0.1	0.1	1.7	11.8
Iraq	2017	0.3	0.3	3.6	22.6
Ireland	2009	0.0	0.0	0.8	9.6
Israel	2018	0.0	0.0	1.9	15.1
Italy	2010	0.0	0.0	1.3	8.9
Jamaica	2004	0.5	0.8	2.4	17.5
Jordan[1]	2010	0.0	0.0	0.6	14.6
Kazakhstan**	2021	0.0	0.0	1.5	7.4
Kenya	2015	1.3	14.7	1.3	12.1
Kiribati	2006	0.0	0.1	0.0	0.1
Kosovo (in accordance with Security Council resolution 1244 (1999))	2016	0.1	0.2	1.3	7.0
Kyrgyzstan	2020	0.1	0.5	1.0	6.4
Lao People's Democratic Republic	2019	1.6	2.0	1.7	3.9
Latvia	2016	0.0	0.0	4.0	9.3
Lebanon[1]	1999	0.0	0.0	6.9	21.0
Lesotho	2010			0.7	14.7
Liberia	2016	2.4	22.6	2.1	16.4
Lithuania	2008	0.0	0.0	2.0	8.1
Luxembourg	2021	0.0	0.0	1.8	19.2
Madagascar	2012	0.4	52.0	0.9	12.2
Malawi	2019	0.9	41.1	0.7	10.7
Malaysia*	2019	0.0	0.0	0.7	19.7
Maldives	2016	0.0	0.0	1.7	11.4
Mali	2021			1.1	21.9
Malta	2015	0.0	0.0	3.1	14.2
Mauritania	2014			2.5	8.8
Mauritius	2017	0.0	0.0	1.2	5.3
Mexico	2020	0.1	0.8	1.1	12.3
Mongolia	2021			3.0	17.8
Montenegro	2015	0.0	0.1	1.6	8.1
Morocco[1]	2013	2.4	1.1	5.0	14.1

		Impoverishing OOP health spending			
		At the 2017 PPP US$ 2.15 a day poverty line		At the relative poverty line of 60% of median consumption or income	
Country, area, or territory name	Latest year	(pushed into poverty) Increase in poverty headcount	(further pushed into poverty) Poor spending on health	(pushed into poverty) Increase in poverty headcount	(further pushed into poverty) Poor spending on health
Mozambique	2019			1.2	22.7
Myanmar	2017	1.4	1.5	3.2	10.7
Namibia	2015	0.1	11.3	0.2	22.5
Nepal	2016	1.0	4.2	2.7	13.3
Nicaragua	2014	2.8	3.7	5.0	21.4
Niger	2018	2.6	49.0	1.3	15.0
Nigeria	2018			2.7	23.8
Norway	1998	0.0	0.0	2.1	10.0
Occupied Palestinian Territory	2016	0.0	0.2	1.5	13.4
Oman	1999	0.0	0.0	0.4	7.5
Pakistan	2018	1.0	3.4	2.3	11.3
Panama**	2017	0.0	0.0	1.3	17.7
Paraguay[1]	2000	1.3	7.2	1.5	22.4
Peru	2021	0.1	1.0	1.8	18.6
Philippines	2015	0.5	8.8	1.0	21.2
Poland**	2021	0.0	0.0	2.4	10.8
Portugal	2011	0.0	0.0	3.1	12.7
Republic of Moldova*	2021	0.0	0.1	1.5	5.0
Romania	2016	0.0	0.0	2.1	8.7
Russian Federation[1]	2014	0.0	0.0	1.8	16.0
Rwanda	2016	0.5	31.6	0.7	11.6
Saint Kitts and Nevis**	2007			0.9	9.2
Saint Lucia	2016	0.3	0.4	1.4	11.8
Sao Tome and Principe	2017			1.2	8.2
Senegal	2018	1.3	5.1	1.4	12.2
Serbia	2019	0.0	0.0	2.2	12.9
Seychelles	2013	0.4	0.9	1.4	10.7
Sierra Leone	2018	4.2	27.0	3.1	13.7
Slovakia	2015	0.1	0.1	1.2	11.0
Slovenia	2018	0.0	0.0	0.8	7.0
Somalia	2017	0.2	28.7	0.3	2.3
South Africa	2014	0.3	7.5	0.3	16.7
South Sudan	2016	1.9	30.9	2.1	9.6
Spain	2019	0.0	0.0	1.5	13.3

