
GLOBAL REPORT
Global spending on health:
Weathering the storm
2020
Conference copy
World Health
Organization

Global Spending on Health: Weathering the storm

World Health Organization

Contents

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Abbreviations

AFR	WHO African Region
AMR	WHO Region of the Americas
CGH	Common Goods for Health
CVA	Cash and voucher assistance
EMR	WHO Eastern Mediterranean Region
EU	European Union
EUR	WHO European Region
EXT	External aid
GDP	Gross Domestic Product
GFF	Global Financing Facility
GGE	General government expenditure
GGHED	Domestic public spending
HICs	High income countries
HIV	Human Immunodeficiency Virus
IDs	Infectious diseases
IMF	International Monetary Fund
LICs	Low income countries
LMICs	Lower middle income countries
MDG	Millennium Development Goals
MICs	Middle income countries
NCDs	Noncommunicable diseases
NHA	National Health Accounts
NTDs	Neglected tropical diseases
ODA	Official development assistance
OECD	Organisation for Economic Co-Operation and Development
OOPS	Out-of-pocket spending
PHC	Primary health care
PPP	Purchasing power parity
PVTD	Domestic private spending
SEAR	WHO South-East Asian Region
SDG	Sustainable Development Goals
SHA	System of Health Accounts
TB	Tuberculosis
UHC	Universal Health Coverage
UMICs	Upper middle income countries
WHO	World Health Organization
WPR	WHO Western Pacific Region


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Key messages

Before the COVID-19 pandemic, global spending on health was continuing to rise, though at a slower rate in recent years

- In 2018, global spending on health reached US$ 8.3 trillion, or 10% of global GDP, and it was the first time in the past five years that health spending grew slower than GDP.
- Government health spending per capita grew over the period 2000-2018, but at the slower rate after the economic crises of 2008-2009.
- The share of out-of-pocket spending in total health spending remained above 40% in low and lower middle income countries.
- Health spending from external aid reached its peak in 2014 and has since fallen. The share of external aid absorbed by lower middle income countries has been increasing and in recent years surpassed that of low income countries.
- The share of health spending devoted to primary health care varied widely across countries.

External aid for health mainly funded infectious and parasitic disease programmes in low and middle income countries, while domestic public funds focused more on noncommunicable diseases

- The analyses on disease-specific spending is based on data from 40 low and middle income countries with standardized data collection and estimation methods.
- In low income countries, infectious diseases accounted for half of overall health spending, while in middle income countries, they accounted for one-third. Noncommunicable diseases accounted for about 30% of health spending in middle income countries and about 13% in low income countries.
- Two-thirds of external aid for health addressed infectious diseases in both low and middle income countries. In middle income countries, HIV alone accounted for nearly half the aid for health.

- Of total spending on noncommunicable diseases, 37% came from domestic public funds in low income countries and 15% was attributed to external aid. In middle income countries, 59% came from domestic public funds, and 2% was attributed to external aid.

A group of 32 lower income countries face severe health financing constraints, which slow their progress towards health security and universal health coverage

- Lower income countries face macroeconomic vulnerabilities and high poverty and are lagging behind on the road to universal health coverage.
- The average domestic spending on health of lower income countries was only US$ 34 per capita in 2018, about 4.4% of GDP, of which nearly 60% was out-of-pocket.
- Average government spending on health was only US$ 9 per capita in 2018, about 1.2% of GDP, and the priority given to health in public spending has been declining between 2000 and 2018.
- Aid for health per capita more than doubled in real terms from 2000 to 2018, accounting for a quarter of lower income countries' health spending in 2018.

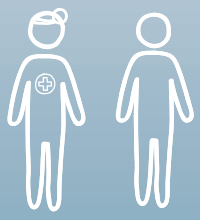
Although precise forecasting is impossible, the combined health and economic shocks triggered by COVID-19 will have both direct and indirect consequences for health spending and progress towards universal health coverage

- COVID-19 is having a devastating impact on health systems globally.
- All countries have responded to the COVID-19 health and related economic crisis with exceptional budget allocations, with the health sector receiving a fairly small portion.
- Low income country health budgets for 2020 have been disproportionately affected, by the COVID-19 health response.
- The health crisis is mirrored by a deep global economic crisis that could have a long-lasting impact on health financing.
- Public revenues are declining due to the economic crisis, forcing many countries to take on additional debt.
- The medium- to long-term health spending impact of the COVID-19 crisis will depend on broader macro-fiscal indicators and changing patterns of demand and supply for health services.
- Health financing vulnerabilities that existed prior to 2020 will also affect health spending in the coming years.
- Higher debt servicing could lower public spending on social sectors, including health, and risk progress towards universal health coverage.
- Deliberate health financing policy actions can help countries weather the COVID-19 storm.
- The COVID-19 crisis provides an opportunity for a 'reset' in countries with weak health financing systems to progress towards universal health coverage.

The COVID-19 pandemic caught the world by surprise, but confirmed the need for greater and more secure public funding for health

- The COVID-19 pandemic hit when the world had established a stable pattern of growing health spending.

- The specific macro-fiscal impact of COVID-19 on health spending remains uncertain. Targeted and deliberate policies will be needed to counteract demands on financing systems and protect vulnerable populations.
- Individually and collectively, countries need to chart courses to a new horizon, progressing on six recommendations for a new health financing compact in a COVID-19 world.
  - Secure domestic public spending on health as both a societal and an economic priority
  - Fund Common Goods for Health as step zero of universal health coverage at country level
  - Invest in global Common Goods for Health to enable global health security
  - Prioritize public funding to ensure equity of access and financial protection through a primary health care approach
  - Increase the level of aid to lower income countries, but adjust aid modalities
  - Fund national institutions for transparent and inclusive tracking of health spending at both country and global levels



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Before COVID-19 hit the world

GLOBAL SPENDING ON HEALTH WAS GROWING

KEY MESSAGES

Before the COVID-19 pandemic, global spending on health was continuing to rise, though at a slower rate in recent years.

- In 2018, global spending on health reached US$ 8.3 trillion, or 10% of global GDP, and it was the first time in the past five years that health spending grew slower than GDP.
- Government health spending per capita grew over the period 2000-2018, but at the slower rate after the economic crises of 2008-2009.
- The share of out-of-pocket spending in total health spending remained above 40% in low and lower middle income countries.
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- The share of health spending devoted to primary health care varied widely across countries.

In 2018, global spending on health reached US$ 8.3 trillion, or 10% of global GDP, and it was the first time in the past five years that health spending grew slower than GDP

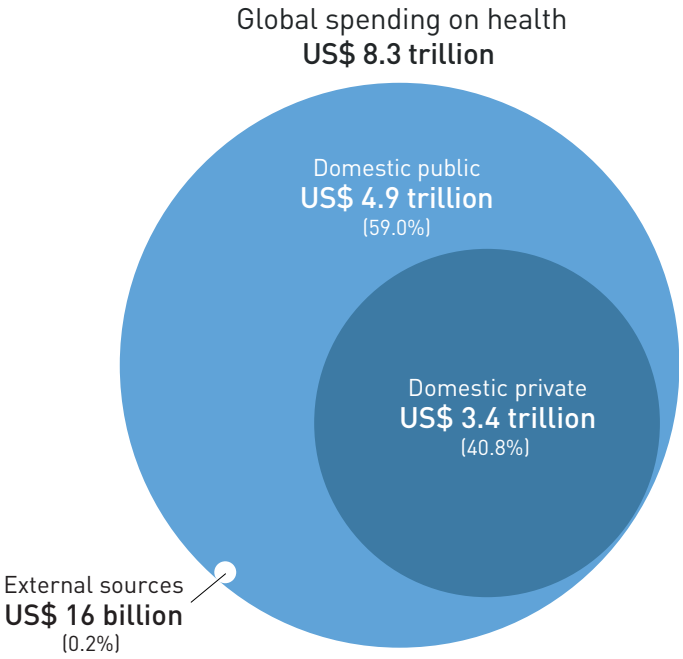
In 2018, global spending on health reached US$ 8.3 trillion, about 10% of global GDP. Domestic public sources took the largest share, which at US$ 4.9 trillion accounted for 59% of global spending in 2018 (Figure 1.1).[1] Private health spending was US$ 3.4 trillion, or 41% of global spending, of which most was household out-of-pocket spending (OOPS). Health spending from external aid accounted for 0.2% of global spending, the same as in the previous year.

More than 75% of global spending on health was in the World Health Organization (WHO) Regions of the Americas and Europe. The countries of the Western Pacific Region accounted for 19% of global spending, while those of the South-East Asian and Eastern Mediterranean Regions each accounted for 2% of global spending, and the African Region for 1%. In 2018, 40% of the world's people lived in 51 countries with per capita health spending below US$ 100. Five countries (France, Germany, Japan, the United Kingdom and the United States), with 9% of the world's people, accounted for more than 60% of global health spending, with the United States alone accounting for 42% (Figures 1.2 & 1.3).

Thus, health spending remained unequal across countries (Figure 1.3). Globally, the cross-country average of health spending per capita was US$ 1,099 in 2018.[2] But in low income countries, the average was only US$ 40 a person that year, while in high income countries, it was US$ 3,313—more than 80 times larger (Figure 1.4).[3] The difference has grown over time, with cross-country inequality in health spending rising. On average, health spending per capita was US$ 115 in lower middle income countries and US$ 466 in upper middle income countries in 2018.

FIGURE 1.1 Domestic public financing accounted for 59% of global spending on health in 2018

Major sources of financing global health care spending, 2018



HEALTH SPENDING GREW SLOWER THAN GDP IN 2018

Per capita health spending continued to rise in real terms, but growth recently slowed (Figure 1.5.a). The average annual growth of health spending has been consistently above 2% over the past two decades. Before the 2008–2009 economic crisis, health spending growth was above 3% a year. During the crisis, health spending grew more than 5% from 2008 to 2009, while GDP dropped more than 1% on average. This pattern was more pronounced in high income countries, where most governments implemented countercyclical fiscal policy to mitigate the impact of the economic shock (Figure 1.5.b). Due to short-term measures, public spending on health actually grew faster during the 2008-2009 economic crisis as compared to previous years. But following the economic recovery, overall government spending increased more slowly. Between 2014 and 2017, health spending per capita grew faster than GDP. But in 2018, the situation reversed, with GDP growth exceeding health spending growth.

In general, the level of health spending depends on the level of country income, but there are variations within income groups. High income countries spent 8.2% of GDP on health on average in 2018 (Figure 1.6). Low income countries spent 6.4% of GDP on health, and upper middle income countries, 6.3%. The lowest share was in the lower middle income countries group—4.8%. Within every country income group, health spending as a share of GDP varies widely. Countries with a similar GDP per capita spent very different proportions of GDP on health. For example, Thailand and South Africa, with roughly equal GDPs per capita, spent vastly different shares of GDP on health, with South Africa spending much more (8.3%) than Thailand (3.8%). Generally, there is

FIGURE 1.2 Most health spending took place in the WHO Americas and European regions in 2018