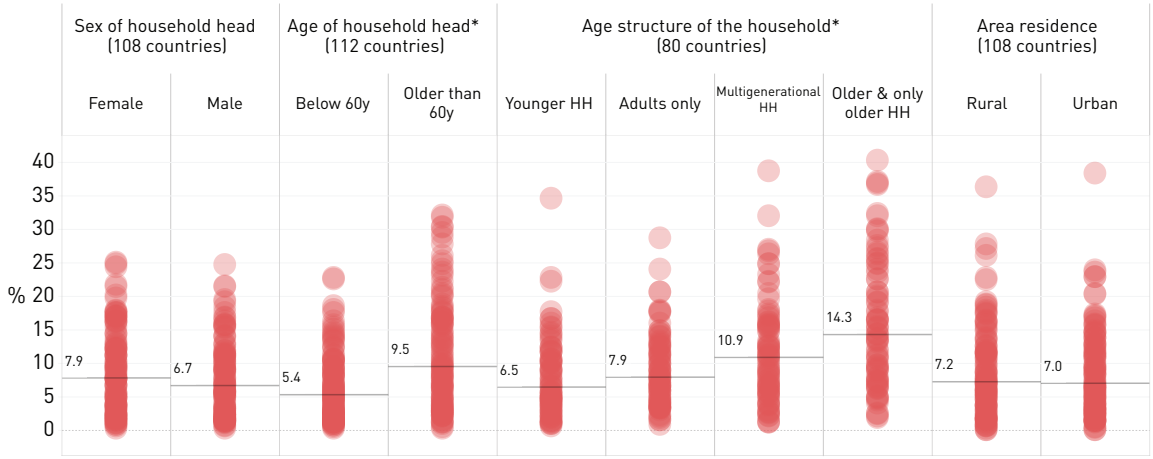
		Impoverishing OOP health spending			
		At the 2017 PPP US$ 2.15 a day poverty line		At the relative poverty line of 60% of median consumption or income	
Country, area, or territory name	Latest year	(pushed into poverty) Increase in poverty headcount	(further pushed into poverty) Poor spending on health	(pushed into poverty) Increase in poverty headcount	(further pushed into poverty) Poor spending on health
Sri Lanka	2016	0.1	0.4	1.2	7.3
Sudan	2014	2.2	8.9	2.8	13.8
Suriname	2016	0.0	0.0	1.1	8.7
Estwatini	2016	1.0	13.9	1.0	12.5
Sweden	1996	0.0	0.0	1.2	8.0
Switzerland**	2017	0.0	0.0	2.2	11.6
Syrian Arab Republic	2007	0.1	0.4	1.5	11.9
Tajikistan*	2018			2.2	11.7
Thailand*	2021	0.0	0.0	0.7	10.8
The former Yugoslav Republic of Macedonia	2019			1.4	5.2
Timor-Leste	2014	0.4	2.6	0.5	2.8
Togo**	2018			1.9	13.8
Tokelau	2015			0.0	1.3
Trinidad and Tobago	2014	0.8	0.3	1.0	2.3
Tunisia	2015	0.0	0.1	2.5	14.8
Turkiye[1]	2016	0.0	0.0	0.7	12.0
Uganda	2016	3.1	26.8	2.6	12.6
Ukraine	2019	0.0	0.0	1.7	11.1
United Kingdom	2020	0.0	0.0	0.4	7.6
United Republic of Tanzania	2018	1.1	27.1	1.2	10.0
United States of America	2021	0.0	0.0	0.6	7.6
Uruguay*	2016	0.0	0.0	1.1	14.8
Uzbekistan	2003	1.1	20.2	0.8	2.8
Viet Nam*	2020	0.1		1.7	
Wallis and Futuna	2005			0.0	0.1
Yemen	2014	4.6	10.6	4.3	9.7
Zambia[1]	2004	0.5	22.1	0.5	10.2
Zimbabwe	2017	5.5	3.2	5.2	1.8

Notes: *Produced by the Member State. **Produced in collaboration with the Member State. ***Produced in collaboration with a country expert. [1] Most recent estimate for impoverishing health spending differs from the most recent estimate for catastrophic health spending (SDG 3.8.2 indicators). [2] Proxy indicator as it excludes selected health care expenditure only, based on after-tax income adjusted by dividing it by the square root of the household size. Impoverishing health spending occurs when an adverse health event forces a household to divert spending from non-medical budget items, such as food, shelter and clothing, to such an extent that its spending on these items is reduced below or further below the level indicated by the poverty line. Indicators of impoverishing spending on health are not part of the official SDG indicator of universal health coverage per se, but link UHC directly to the first SDG goal, namely to end poverty in all its forms everywhere. WHO and the World Bank estimated values are based on standard definitions and methods to ensure cross-country comparability, which may not correspond to the regional and/or national methods to monitor catastrophic health spending. These estimates are based on data availability for global monitoring, which may not necessarily align with the availability of data at national or regional levels.

Source: Global database on financial protection assembled by the WHO and the World Bank, 2023 *(26,27)*.

Annex 15 Inequalities in financial hardship before 2015

Fig. A15.1. Inequalities in the incidence of catastrophic OOP health spending, the most recent year before 2015 (percentages of the population with OOP health spending exceeding 10% of household budget)

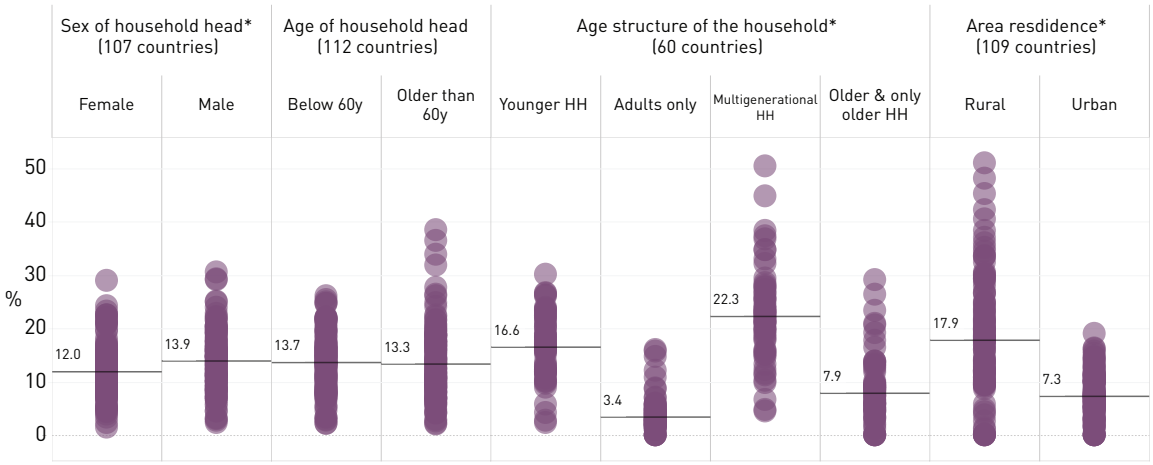


*: Significant at 95% level.

___: The horizontal line correspond to the median of values across countries.

Source: Data from the Global database on financial protection assembled by the WHO and the World Bank, 2023 *(26,27)*.

Fig. A15.2. Inequalities in the incidence of impoverishing OOP health spending at the relative poverty line, the most recent year before 2015 (percentages of the population with impoverishing OOP health spending)