Health spending by World Health Organization region and country, 2018

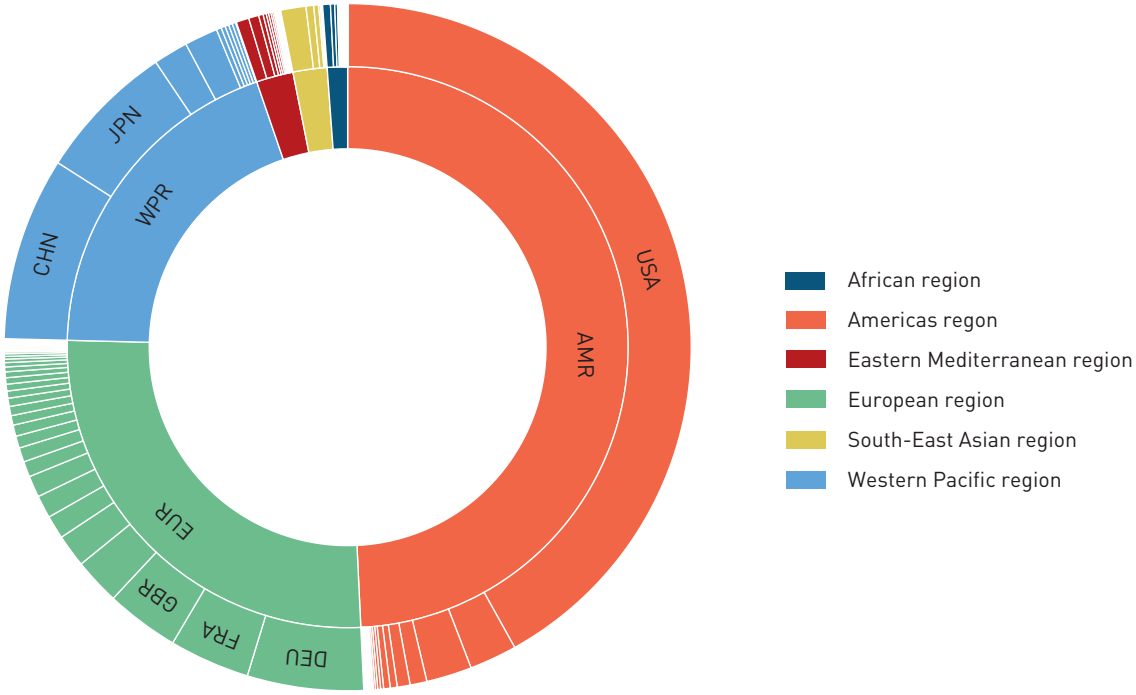


FIGURE 1.3 Health spending varied widely across countries

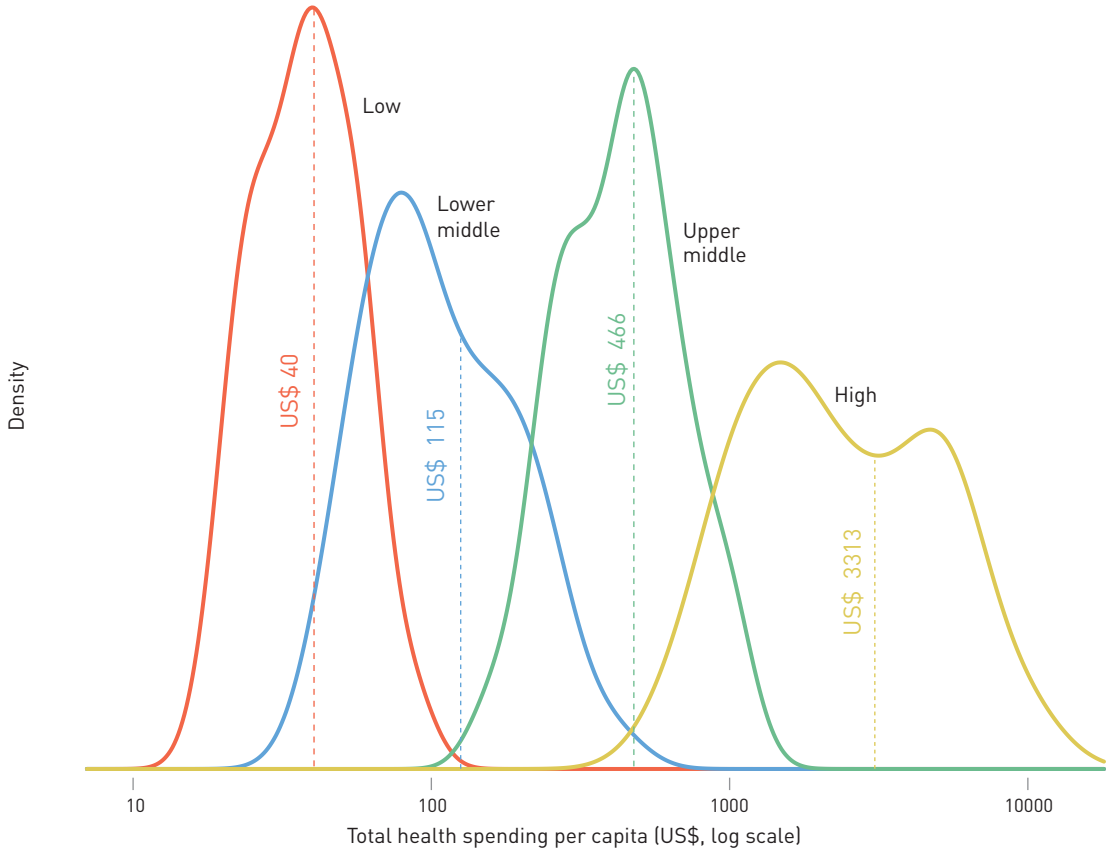
Health spending per capita by country, US$, 2018

no clear correlation between income and share of health spending within any income group. The policy choices that each country makes in the organization of its health financing system, as well as differences in epidemiological patterns, have important implications for health spending levels and likely explain much of the observed variation.

Health spending as a share of GDP increased over the past two decades in all groups (Figure 1.7). However it increased at different rates in different country income groups. In high

FIGURE 1.4 Health spending was mostly related to country income

Distribution of health spending per capita by income group, 2018



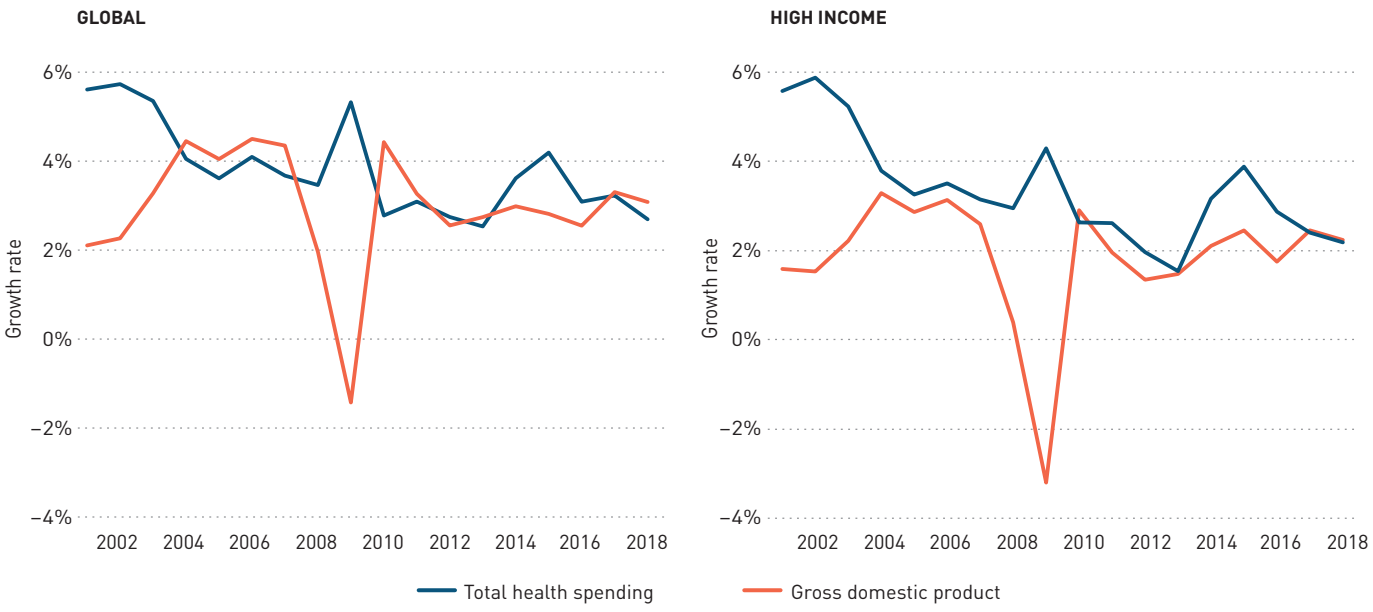
Note: Dashed lines represent income group means.

FIGURE 1.5 Health spending growth increased during the 2008-2009 crisis, but declined shortly after

Growth of health spending and GDP globally (1.5a) and for high income countries (1.5b), 2001–2018

a. Global spending on health

b. Health spending in high income countries



Note: Growth is calculated based on global and country income group totals for health spending and GDP.

income countries, it increased at an average of 1.4 percentage points from 2000 to 2018, and it increased in all but three countries (Croatia, Hungary and Uruguay). For upper middle income countries, the average increase was 0.7 percentage points, and variation was much bigger than among the high income countries. On average, in lower middle income countries, it increased the slowest, 0.3 percentage points, with the share decreasing in 12 countries and increasing in 16. In low income countries, the average share increased 1.4 percentage points, but with wide variation from –3 to +6 percentage points. That variation is likely related to fluctuations in external health aid and to economic and societal fragility. But further investigation is needed to understand the pattern in low income countries better.

The sources of health spending across country income groups differed greatly. These sources of health spending are categorized as: expenditure from public sources (government budget transfers and social health insurance contributions), out-of-pocket payment by households, voluntary prepayment to private health insurance, external aid and other sources. Other sources are in general relatively small, such as the expenditures of private enterprises on health services that they directly provide for their employees.

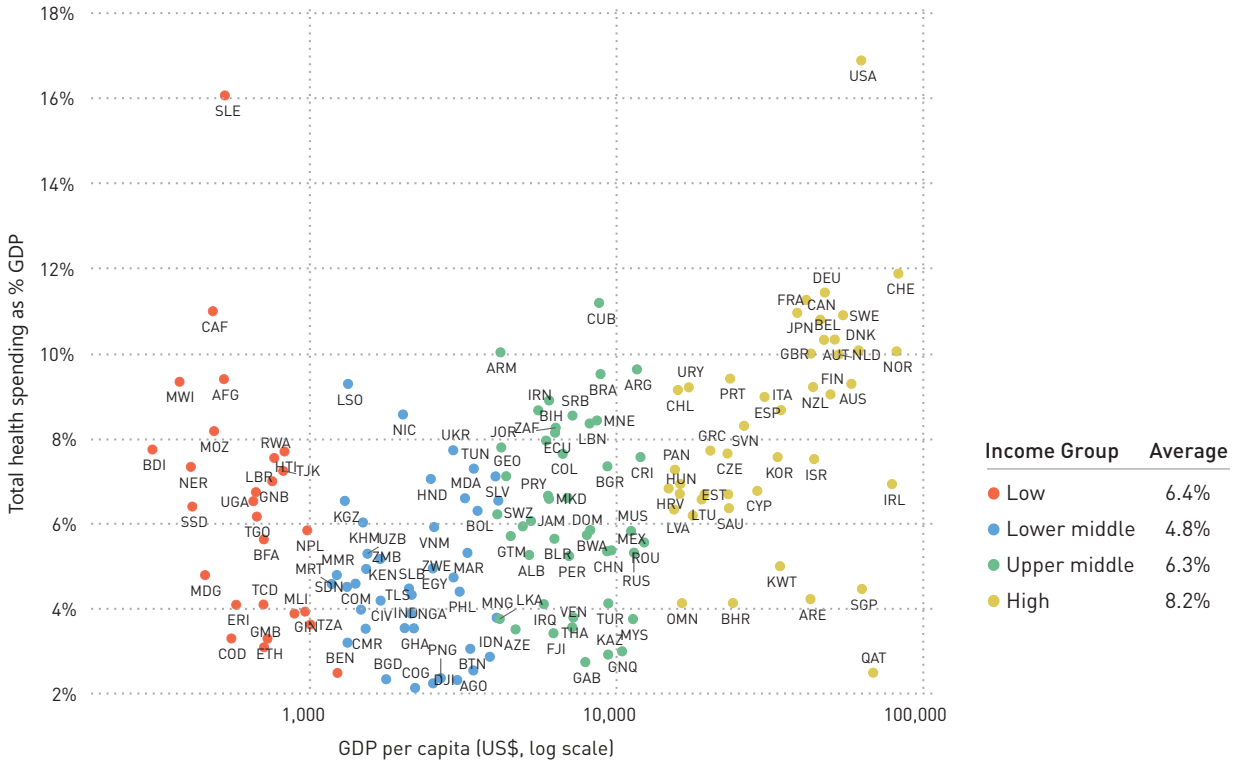
On average, low income countries depended on donor funding for 30% of total health spending and on out-of-pocket spending for 41%. Government spending (government transfers and social health insurance contributions) in 2018 was only 21% of total health spending (Figure 1.8).

Among lower middle income countries in 2018, OOPS contributed 42% of health spending —the largest share. On average, government transfers accounted for more than one-third of total health spending, and social health insurance contributions for an additional 7%. External aid was responsible for 10% of health funding.