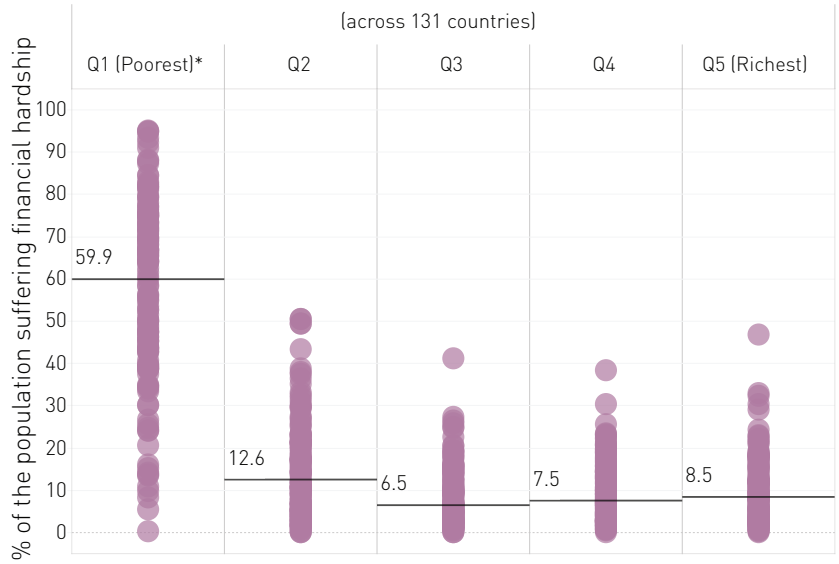


*: Significant at 95% level.

___: The horizontal line correspond to the median of values across countries.

Source: Data from the Global database on financial protection assembled by the WHO and the World Bank, 2023 *(26,27)*.

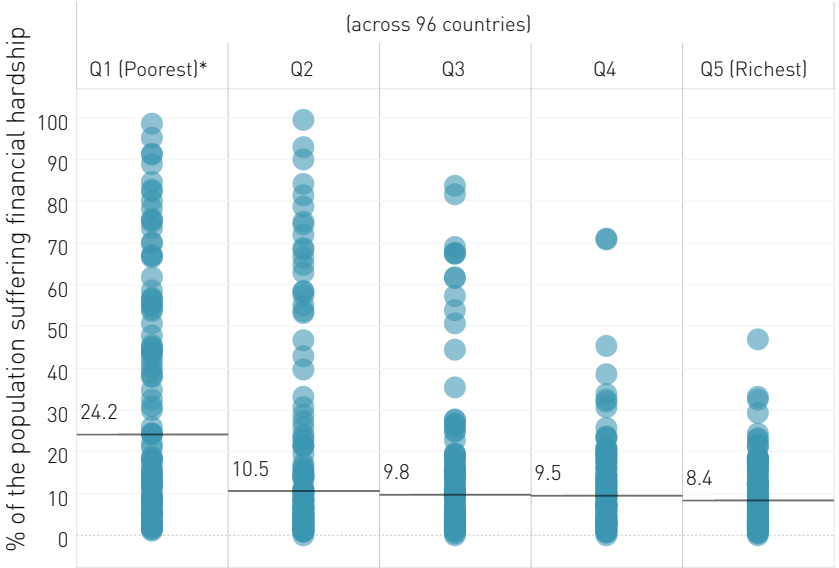
Fig. A15.3. Inequalities in the incidence of financial hardship by consumption quintile, most recent year (before 2015). Proportion of the population with OOP health spending exceeding 10% of the household budget (SDG 3.8.2, 10% threshold), impoverishing OOP health spending at the relative poverty line or both by per capita consumption quintile



*: Significantly higher than other quintiles at 95% level.
___: The horizontal line correspond to the median of values across countries.

Source: Background data produced by the WHO and the World Bank for the 2023 update of the WHO and World Bank global financial protection database *(26,27)*.

Fig. A15.4. Inequalities in the incidence of financial hardship by consumption quintile, most recent year (before 2015). Proportion of the population with OOP health spending exceeding 10% of the household budget (SDG 3.8.2, 10% threshold), impoverishing OOP health spending at the extreme poverty line or both by per capita consumption quintile



*: Significantly higher than other quintiles at 95% level.
___: The horizontal line correspond to the median of values across countries.

Source: Background data produced by the WHO and the World Bank for the 2023 update of the WHO and World Bank global financial protection database *(26,27)*.

Annex 16 Data sources for chapters 2, 3 and 4

This annex presents the data sources and related indicators used to produce the graphs and/or support the discussion on COVID-19 and financial protection.

The following choices were made when needed in Chapter 2:

- The base year in constant US$ values is 2019.
- All the statistics are population-weighted.
- The year-specific income group is used.

Graphs and discussion include data from the following sources:

  - Poverty and inequality platform indicators (December 2022 update, accessed 14 December 2022)
  - World development indicators (2022 update, accessed 11 October 2022)
  - High-frequency survey (last accessed 31 June 2023)

- UN Population Division
  - World Population Prospects (2023 update, accessed 25 March 25 2023)
- World Health Organization
  - Global health expenditure database (December 2022 update, accessed 17 February 2023)

More details on each source are provided hereafter.

World Bank

Poverty and inequality platform: An interactive computational tool that allows users to access the World Bank's estimates of poverty, inequality, and shared prosperity. It is managed by the Global Poverty Working Group, a collaboration between World Bank staff across the Development Data Group, the Development Research Group, and the Poverty and Equity Global Practice.

World development indicators: A compilation of relevant, high-quality, and internationally comparable statistics about global development and the fight against poverty. It is the primary World Bank collection of development indicators, compiled from officially recognized international sources. It presents the most current and accurate global development data, including national, regional, and global estimates.

*Macro poverty outlook***:** The macro poverty outlook analyses macroeconomic and poverty developments in 147 developing countries. The report is released twice annually for the Spring and Annual Meetings of the World Bank Group and the International Monetary Fund. The macro poverty outlook consists of individual country notes that provide an overview of recent developments, forecasts of major macroeconomic variables and poverty during 2021–2023, and a discussion on the critical challenges for economic growth, macroeconomic stability, and poverty reduction moving forward.

High-frequency survey: The World Bank and partners have collected and published country-level results from COVID-19 surveys to inform policies that limit the human and economic impact of the pandemic. In view of the social distancing measures that have severely limited the use of face-to-face interviews, the Living Standards Measurement Study, with funding from the U.S. Agency for International Development and in collaboration with the World Bank Poverty and Equity Global Practice, is providing financial and technical assistance to high-frequency phone surveys to track responses to and socio-economic impacts of COVID-19. The survey contains questions related to food security, changes in employment, income loss, access to safety nets and health care, and household coping strategies.

Figures related to forgone care during the COVID-19 period in both chapters 1 and 2 are derived from an analysis based on two rounds of World Bank high-frequency phone surveys from each of the 25 LICs and LMICs (World Bank 2020). The data were collected between May and August 2020, and between January and June 2021, depending on the country. The final sample included 86 643 observations collected from 63 348 unique households across the two waves of data. One respondent per household was asked whether any member of their household needed health services in the 30 days preceding the interview, whether they could access the services they needed, and if not, for what reason.

United Nations Department of Economic and Asocial Affairs Population Division

World population prospects: The official United Nations population estimates and projections representing population estimates from 1950 to the present for 237 countries and areas, underpinned by analyses of historical demographic data presented by income group, demographic region, subregion, country or with grouping by disaggregation.

World Health Organization

Global health expenditure database: The database provides internationally comparable health spending data for nearly 194 countries and areas from 2000 to 2021. The database is open access and supports the goal of UHC by helping monitor the availability of resources for health and the extent to which they are used efficiently and equitably. WHO works collaboratively with Member States and updates the database annually using available data such as health accounts studies and government expenditure records. Where necessary, modifications and estimates are made to ensure the comprehensiveness and consistency of the data across countries and years. This database is the source of the health expenditure data republished by the World Bank and the WHO Global Health Observatory.

National pulse survey on continuity of essential health services during the COVID-19 pandemic: The pulse survey on the continuity of essential health services during the COVID-19 pandemic aimed to gain initial insight from the country's key informants into the impact of the COVID-19 pandemic on essential health services across the life course. The survey results in this interim report can improve understanding of the extent of disruptions across all services, the reasons for disruptions, and the mitigation strategies countries are using to maintain service delivery.

Chapter 4

The following regional indicators of catastrophic and impoverishing health spending are used for tracking in the WHO European Region were developed by the WHO Barcelona Office for Health Systems Financing and WHO Regional Office for Europe:

The proportion of households with OOP payments greater than 40% of capacity to pay for health care using the food, housing and utilities approach is available from the WHO Global Health Observatory (https://www.who.int/data/gho/data/indicators/indicator-details/GHO/households-with-out-of-pocket-payments-greater-than-40-of-capacity-to-pay-for-health-care-(food-housing-and-utilities-approach---developed-by-who-europe)-(-), accessed 11 August 2023).