In upper middle income countries, domestic public spending is the largest source, with government transfers providing 38% of total health spending and contributions to social health insurance providing 17%. The second largest share is OOPS, at 35% of total health spending. Upper middle income countries also had a significant amount of spending funded

FIGURE 1.6 No clear relationship between income and share of health spending within any income group

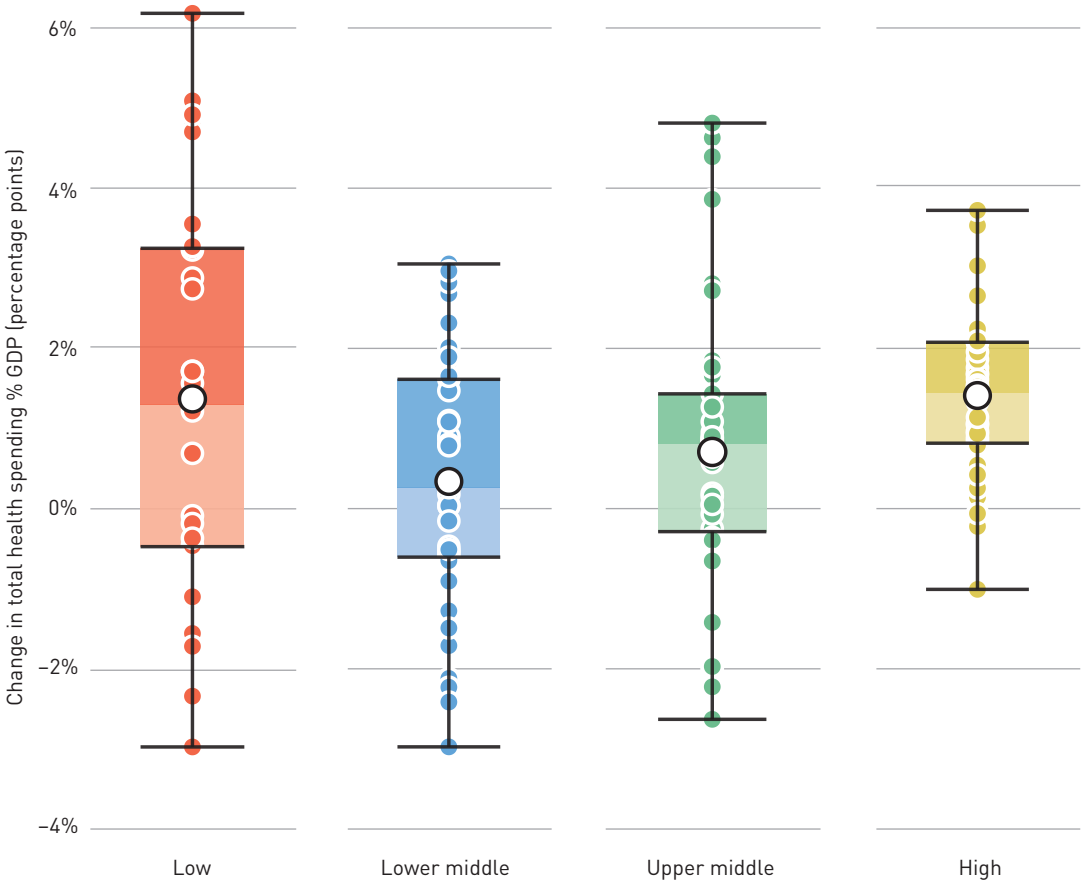
Health spending share of GDP and GDP per capita, 2018



Note: Country codes can be found in Annex 1.

FIGURE 1.7 Average health spending as a share of GDP increased in most countries

Changes in health spending as a share of GDP from 2000 to 2018, by income group



Note: Changes are calculated as the difference between the averages for 2000–2002 and 2016–2018.
Boxplots show the interquartile range (25th–75th percentile) of values. The median is marked by a line inside the bar. Each circle represents one country and the mean is marked as a white circle. The vertical lines from the bars extend to the maximum and minimum values.

through voluntary health insurance contributions—on average, 7% in 2018.

In high income countries, government sources provided more than two-thirds of health spending in 2018, with government transfers accounting for 48% and social health insurance contributions, 22%. Households funded 21% of health spending directly out of pocket.

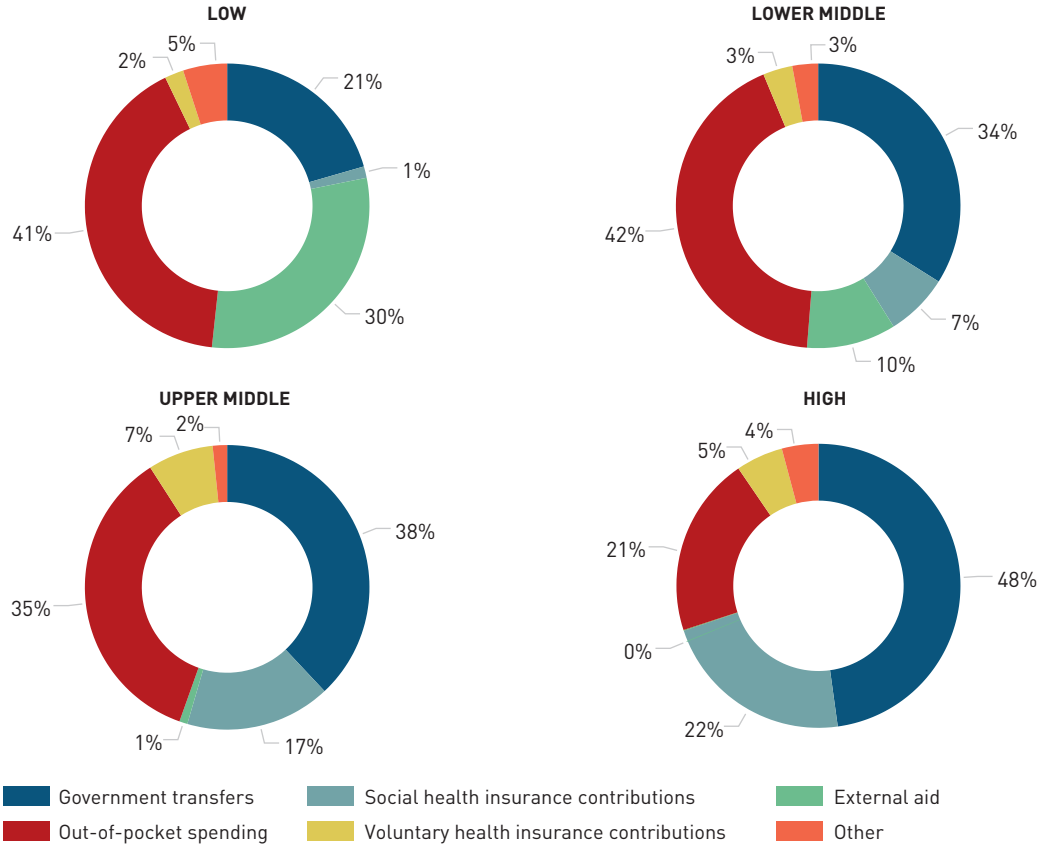
The structure of health spending by source for each income group has been fairly stable over time. In low income countries, however, the share of total health spending coming from external aid increased from 18% in 2000 to 30% in 2018 (Figure 1.9). In LICs, both the OOPS and government shares declined from 2000 to 2018. The latter is worrying as it raises concerns of possible fungibility, a phenomenon described in previous reports and which we explore in more detail in Chapter 3 *[1, 2]*. In lower middle income countries, external aid grew from 4% of health spending in 2000 to 10% in 2018, OOPS fell from 48% to 42% and government spending held steady. Upper middle income countries experienced a slow rise in the share of health spending from government sources alongside a decline in the share from OOPS. High income countries' structure of health spending by source was virtually unchanged over 2000–2018.

Government health spending per capita grew over the period 2000-2018, but at the slower rate after the economic crises of 2008-2009

In general, average government health spending from domestic sources grew faster than total government spending between 2000 and 2018, except in 2007, 2008, 2010 and 2018, when overall government spending grew faster than health spending (Figure 1.10).[4] Government

FIGURE 1.8 Higher income countries had the larger share of public financing in total health spending in 2018

Health spending by funding source and income group, 2018



Note: Other sources are compulsory prepayments to private insurance, domestic nongovernmental organization contributions and health services operated by enterprises for their employees. Social health insurance contributions are comprised mainly of revenues raised by a 'payroll tax' levied as a fixed percent on wages/salaries. There are a few countries that also mainly organize health financing through compulsory insurance, but with funding based on mandatory fixed premiums (Switzerland) or a combination of payroll tax and fixed premium (the Netherlands). For these countries, all mandatory contributions are included in our estimates of social health insurance contributions. For other countries, we have grouped the expenditures reported as compulsory insurance contributions with "other sources", as these do not fit well with the social health insurance contribution category.

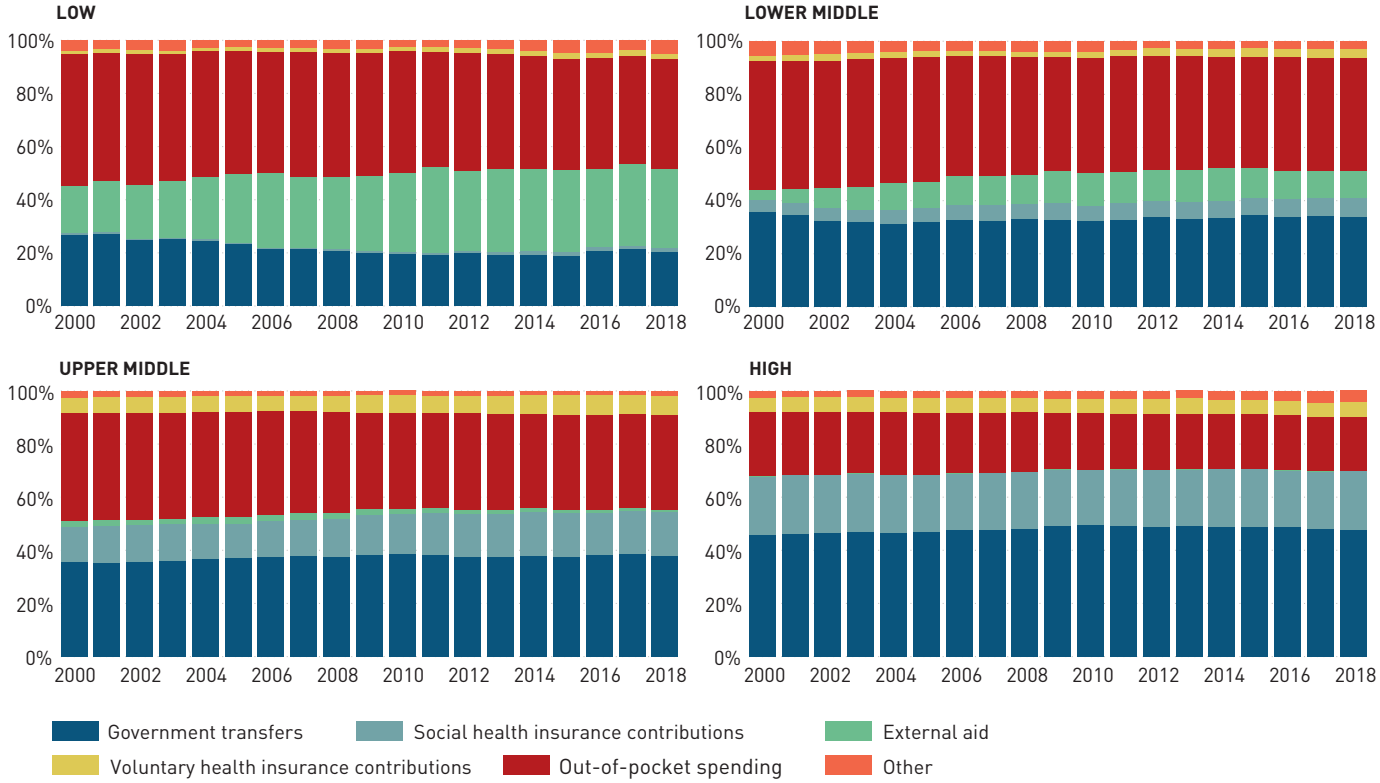
health spending increased sharply in 2003 by 11.5% and in 2009 by 10.1%. The growth rate of government health spending changed considerably after the financial crisis. After the 2008 crisis, slow growth continued until 2010 but accelerated again between 2011 and 2014. Since 2014, the growth of per capita government spending in general and on health care slowed down.

Government health spending as a share of total government spending reflects the priority of health. The average shares in 2018 were 5.6% in low income countries, 7.3% in lower middle income countries, 11.6% in upper middle income countries and 14.3% in high income countries (Figure 1.11). But the averages conceal a wide range within each income group. Upper middle income countries and high income countries had larger variations. For example, in the upper middle income country group, the share ranged from 3% to 28%. Overall, the share of health spending in general government spending increased over time in upper middle income countries and high income countries. In lower middle income countries, the share fell slightly in recent years, but the trend was fairly flat over 2000–2018 (Figure 1.12).