The proportion of households impoverished and further impoverished by OOP payments using a relative poverty line reflecting basic needs is available from the WHO Global Health Observatory (https://www.who.int/data/gho/data/indicators/indicator-details/GHO/households-impoverished-by-out-of-pocket-payments-(relative-poverty-line-reflecting-basic-needs-food-housing-utilities)-(-), accessed 11 August 2023).

Annex 17 Sustainable Development Goal (SDG) indicators of universal health coverage (UHC) by country, most recent year available

	SDG UHC indicator 3.8.1		SDG UHC indicator 3.8.2, latest year: incidence of catastrophic OOP health spending (%)	
Country/area/territory	Service coverage index in 2021	Latest year available	At 10% of household total consumption or income	At 25% of household total consumption or income
Afghanistan**	41	2020	26.1	8.0
Albania	64	2017	8.8	1.4
Algeria	74			
Andorra	79			
Angola	37	2018	35.5	12.5
Antigua and Barbuda	76			
Argentina*	79	2017	9.6	2.5
Armenia**	68	2021	19.9	5.9
Australia***	87	2015	2.5	0.4
Austria	85	1999	4.3	0.7
Azerbaijan	66	2005	8.1	1.1
Bahamas	77			
Bahrain*	76	2015	4.9	1.4
Bangladesh	52	2016	24.4	8.4
Barbados	77	2016	16.4	3.8
Belarus*	79	2021	16.5	1.2
Belgium	86	2009	11.4	1.4
Belize*	68	2018	6.2	3.1
Benin	38	2018	14.3	2.9
Bhutan	60	2017	4.0	1.8
Bolivia (Plurinational State of)	65	2021	5.7	1.2
Bosnia and Herzegovina	66	2015	8.2	1.4
Botswana	55	2015	4.3	1.0
Brazil	80	2017	11.8	1.9
Brunei Darussalam	78			
Bulgaria	73	2018	21.3	3.1
Burkina Faso	40	2018	8.4	1.8
Burundi*	41	2020	4.8	0.9
Cabo Verde	71	2007	2.0	0.0
Cambodia**	58	2019	17.9	4.9
Cameroon	44	2014	10.7	1.8
Canada*[,1]	91	2019	3.5	0.8

	SDG UHC indicator 3.8.1		SDG UHC indicator 3.8.2, latest year: incidence of catastrophic OOP health spending (%)	
Country/area/territory	Service coverage index in 2021	Latest year available	At 10% of household total consumption or income	At 25% of household total consumption or income
Cayman Islands		2015	3.2	0.6
Central African Republic	32	2008	6.7	1.2
Chad*	29	2018	9.3	1.4
Chile	82	2016	14.6	2.1
China	81	2018	24.3	6.9
Colombia	80	2016	8.2	2.2
Comoros	48	2014	8.8	1.6
Congo	41	2011	4.6	0.7
Cook Islands*	46	2015	0.1	0.0
Costa Rica	81	2018	7.4	1.1
Côte d'Ivoire	43	2018	8.3	0.6
Croatia	80	2010	2.8	0.3
Cuba	83			
Cyprus	81	2015	14.7	1.6
Czech Republic**	84	2019	4.6	0.8
Democratic People's Republic of Korea	68			
Democratic Republic of the Congo	42	2012	4.8	0.6
Denmark	82	2010	2.9	0.5
Djibouti	44	2017	1.5	0.3
Dominica	49			
Dominican Republic**	77	2018	8.2	0.9
Ecuador	77	2013	10.3	2.4
Egypt	70	2017	31.1	6.1
El Salvador*	78	2019	4.1	1.4
Equatorial Guinea	46			
Eritrea	45			
Estonia	79	2010	8.8	1.2
Ethiopia	35	2018	3.5	0.6
Fiji	58	2009	0.8	0.1
Finland	86	2016	6.7	0.7
France	85			
Gabon	49	2017	3.8	0.7
Gambia	46	2015	0.2	0.0
Georgia**	68	2021	31.4	8.9
Germany	88	2010	1.5	0.1

	SDG UHC indicator 3.8.1		SDG UHC indicator 3.8.2, latest year: incidence of catastrophic OOP health spending (%)	
Country/area/territory	Service coverage index in 2021	Latest year available	At 10% of household total consumption or income	At 25% of household total consumption or income
Ghana	48	2016	1.3	0.1
Greece	77	2016	16.9	1.6
Grenada**	70	2008	3.2	0.5
Guatemala	59	2014	11.5	3.8
Guinea	40	2018	1.5	0.0
Guinea-Bissau	37	2018	5.0	0.4
Guyana	76			
Haiti	54	2013	11.5	4.0
Honduras	64	2004	1.1	0.1
Hungary**	79	2018	12.3	0.9
Iceland	89	1995	7.0	0.9
India	63	2017	17.5	6.7
Indonesia*	55	2021	2.0	0.4
Iran (Islamic Republic of)*	74	2021	15.4	3.7
Iraq	59	2017	19.6	4.2
Ireland	83	2009	5.6	0.5
Israel	85	2018	12.8	2.6
Italy	84	2010	9.3	1.1
Jamaica	74	2004	10.2	2.9
Japan*	83	2021	11.1	2.0
Jordan*	65	2018	6.4	1.3
Kazakhstan**	80	2021	3.7	0.2
Kenya	53	2015	5.2	1.4
Kiribati	48	2006	0.0	0.0
Kosovo (in accordance with Security Council resolution 1244 (1999))		2016	7.0	1.0
Kuwait	78			
Kyrgyzstan	69	2020	4.9	0.8
Lao People's Democratic Republic	52	2019	6.7	3.0
Latvia	75	2016	21.4	5.7
Lebanon	73	2012	26.6	6.3
Lesotho	53	2010	4.5	1.4
Liberia	45	2016	6.7	1.1
Libya	62			
Lithuania	75	2008	12.9	2.7
Luxembourg	83	2021	4.3	0.2

	SDG UHC indicator 3.8.1		SDG UHC indicator 3.8.2, latest year: incidence of catastrophic OOP health spending (%)	
Country/area/territory	Service coverage index in 2021	Latest year available	At 10% of household total consumption or income	At 25% of household total consumption or income
Madagascar	35	2012	2.9	0.6
Malawi	48	2019	2.9	0.4
Malaysia*	76	2019	1.5	0.1
Maldives	61	2016	10.3	4.1
Mali	41	2021	1.7	0.1
Malta	85	2015	15.9	2.7
Marshall Islands	59			
Mauritania	40	2014	11.7	2.9
Mauritius	66	2017	8.2	1.9
Mexico	75	2020	4.4	1.2
Micronesia (Federated States of)	48			
Monaco	86			
Mongolia	65	2021	14.0	3.5
Montenegro	72	2015	10.3	0.8
Morocco*	69	2019	8.2	0.9
Mozambique	44	2019	3.6	1.0
Myanmar	52	2017	12.7	3.5
Namibia	63	2015	1.5	0.3
Nauru	60			
Nepal	54	2016	10.7	2.1
Netherlands (Kingdom of the)	85			
New Zealand	85			
Nicaragua	70	2014	24.7	9.1
Niger	35	2018	6.5	0.9
Nigeria	38	2018	15.8	4.1
Niue	44			
Norway	87	1998	5.1	0.5
Occupied Palestinian territory, including east Jerusalem*		2016	9.0	1.5
Oman	70	1999	0.6	0.1
Pakistan	45	2018	5.4	1.0
Palau	65			
Panama**	78	2017	6.2	0.7
Papua New Guinea	30			
Paraguay*	72	2011	10.5	0.8
Peru	71	2021	12.6	2.0