The government spending priority given to health was lowest in low income countries and has been falling, even though government health spending is critical for achieving the Sustainable Development Goals for health. In most low income countries in 2018, health spending was around 4%–8% of total government spending, and in none did it exceed 10.5%. In four low income countries, health spending was as low as 3% of total government spending. In these low income countries, government health spending as

FIGURE 1.9 Patterns of health spending tended to be stable within income groups, with a slowly falling trend of out-of-pocket share

Health spending by financing source and income group, 2000–2018



Note: Other sources are compulsory prepayments to private insurance, domestic nongovernmental organization contributions and health services operated by enterprises for their employees. Social health insurance contributions are comprised mainly of revenues raised by a 'payroll tax' levied as a fixed percent on wages/salaries. There are a few countries that also mainly organize health financing through compulsory insurance, but with funding based on mandatory fixed premiums (Switzerland) or a combination of payroll tax and fixed premium (the Netherlands). For these countries, all mandatory contributions are included in our estimates of social health insurance contributions. For other countries, we have grouped the expenditures reported as compulsory insurance contributions with "other sources", as these do not fit well with the social health insurance contribution category.

FIGURE 1.10 Overall government spending and government spending on health evolved at a different pace around the 2008–2009 economic crisis

Average year-on-year growth per capita total government spending and government health spending, in real terms, 2001–2018

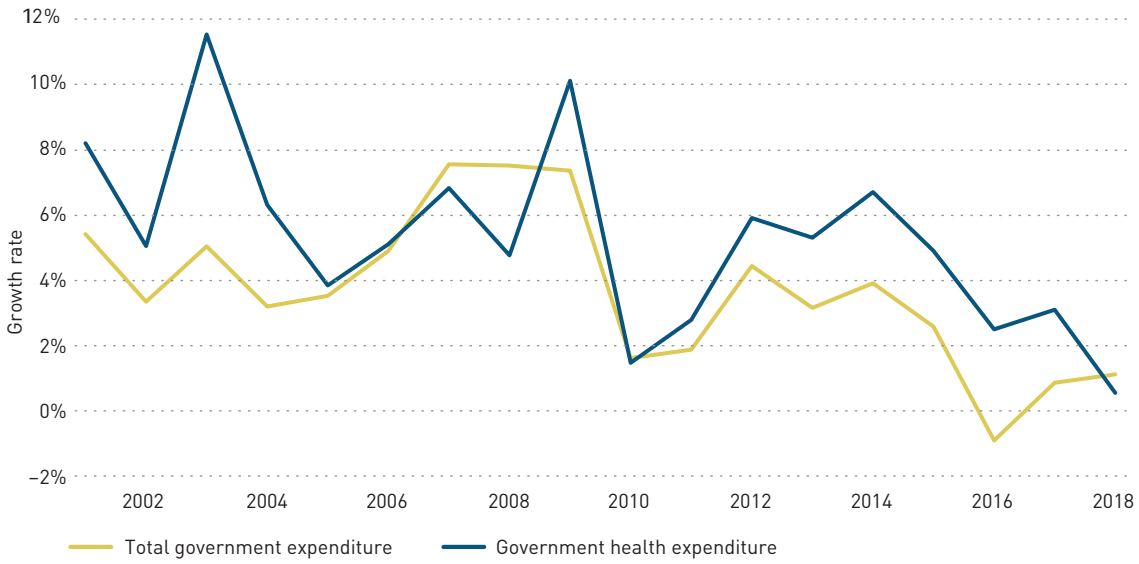
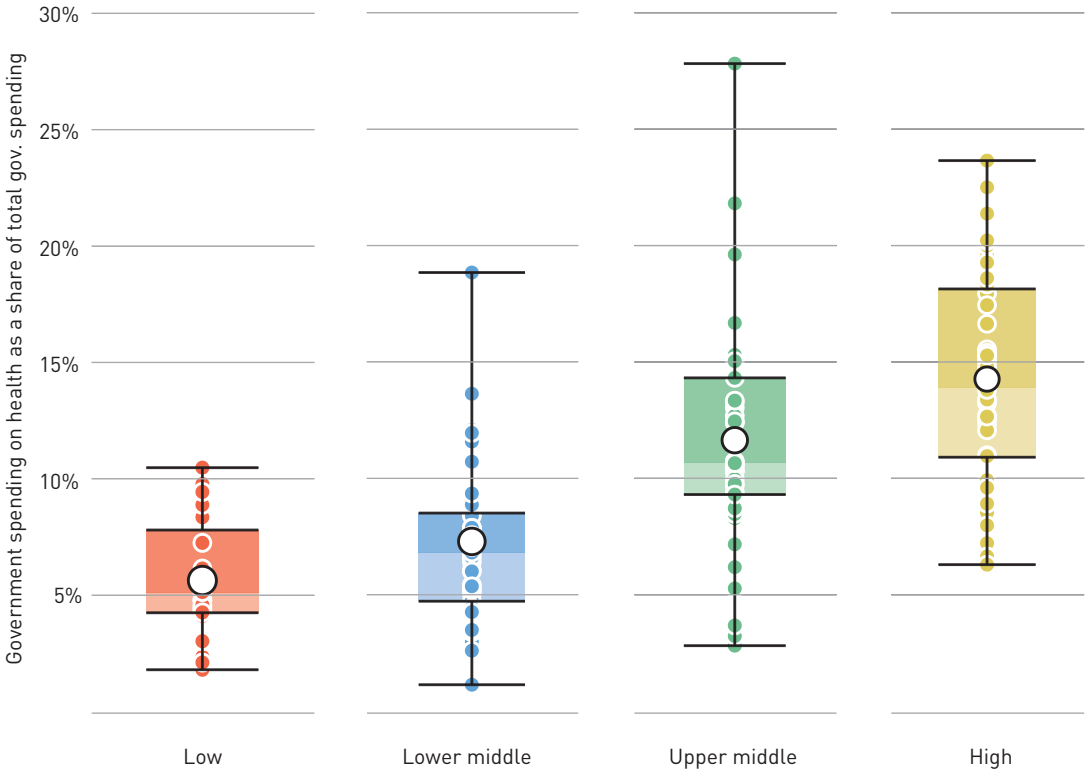


FIGURE 1.11 Higher income countries gave higher priority to health in public spending in 2018

Government health spending as a share of total government spending, by income group, 2018



Note: Boxplots show the interquartile range (25th–75th percentile) of values, with the median marked by a line inside the bar. Each circle represents one country and the means are marked as a white circle. The vertical lines from the bars extend to the maximum and minimum values.

a share of government spending declined steadily from 2004 to 2012, recovered until 2016 but fell again in the two most recent years (Figure 1.12).

The share of out-of-pocket spending in total health spending remained above 40% in low and lower middle income countries

Over the past two decades, both government health spending and OOPS per capita rose in most countries, but the speed of the rise varied hugely. In 105 countries, government health spending grew faster (or decreased slower) than OOPS in real terms (Figure 1.13, blue shaded section). In some countries, government spending increased while OOPS declined (Figure 1.13, quadrant I). Most countries experienced growth in both government spending and OOPS (quadrant II). In a few, primarily low income, countries, out-of-pocket spending and government spending both fell (quadrant III). And in a few, government spending fell while OOPS grew (quadrant IV). Country income is not strongly correlated with these trends, supporting the idea that they are not solely a function of the level of GDP.

While both government health spending and OOPS have been rising in absolute terms, the average share of OOPS in total health spending fell slowly in all country groups (Figure 1.14). Yet OOPS persistently represented more than one-third of health spending in all country groups except the high income group. In the low income group, OOPS accounted for nearly half the total health spending on average in 2000 and 41% in 2018 (Figure 1.15). Similarly, in lower middle and upper middle income countries, OOPS made up 42% and 35% of health spending, respectively. In the high income group, OOPS accounted for 20% of health spending. Thirty-two countries funded more than half their health spending from out-of-pocket revenues in 2018. Among them, seven funded more than three-fourths of health spending from OOPS.

FIGURE 1.12 **Government priority to health increased in richer countries, declined in poorer**

Government health spending as a share of total government spending, by income group, 2000–2018

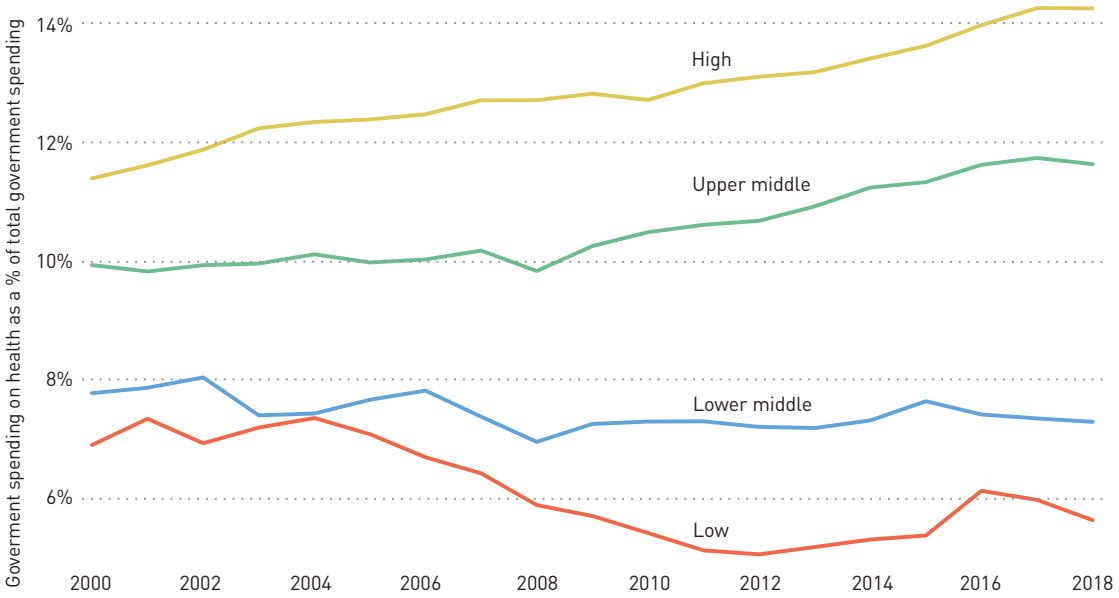
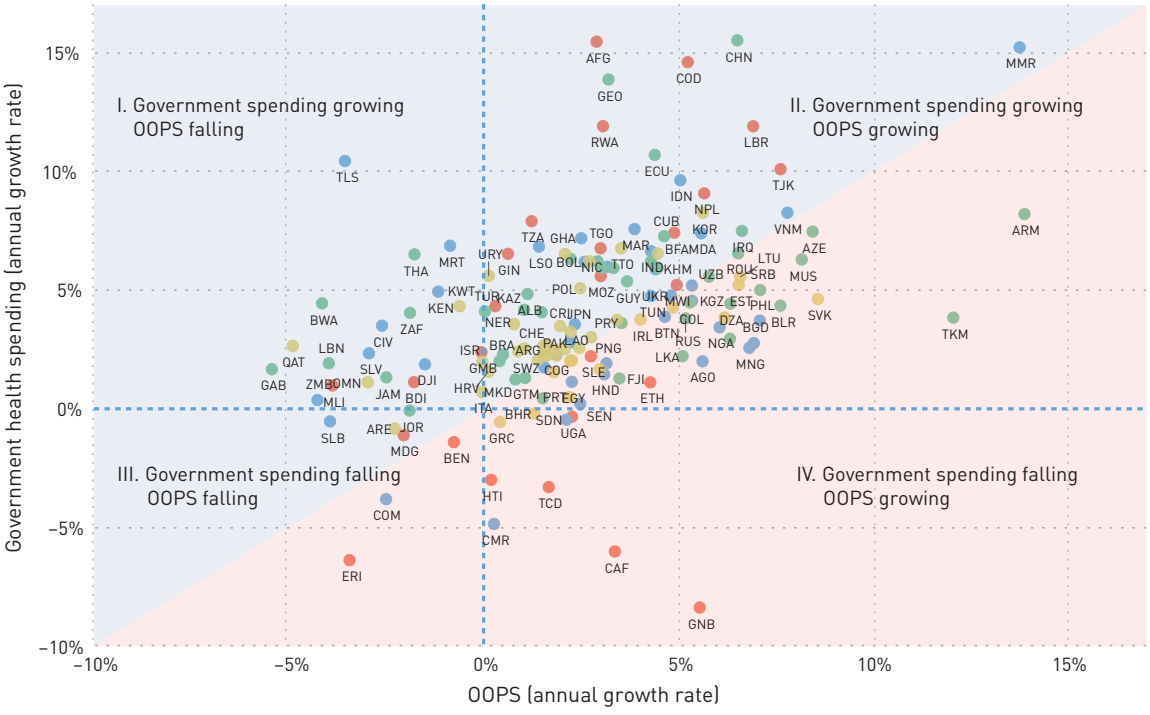


FIGURE 1.13 **Government and out-of-pocket spending both grew over the past two decades**

Annual growth of government health spending and out-of-pocket spending, by country, 2000–2018



Note: Compound annual growth rates of government spending (Y-axis) and out-of-pocket spending (X-axis) during 2000–2018, in real terms.

FIGURE 1.14 Out-of-pocket spending declined in all income groups but remained high in low and middle income countries

Out-of-pocket spending as a share of total health spending, by income group, 2000–2018

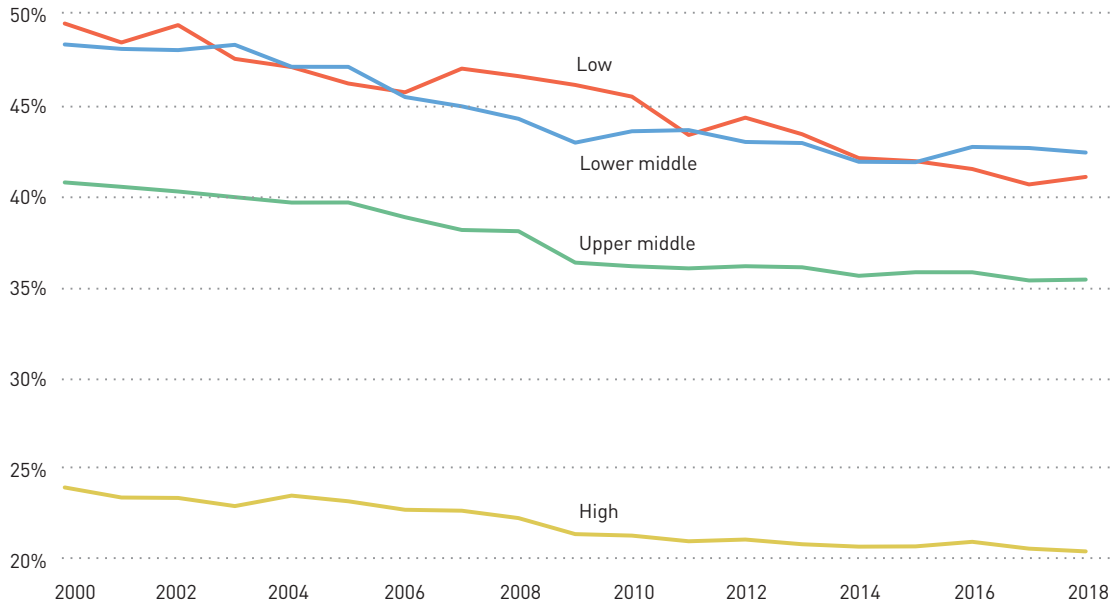
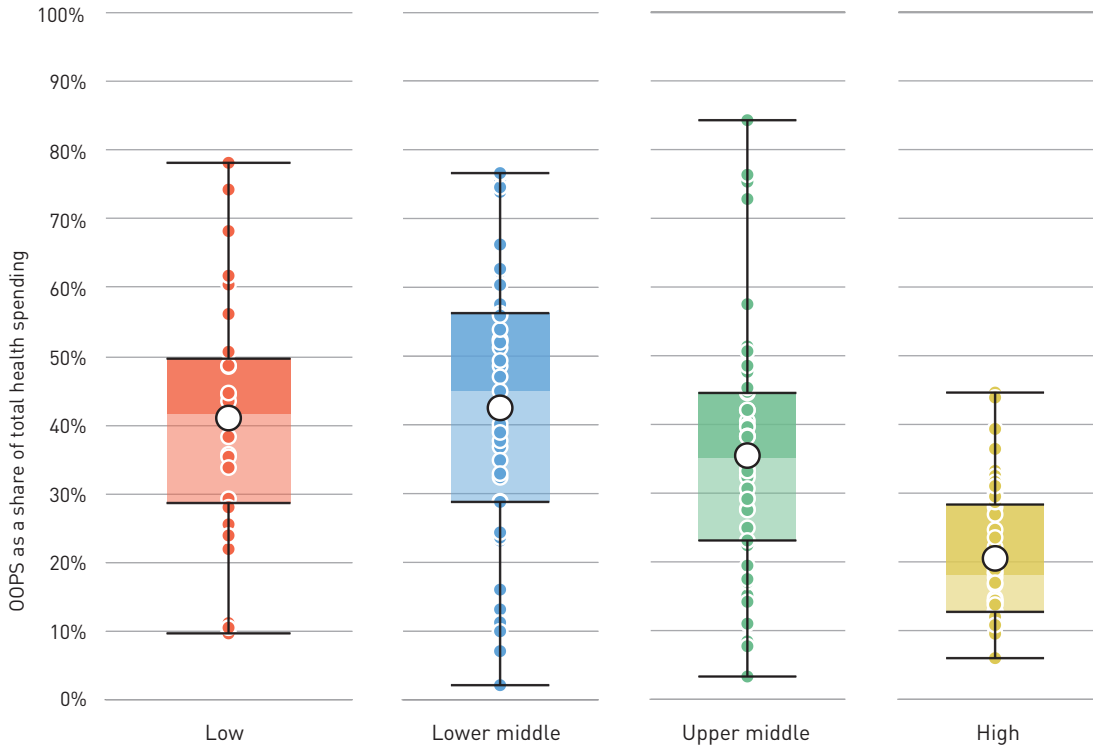


FIGURE 1.15 Out-of-pocket spending remained a major source of funding for health in low and lower middle income countries

Out-of-pocket spending as a share of total health spending, by income group, 2018



Note: Boxplots show the interquartile range (25th–75th percentile) of values, with the median marked by a line inside the bar. Each circle represents one country and the means are marked as a white circle. The vertical lines from the bars extend to the maximum and minimum values.

Health spending from external aid reached its peak in 2014 and has since fallen. The share of external aid absorbed by lower middle income countries has been increasing and in recent years surpassed that of low income countries

External aid for health increased from 2000 to 2014 but has been stagnant since 2015. External aid to health includes official development assistance through grants and concessional loans from bilateral and multilateral donors, and grants from private donors. In 2018, external aid was US$ 16.2 billion, down 16% from the peak of US$ 19.3 billion in 2014 (Figure 1.16).

The top nine recipient countries absorb 43% of total external aid. Four of them are lower middle income countries (India, Kenya, Nigeria and Zambia), and one is an upper middle income country (South Africa, Figure 1.17).

The share of external aid in total health spending in low income countries, which increased greatly from 2006 to 2011, has levelled off at about 30%. Low income countries received more aid than lower middle income countries from 2006 to 2012 (Figure 1.18a), but the reverse has been true since 2013 (except in 2017). In 2018, lower middle income countries received 43% of external aid, while low income countries received 42%. Although per capita external aid was similar for both country income groups (about US$ 11), external aid played a much more important role in financing health systems in low income countries than in lower middle income countries (Figure 1.18b). The share of aid in total health spending was 30% in low income countries, compared with only 10% in lower middle income countries (Figure 1.18c). External aid made up more than half the health spending in several low income countries in 2018. Upper middle income countries still received, on average, US$ 3.50 per capita in 2018, but that average primarily reflected four countries receiving US$ 10 or more per capita: Botswana, Jordan, Namibia and South Africa.

FIGURE 1.16 External aid for health has reached a plateau, stagnating at its 2013 level

Total global external aid for health, current US$, 2005–2018

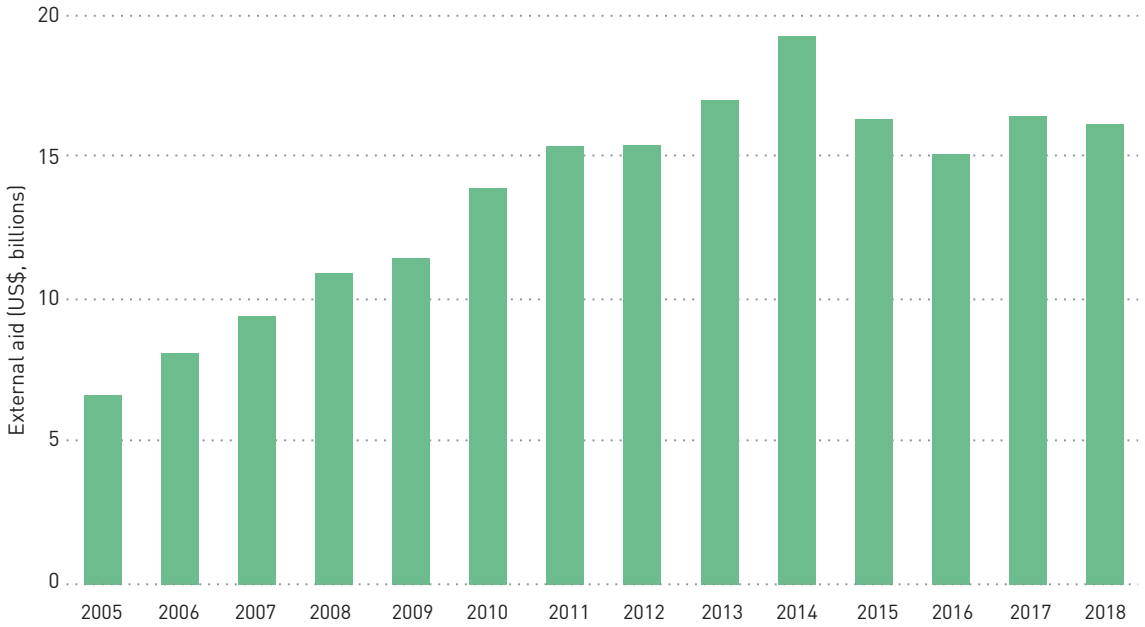
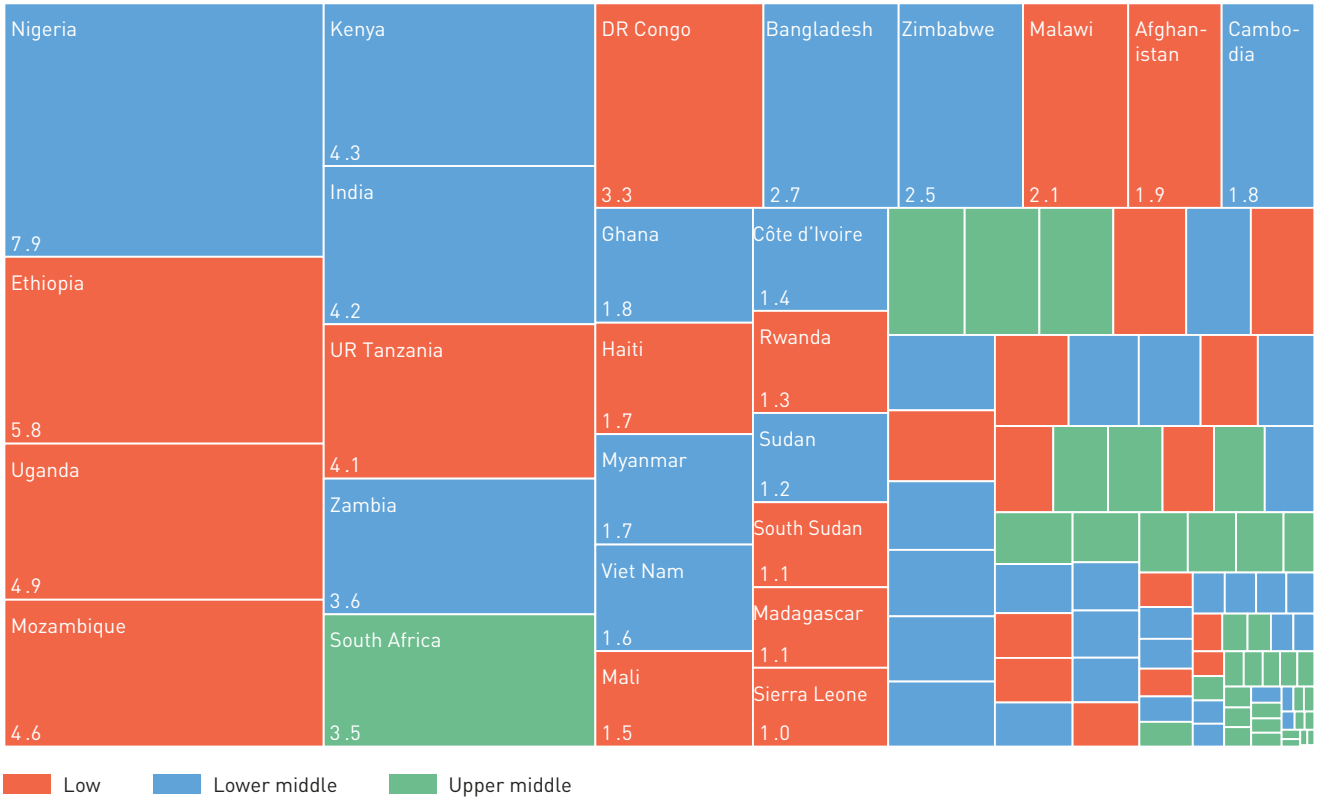


FIGURE 1.17 **The top nine recipient countries absorbed more than 40% of total external aid in 2018**

Country shares of external aid for health (%), 2018



Note: Only countries that received more than 1% of total external aid in 2018 are labelled.