	SDG UHC indicator 3.8.1		SDG UHC indicator 3.8.2, latest year: incidence of catastrophic OOP health spending (%)	
Country/area/territory	Service coverage index in 2021	Latest year available	At 10% of household total consumption or income	At 25% of household total consumption or income
Philippines	58	2015	6.3	1.4
Poland**	82	2021	16.1	2.0
Portugal	88	2011	18.4	3.3
Qatar*	76	2017	1.3	0.1
Republic of Korea*	89	2018	12.0	2.9
Republic of Moldova*	71	2021	14.2	2.5
Romania	78	2016	13.4	2.2
Russian Federation*	79	2020	7.7	0.9
Rwanda	49	2016	1.2	0.1
Saint Kitts and Nevis**	79	2007	4.1	0.3
Saint Lucia	77	2016	6.2	1.8
Saint Vincent and the Grenadines	69			
Samoa	55			
San Marino	77			
Sao Tome and Principe	59	2017	4.8	1.2
Saudi Arabia*	74	2018	1.3	0.6
Senegal	50	2018	6.9	1.3
Serbia	72	2019	8.5	0.6
Seychelles	75	2013	2.6	1.3
Sierra Leone	41	2018	16.4	3.0
Singapore*	89	2013	9.0	1.5
Slovakia	82	2015	2.7	0.0
Slovenia	84	2018	3.7	0.3
Solomon Islands	47			
Somalia	27	2017	0.1	0.0
South Africa	71	2014	1.0	0.1
South Sudan	34	2016	11.7	2.7
Spain	85	2019	7.9	1.1
Sri Lanka	67	2016	5.4	0.9
Sudan	44	2014	12.5	1.8
Suriname	63	2016	4.9	1.4
Swaziland	56	2016	5.0	1.3
Sweden	85	1996	5.5	0.7
Switzerland**	86	2017	7.9	0.3
Syrian Arab Republic	64	2007	6.9	1.4
Tajikistan*	67	2018	9.8	1.4

	SDG UHC indicator 3.8.1		SDG UHC indicator 3.8.2, latest year: incidence of catastrophic OOP health spending (%)	
Country/area/territory	Service coverage index in 2021	Latest year available	At 10% of household total consumption or income	At 25% of household total consumption or income
Thailand*	82	2021	2.1	0.3
North Macedonia	74	2019	9.7	1.5
Timor-Leste	52	2014	2.6	0.5
Togo**	44	2018	13.7	3.0
Tokelau		2015	0.0	0.0
Tonga	57			
Trinidad and Tobago	75	2014	3.9	1.9
Tunisia	67	2015	16.7	2.4
Türkiye*	76	2019	4.2	0.7
Turkmenistan	75			
Tuvalu	52			
Uganda	49	2016	15.3	3.8
Ukraine	76	2019	8.3	1.2
United Arab Emirates*	82	2019	0.4	0.0
United Kingdom	88	2020	2.4	0.6
United Republic of Tanzania	43	2018	4.3	0.8
United States of America	86	2021	4.6	0.9
Uruguay*	82	2016	2.1	0.1
Uzbekistan	75	2003	6.7	1.8
Vanuatu	47			
Venezuela (Bolivarian Republic of)	75			
Viet Nam*	68	2020	8.5	1.7
Wallis and Futuna		2005	0.0	0.0
Yemen	42	2014	15.8	4.2
Zambia	56	2015	0.3	0.0
Zimbabwe	55	2017	11.8	7.0

Notes: SDG 3.8.2 indicators: *Produced by the Member State; **Produced in collaboration with the Member State; ***Produced in collaboration with a country expert. Catastrophic health spending is defined as out-of-pocket expenditures exceeding 10% and 25% of the household total consumption or income. [1] Proxy indicator as it excludes selected health care expenditure only, based on after-tax income adjusted by dividing it by the square root of the household size. This definition with these two thresholds corresponds to SDG indicator 3.8.2, defined as "the proportion of population with large household expenditures on health as a share of total household expenditure or income". WHO and the World Bank estimated values are based on standard definitions and methods to ensure cross-country comparability, which may not correspond to the methods used at national or regional levels to monitor catastrophic spending on health. These estimates are based on data availability for global monitoring which may not necessarily align with availability of data at national or regional levels.

Source: SDG indicator 3.8.1: WHO global service coverage database, May 2023 *(29)*; SDG indicator 3.8.2: Global database on financial protection assembled by WHO and the World Bank, 2023 *(26,27)*.

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