FIGURE 1.18

a. LMICs received as much aid as LICs

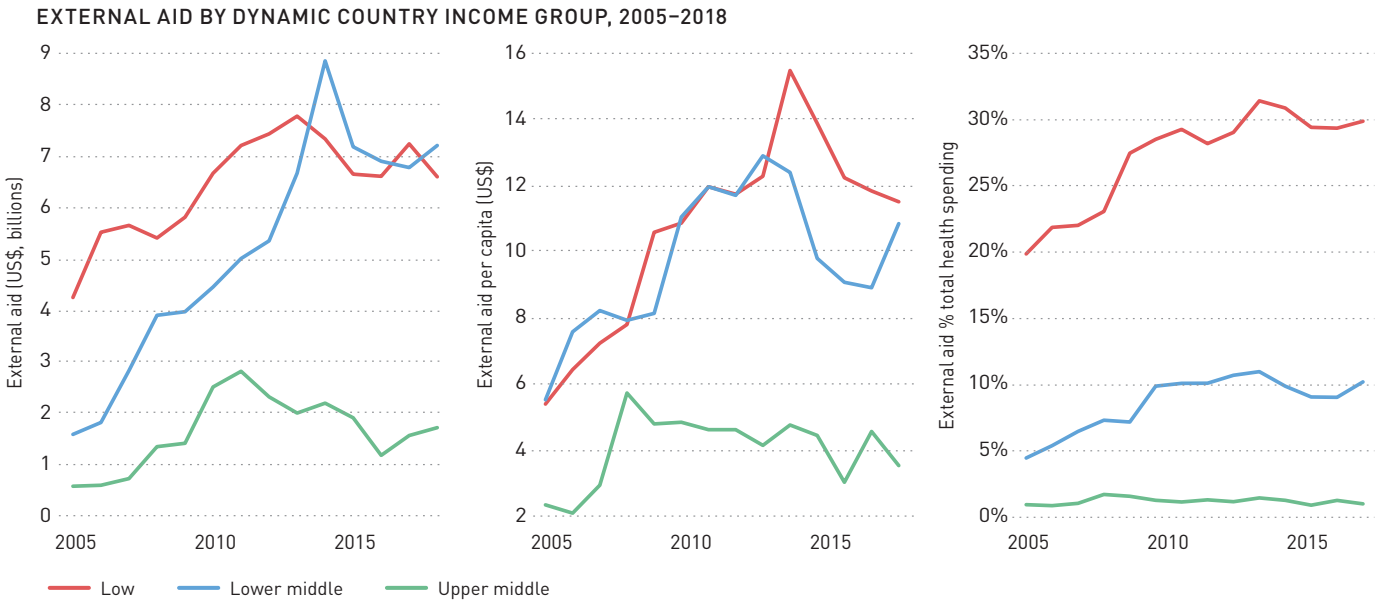
Total external aid

b. Per capita aid tended to be similar in LICs and LMICs

External aid per capita

c. Aid funded a large share of health spending in LICs

External aid as a share of health spending



Note: The country income groups in this figure are dynamic—that is, for each year each country is placed in the group it belongs to. So, a country can move from one group to another from year to year. The 2014 peak in the lower middle income group in Figure 1.18 is primarily due to the move of the major external aid recipients—Bangladesh, Kenya and Myanmar—to that group from the low income group.

The share of health spending devoted to primary health care varied widely across countries

CLINICAL SERVICES AND MEDICINES ABSORB THE LARGEST SHARE OF HEALTH SPENDING ACROSS ALL COUNTRIES

In this section, 106 countries reported health expenditures by functions, of which, 52 were able to disaggregate these expenditures by funding source. Inpatient services include all health care goods and treatment received in an inpatient setting, such as care, diagnostic tests, hospital bed, pharmaceuticals and other medical goods *[4]*. Inpatient care spending varies the most across country income groups, ranging from a share of 15% of health spending in low income countries to 33% in upper middle income countries (Figure 1.19).

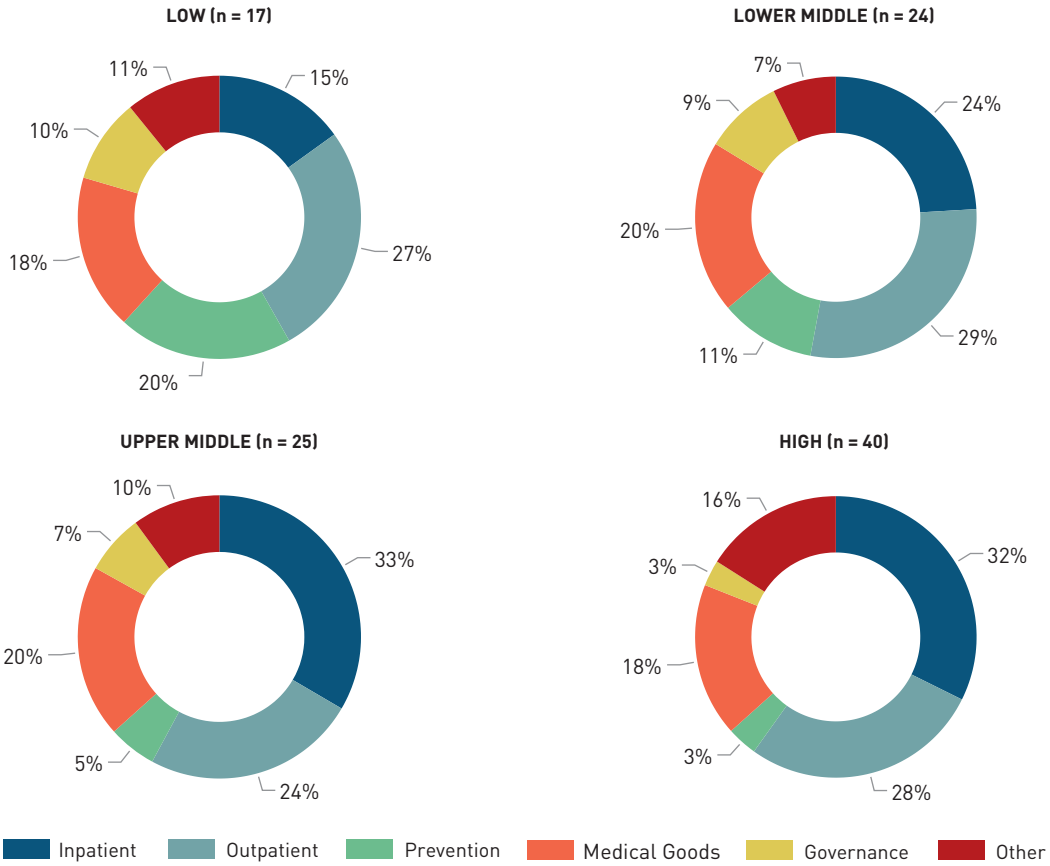
Outpatient care includes medical and diagnostic services and medicines provided in outpatient consultation. Outpatient care spending ranges from 24% to 29% of total health spending across income groups. Both inpatient and outpatient service can be curative, rehabilitative or long-term care *[4]*.

The medical goods category includes medicines and medical supplies purchased outside an inpatient or outpatient setting. As some medical goods provided as part of inpatient or outpatient treatment *[4]*, therefore, the 'medical goods' category does not represent total spending on medicines and medical supplies. Medical goods averaged around one-fifth (18%–20%) of health spending in all income groups.

The proportion of health spending for preventive care showed great differences across country income groups. Preventive services include immunization, health checkups, health education, disease detection, epidemiological surveillance, emergency preparedness programs and so on *[4, 5]*. In high income

FIGURE 1.19 Higher income countries tended to spend more on inpatient care, lower income countries on prevention

Health spending by health care function and income group, latest year available



Note: "Other" includes home-based and day care, ancillary services and other health care services not elsewhere classified.

countries, spending on preventive services is only 3% of health spending, while in low income countries, it is 20%. Part of the reason is that higher income countries have more complex treatment procedures and technology, which drive up total health care costs.

With limited resources in low income countries, health spending goes primarily to basic services. But that larger share going to prevention in low income countries does not mean they have sufficient resources for prevention: the amount in absolute terms is very small—US$ 7 per capita. The magnitude of preventive care depends on the country's service delivery system. Expenditures on population-based prevention measures, such as surveillance, disease detection and risk factor prevention are easier to separate from treatment service expenditures. However, expenditures from individual-based preventive services are difficult to separate as they are often highly integrated in outpatient or even inpatient services. This difficulty leads to an underestimation of prevention spending, and is particularly prevalent in HICs.

On average, a larger share of health spending went to health system governance in low income countries than in other country income groups. Governance includes the administration of health care and its financing system, including coordination, planning, management, monitoring and evaluation *[4]*. On average, 10% of health spending in low income countries went to administering the health care system, followed by lower middle income countries with 9%, upper middle income countries with 7% and high income countries with 3%. In general, systems that are more fragmented in service delivery or financing would require more resources for governance, perhaps partly explaining the differences among income groups.

Both day care and home-based service can provide curative, rehabilitative or long-term care. So, a portion of day care and home-based care spending, as well as spending on ancillary services (such as laboratory services) and spending not elsewhere classified, are included in the 'other' category (Figure 1.19) *[4]*.

PRIMARY HEALTH CARE WAS STILL MAINLY FUNDED BY PRIVATE SOURCES

On average, half of total health spending went to primary health care (PHC) in 2018 (box 1.1). Many high income countries spent more than US$ 1,000 per person on PHC, while several countries spent less than US$ 20 (Figure 1.20). Income is not the only determinant. Within countries of similar incomes there were large differences in PHC spending.

FIGURE 1.20 High income countries spent more on PHC per capita

Primary health care spending per capita, constant US$ 2018, latest year available

BOX 1.1

Global definition of primary health care spending for cross-country comparison

The System of Health Accounts 2011 does not include a ready-made classification for mapping primary health care (PHC), which can be defined differently depending on the objective. It can be defined by the level of provider (HP classification), the type of services (HC classification) or the combination of the two (HP x HC). The global definition of PHC aims to provide a benchmark for cross-country comparison with full recognition that countries organize their systems differently, and a unique global definition will not be equally relevant to all countries *[6]*.

Following a global consultation, the WHO based its current definition of PHC spending on the type of services (HC classification). The following spending categories from the health care function classification are considered as spending on PHC:

- General outpatient curative care (such as visits to a general practitioner or nurse).
- Dental outpatient curative care (such as visits for regular control and other oral treatment).
- Curative outpatient care not elsewhere classified (excluding specialized outpatient care).
- Home-based curative care (such as home visits by a general practitioner or nurse).
- Outpatient and home-based long-term health care.
- Preventive care (such as immunization, health check-ups, health education, disease detection, monitoring and emergency response programs).
- 80% of medical goods provided outside health care services.
- 80% of health system administration and governance expenditure.

The medical goods category under the HC classification includes medicines purchased outside the inpatient and outpatient setting (in pharmacies and markets) or paid for separately from the consultation fee. The PHC component of medical goods includes only those for general outpatient use and self-prescribed medicine. It does not include medical goods for specialized outpatient and inpatient services. Following these criteria and assuming most spending recorded for medical goods is for PHC, 80% of medical goods spending was attributed to PHC spending under this global definition *[7]*.

Governance functions are mainly related to the administration, development and implementation of policies, and the administration of health financing. Policy development, implementation and coordination are population-based interventions in the broader public health scope and so are considered as PHC. According to this criterion, 80% of spending in the governance category is counted as PHC spending *[7]*.

Sources of funding for PHC varied across income groups. In low income countries, about one-fifth of PHC spending was financed through government sources. In lower middle income countries, governments paid for more than one-third, and in upper middle income countries, more than 40% (Figure 1.21). Private domestic sources still accounted for about half of PHC spending in low and lower middle income groups, showing that market forces still play a large role in shaping PHC services.

In low income countries, 33% of PHC spending was financed through external aid. In lower middle income countries, external aid contributed 14% of PHC spending on average. Upper middle income countries did not rely greatly on external aid (2%). Aid is often highly earmarked to specific programs and activities. External aid is important in funding priority public health programs, such as those for immunization, maternal and child health care and prevention of infectious diseases. See chapter 2 for deeper analysis about disease- and program-specific spending.

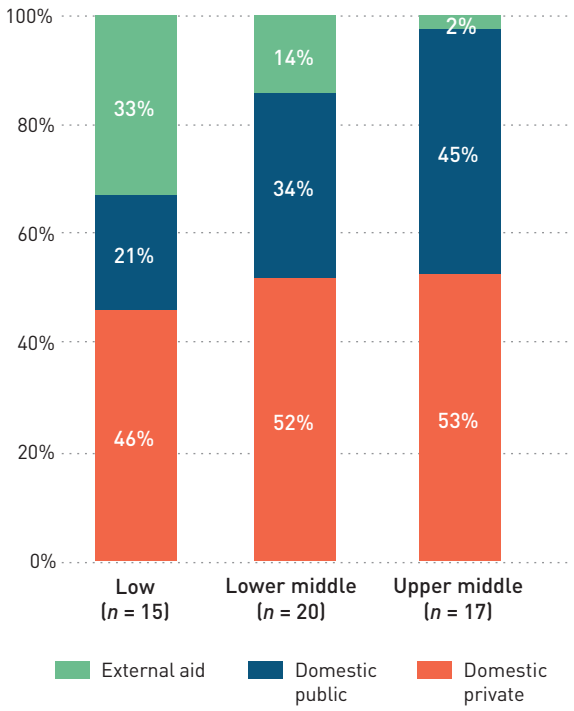
Conclusion

In 2018, global spending on health increased in absolute terms, but for the first time in two decades its growth has been slower than world economic growth. In the past two decades, the structure of funding sources for health spending remained rather stable. OOPS remains high, and the share of OOPS in total health spending has been coming down much more slowly than desired. In addition, many low income countries continue to rely heavily on external funding.

In 2020, the world entered the COVID-19 storm, bringing harm to health, health systems and economies around the world. As described in Chapter 4, high reliance on external funding and OOPS are "preconditions" that are likely to leave countries more vulnerable to the macroeconomic and fiscal

FIGURE 1.21 Private spending is the largest source of PHC funding

Primary health care spending by funding source and income group, latest year available



Note: High income countries are not shown, since too few data points on spending by funding source are available.

disruptions resulting from the COVID-19 crisis. The overall policy response to that shock will also, in turn, have long-term impacts on health system financing. The established patterns of health spending is likely to change, but lessons from the past inform us to better weather the COVID-19 storm and to reorient future systems.

Notes

1. Throughout this report the term 'domestic public' spending refers to spending from government budget transfers and from mandatory social health insurance contributions. Domestic public spending will also be referred to as 'government' spending.
2. Throughout this report, group averages exclude countries with populations of fewer than 600,000 people.
3. The country income group classification in this report follows the World Bank's 2018 classification, unless otherwise specified.
4. Total government expenditure is used as defined in the System of National Accounts. Its major components are: intermediate consumption, compensation of employees, interest, social benefits, social transfers in kind, subsidies, other current expenditure and capital expenditure payable by central, regional and local governments, as well as social security funds [3].

References

1. WHO. New perspectives on global spending for universal health coverage. Geneva: World Health Organization; 2017. Available from: https://apps.who.int/nha/database/DocumentationCentre/GetFile/55650141/en.
2. WHO. Public spending on health: a closer look at global trends. Geneva: World Health Organization; 2018. Available from: https://apps.who.int/nha/database/DocumentationCentre/GetFile/57720661/en.
3. OECD. Health at a glance: Europe 2020. Paris: OECD Publishing; 2020. Available from: https://ec.europa.eu/health/state/glance_en.
4. OECD. Eurostat and WHO. A system of health accounts 2011: revised edition. Paris: OECD Publishing; 2017. Available from: https://www.who.int/health-accounts/methodology/sha2011.pdf?ua=1.10.
5. OECD. Expenditure on prevention activities under SHA 2011: supplementary guidance. Paris: OECD Publishing; March 2017. Available from: https://apps.who.int/nha/database/DocumentationCentre/GetFile/57873371/en.
6. Vande Maele N, Xu K, Soucat A, Fleisher L, Aranguren M, Wang H. Measuring primary healthcare expenditure in low-income and lower middle-income countries. BMJ Glob Health. 2019;4:e001497. Available from: https://gh.bmj.com/content/bmjgh/4/1/e001497.full.pdf.
7. WHO. Estimation of primary health care expenditure: technical note for discussion. Geneva: World Health Organization; December 2019. Available from: https://apps.who.int/nha/database/DocumentationCentre/GetFile/57752201/en.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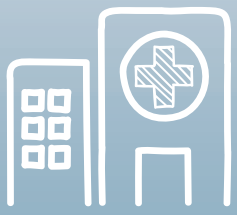


2

Spending across diseases

DIFFERENCES BETWEEN LOW AND MIDDLE INCOME COUNTRIES

KEY MESSAGES

External aid for health mainly funded infectious and parasitic disease programmes in low and middle income countries, while domestic public funds focused more on noncommunicable diseases.

- The analyses on disease-specific spending is based on data from 40 low and middle income countries with standardized data collection and estimation methods.
- In low income countries, infectious diseases accounted for half of overall health spending, while in middle income countries, they accounted for one-third. Noncommunicable diseases accounted for about 30% of the health spending in middle income countries and about 13% in low income countries.
- Two-thirds of external aid for health addressed infectious diseases in both low and middle income countries. In middle income countries, HIV alone accounted for nearly half the aid for health.
- Of total spending on noncommunicable diseases, 37% came from domestic public funds in low income countries and 15% was attributed to aid. In middle income countries, 59% came from domestic public funds, and 2% was attributed to external aid.

The analyses on disease-specific spending is based on data from 40 low and middle income countries with standardized data collection and estimation methods

This chapter analyses health spending by different categories of disease and programme. A picture of disease- and programme-specific spending can inform policy development and implementation and performance monitoring. Globally, tracking disease-specific spending is still at an early stage. And studying disease-specific spending by funding source is even more challenging, particularly for private spending. Even so, some low and middle income countries have started to report such detailed data, while the methodology, data availability and reliability are improving.

It first discusses the methods for data collection and estimation, then presents findings, starting with disease-specific spending as a share of country health spending, then studying it as supported by three main funding sources, and finally presenting one country case to analyse health care functions for key diseases and programmes. Unless otherwise stated, all the figures in this chapter are for 2018.

Shedding light on disease funding patterns can support more evidence-based, efficient decision making in resource-constrained settings such as the low and middle income countries analysed here *[1, 2]*. Knowing how much health spending goes to specific diseases has been of policy interest for decades—it can be traced back to mid-twentieth-century studies in what was then Yugoslavia *[3]*. But the only prior exercise covering a full range of diseases and funding sources was done by the Organisation for Economic Co-operation and Development (OECD) for a dozen countries over 2003–2011 *[4]*. Otherwise, the rich body of literature on disease spending rarely covers a full range of diseases, conditions and funding. Publications examine a single disease or a sole funding source, precluding cross-country comparisons or benchmarkings of one disease against another in a single country *[5, 6]*. Too often, summing disease-specific spending numbers produces totals greater than total country health spending. The analysis in the OECD report and used in this report are alone in the rigor of their standardized methodology and use of actual spending data. Both analyses are country-based estimates using data produced by ministries of health or statistical offices and do not result from modelling.

World Health Organization (WHO) tracking of health spending uniquely relies on comprehensive and standardized tracking of actual country spending. In February 2014, WHO and its partners agreed to provide technical support to countries for producing full disease-distributed health accounts against five broad categories—a mix of functional and anatomical classifications mostly derived from the international classification of disease (Box 2.1).[1] Shifting to a cross-cutting method tracking the flows of disease-related health spending by applying a standard accounting framework is more technically rigorous than the partial methodologies used by other studies (Box 2.1). The method, despite some challenges, ensures internal consistency and provides good value for money (Box 2.2). It minimizes multiple parallel data collection efforts and is less labour intensive and time consuming. And it builds institutional capacity at country level.

Work is ongoing to help countries move from one-off health accounts studies, often externally funded and produced, by setting up the foundational mechanisms that would allow them to institutionalize the regular production and use of expenditure data for policymaking. Countries would invest in system strengthening and capacity building, at least for a core team in charge, so that data collection could rely less on national surveys and could become routine through the public system. Since the new approach follows well-established vertical resource tracking systems for diseases and programmes, WHO has embarked on developing a series of crosswalks that would enhance harmonization and interoperability and preserve data time series.[2]

This chapter discusses 40 low and middle income countries from which relevant data could be obtained. The countries analysed represent a large sample of those benefitting from development aid. About half (17) are low income countries, and the study aggregated 17 lower middle and 6 upper middle income countries into a group of 23 middle income countries. Of the 40 countries, 27 are from the WHO African region (Annex 2).[3] These 40 countries have 14% of the world's population and receive 54% of external aid for health.

They account for more than 55% of the yearly global maternal death count *[8]*, with an average 304 maternal deaths per 100,000 live births—about 100 above the global average of 211.[4] Twenty of them are among the 48 high burden countries for tuberculosis, 30 are on the 69-country FP2020 list for family planning, 29 have received a grant from Gavi, the Vaccine Alliance, 39 others have received a grant from the Global Fund to Fight AIDS, Tuberculosis and Malaria and 10 are high burden countries for the control, elimination and eradication of neglected tropical diseases[5] (Annex 2). Depending on country epidemiological contexts, the interest in specific diseases and programmes varies. There are growing interactions around obtaining specific spending amounts incurred for nutrition and neglected tropical diseases, even though they account for a minimal share of country health spending (Box 2.3).

BOX 2.1

Disease and programme classification using the System of Health Accounts framework

The System of Health Accounts framework (SHA) serves as a guide to countries in reporting health spending amounts by disease and programme in a standardized and comparable way *[9]*. In brief, the country health spending envelope is broken down into five main disease categories—infectious and parasitic diseases, reproductive health, nutrition deficiencies, noncommunicable diseases, and injuries—that are mutually exclusive. Each category could be further disaggregated to address policy questions of interest in light of a country's epidemiological context. For instance, spending on HIV/AIDS, tuberculosis or malaria could be untied from spending on the larger group of infectious and parasitic diseases. Or for high burden tuberculosis countries, spending on multidrug-resistant tuberculosis could be separated from spending on drug-susceptible tuberculosis (Annex 3).

The categories presented and discussed in the current report are as follows:

Infectious and parasitic diseases
- HIV/AIDS and other sexually transmitted diseases (STDs)
- Tuberculosis (TB)
- Malaria
- Neglected tropical diseases (NTDs)

Reproductive health
- Maternal conditions
- Family planning

Nutritional deficiencies

Noncommunicable diseases (NCDs)

Injuries

Other and unspecified diseases/conditions

Expenditures for immunization are embedded in the infectious and parasitic diseases category, so it is not separately visible. But throughout this chapter, spending for immunization programmes is distinguished from spending on infectious and parasitic diseases. There is no double counting since spending on immunization is traced under a separate classification—the health care function. Throughout this chapter, all HIV/AIDS-related figures include other sexually transmitted diseases along with HIV/AIDS. And TB/HIV activities are nested under HIV/AIDS, not under tuberculosis—since tuberculosis is considered opportunistic to HIV/AIDS (Annex 3).

BOX 2.2

Methodology for estimating disease-specific spending

The disease spending amounts cover the full range of factors provided for health services—drugs, supply and human resources—at both the service delivery point, where health services are produced and consumed, and centrally, where the system is administered and governed. In allocating spending amounts, some line items are easy to identify, and thus specific to a particular disease or a programme—for example, spending on drugs such as insulin for diabetes, antiretrovirals for HIV/AIDS and the salaries of doctors and nurses working in a psychiatric hospital for mental health or those of midwives in labour and delivery wards for reproductive health.

Other, nonspecific line items for running the health system or associated with service delivery in generalized settings—such as water and electricity bills or the salary lines for ministry of health staff or the personnel of general hospitals—need to be distributed across disease categories. That is the basis for a set of *distribution keys,* illustrated in the following equation:

$$exp_{dis\_i} = exp_{specific\_dis\_i} + exp_{non-specific\_dis\_i}$$

where ***exp*** stands for expenditure and ***dis_i*** for disease *i*.

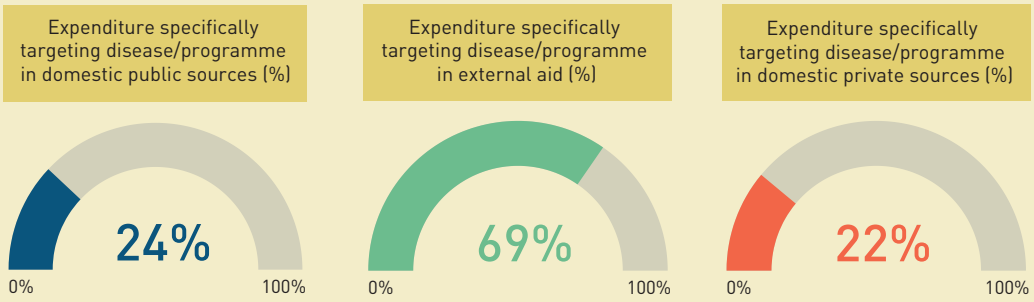
The details of splitting nonspecific funding lines such as ministry of health staff salaries using disease distribution keys is available in a methodological guidance note available on WHO's documentation centre. Briefly, expenditure amounts are disaggregated by disease or programme using split keys built on two pieces of information: service use—the number of cases or reported visits by diagnosis and/or symptom as recorded by the routine health information system—and the intensity of resources needed for each service type—assessed by either a costing study or by weighting outpatient visit costs compared with inpatient stays.

In a desk review, we specifically assessed the magnitude of spending directly attributable to a disease or a programme for 12 countries.[1] In preliminary results, such spending accounted for 28% of country health spending on average. It varied by funding source, representing an average of 69% of countries' health spending from external sources but less than 25% of spending from either domestic public or domestic private sources (Box Figure 1).[2]

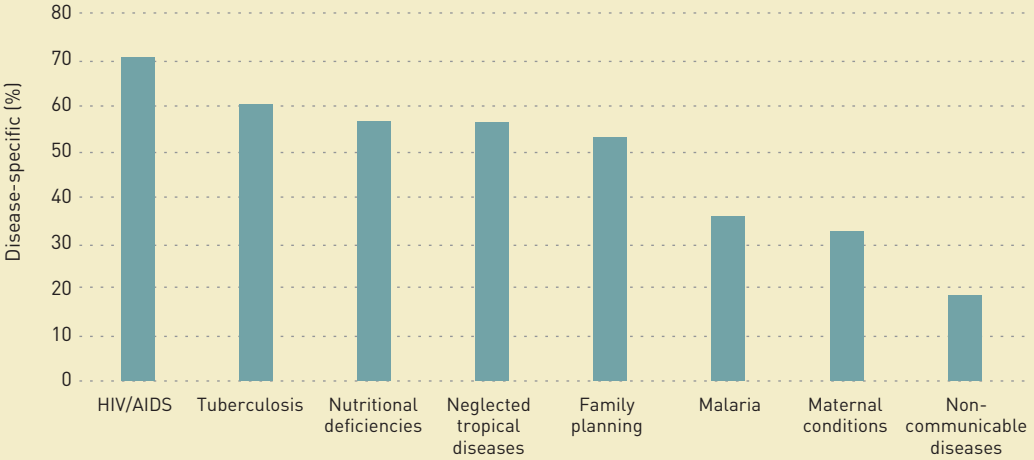
The challenge of allocating domestic private spending to diseases or programmes is greater than for other funding sources. The challenge of allocating domestic private spending to diseases or programmes is greater than for other funding sources. Countries may not have access to detailed disease information for out-of-pocket health spending. Household surveys are the basis for calculating out-of-pocket series and often do not separate household spending on health by disease and conditions , as this would by definition rely on self-reporting rather than facility data. Collaborative work is ongoing to shape health expenditure modules in household surveys and in the routine health information system directly, where possible.[3] When such modules are implemented, the results made available to country teams would greatly improve the estimates, considering the size of domestic private spending on health in these low and middle income countries. The situation is uneven across countries. Some have institutionalized the regular production of their health accounts—such as Burkina Faso, which relies on facility-based surveys conducted every two to three years, and Gabon, which relies on actual data directly collected from pharmacists—to regularly update the disease allocation splits applied to the country's out-of-pocket spending. Others mainly build splits applied to non-disease-specific funds from domestic private sources on the basis of splits in public sources.[4]

Across the 12 countries, the disease-specific funding lines ranged, on average, from about 70% of a country's HIV/AIDS spending down to about 20% of spending on noncommunicable diseases (Box Figure 2). The amounts reflected, among others, the spending for specific medical goods—in the case of HIV/AIDS, for antiretroviral drugs, laboratory reagents for CD4 count and viral load and condoms distributed by the national AIDS control programme—and for specific

BOX FIGURE 1 **Share of disease-specific funds, by funding source, 12 countries**



BOX FIGURE 2 **Disease-specific spending as a share of spending on selected diseases or programmes, 12 countries**



interventions targeting key populations—such as information, education and counselling for sex workers and their clients and voluntary male circumcision to reduce the risk of HIV infection.

The spending amounts presented in the chapter should be taken with caution due to the limited accuracy, timeliness and completeness of the underlying health information management systems in most low and middle income countries *[10, 11, 12]* and the high proportion of non-disease-specific spending in total spending for some disease categories—particularly for noncommunicable diseases.

1. Afghanistan, Burkina Faso, Cabo Verde, Central African Republic, Côte d'Ivoire, Eswatini, Gabon, Mali, Mauritania, Nigeria, Sao Tome and Principe, and Togo.
2. Domestic private sources include out-of-pocket spending, contributions to voluntary health insurance schemes, expenditures from enterprises and from locally funded nongovernmental organizations. Domestic public sources include government internal transfers and contributions to social health insurance. External aid includes spending from foreign money, whether channelled through the government or not.
3. This refers to adding a finance module to the District Health Information Software 2 (DHIS2), the world's largest web-based health management information system platform, which is used by 73 low and middle income countries, to collect spending amounts alongside epidemiological data. https://www.dhis2.org/home.
4. These would be adjusted so that free-of-charge services would not be treated the same way—the case, for instance, for tuberculosis treatment, HIV/AIDS treatment, family planning services and so on in numerous countries. Even so, the extent to which users do not in reality pay for these services is debatable.

BOX 2.3

Growing interest in disaggregated spending data for nutrition and neglected tropical diseases

Although few countries have breakdowns of spending by nutrition and neglected tropical diseases, the interest in tracking such expenditures is growing.

In the latest *Global Nutrition Report*—an instrument for tracking commitments by 100 stakeholders spanning donors, governments, businesses, civil society and the United Nations—the nutrition community noted, quoting the 2018 *Global Health Expenditure Report*, that spending on nutrition has the lowest government spending priority among all disease categories *[13]*. Earlier work in Ethiopia, where stunting affected 38% of children under five years old in 2016, led to the National Nutrition Program 2016–2020, with a strategy based on proven nutrition interventions to be implemented through a multisectoral approach and coordinated between government and development partners. The latest health accounts show that spending on nutrition deficiencies was 14% of Ethiopia's health spending, compared with 3% across the 26 other African countries making disaggregated information on nutrition available.

On neglected tropical diseases, a 2030 roadmap endorsed by the 73rd World Health Assembly sets out global targets and milestones for preventing, controlling, eliminating and eradicating 20 neglected tropical diseases and disease groups *[14]*. By shifting from single-disease vertical programmes to cross-cutting approaches, the assembly aims to promote the inclusion of neglected tropical diseases (NTDs) in overall health system planning and budgeting cycles through improved coordination and collaboration.

Another distinct movement is to drive greater ownership of NTDs by national and local governments and communities. Spending data, a tangible measure of political commitment, can support monitoring and evaluating progress. But such ambitious goals require solid and continuous country-level collaboration between the NTD programme and the team producing the health accounts. In many endemic countries, there might be no master programme encompassing all NTDs, but disease-specific programmes on any of the 20 NTDs. And the absence of an integrated institutional structure for NTD programmes hinders systematically tracking and isolating NTD-related expenditure data. For instance, health account teams are often unable to estimate donated drugs and so likely to underestimate actual NTD expenditures. In the first publication of disaggregated NTD data on WHO's website, of the 48 countries that have included NTD-related details in their health accounts, only 37 will be released. The other 11 must first pass current quality standards.[1]

1. For instance, domestic public funds may be missing as a source of NTD spending, or no external aid is reported in a country flagged as receiving donated drugs for NTDs.

In low income countries, infectious diseases accounted for half of overall health spending, while in middle income countries, they accounted for one-third. Noncommunicable diseases accounted for about 30% of health spending in middle income countries and about 13% in low income countries

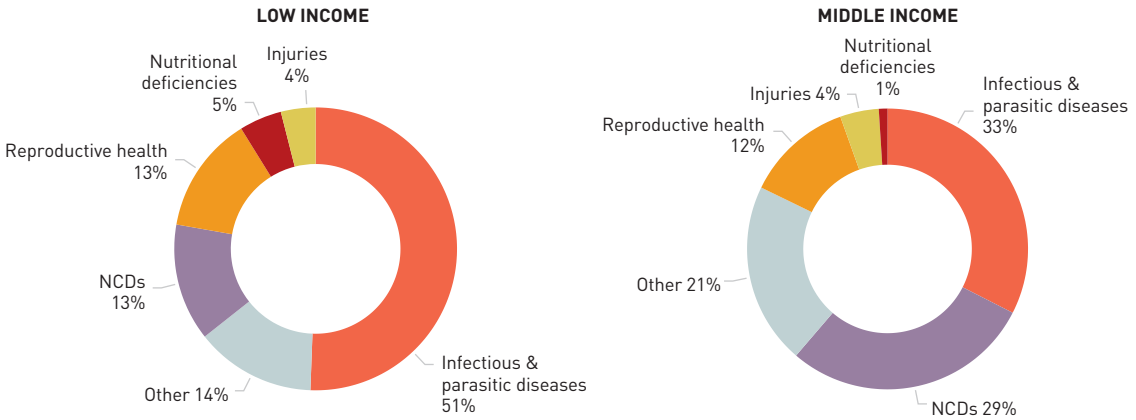
The pattern of health spending by disease varies by country income group. On average across the low income countries for which data are available, 51% of spending on average was allocated to infectious and parasitic diseases in 2018 (Figure 2.1). In middle income countries, nearly one-third of health spending was allocated to such diseases. Middle income countries spent a larger share on noncommunicable diseases (29%) than did low income countries (13%).

Low income countries assigned a greater share of health spending to nutritional deficiencies (5%) than middle income countries (1%), reflecting the strong correlation of nutritional deficiency outcomes such as stunting with country income level. Vulnerable populations are those who cannot afford food on a regular basis and cannot easily access clean water and sanitation *[15]*.

Reproductive health, on the other hand claimed the same share of health spending, around 12%–13%, in both low and middle income countries. So did injuries—about 4% of health spending in both country income groups.

FIGURE 2.1 Low income countries spent half their overall health spending on infectious diseases, while middle income countries spent one-third. Noncommunicable diseases accounted for about 30% of the health spending in middle income countries and about 13% in low income countries.

Spending disaggregated by disease or programme, by country income group, 2018



Note: NCDs are noncommunicable diseases.

The "other" category, accounting for 14% of health spending in low income countries and 21% in middle income countries, contains spending on general symptoms, such as fever or pain, not necessarily linked to a particular disease. The category corresponds to "symptoms, signs and abnormal clinical and laboratory findings" and "factors influencing health status and contact with health services" in the international classification of diseases.

Two-thirds of external aid for health addressed infectious diseases in both low and middle income countries. In middle income countries, HIV alone accounted for nearly half the aid for health

Domestic private sources are the largest funding source for health in both low and middle income countries (Chapter 1).[6] That holds for the 40 countries studied in this chapter—47% for low income countries and 45% for middle income countries. Most domestic spending is out-of-pocket spending at the point of service. In middle income countries, 44% of health spending came from domestic public sources, but in low income countries, only 22%. And low income countries relied on external aid for 30% of their health spending, much more than middle income countries, which used external aid for 11%.

Low income countries mostly spent their **domestic public funds** on infectious diseases, while middle income countries spent more on noncommunicable diseases. In low income countries, governments allocated an average of 47% of domestic public funds for health to infectious and parasitic diseases. But in middle income countries, 37% of domestic public funds went for noncommunicable diseases. Middle income countries still placed a high priority on infectious and parasitic diseases, allocating 32% of domestic public sources to them (Figure 2.2.a).

External aid targeted infectious and parasitic diseases in both low and middle income countries. In low income countries, an average of 65% of external aid was allocated to infectious and parasitic disease, and in middle income countries, 78% (see Figure 2.2.a). Spending on HIV accounted for 48% of the funds from external aid in middle income countries, with 67% going to HIV, tuberculosis and malaria combined, confirming an earlier finding *[16]*. External aid also financed reproductive health, which received an average of 13% of this aid in low income countries and 8% in middle income countries.

Of total spending on noncommunicable diseases, 37% came from domestic public funds in low income countries and 15% was attributed to external aid. In middle income countries, 59% came from domestic public funds, and 2% was attributed to external aid

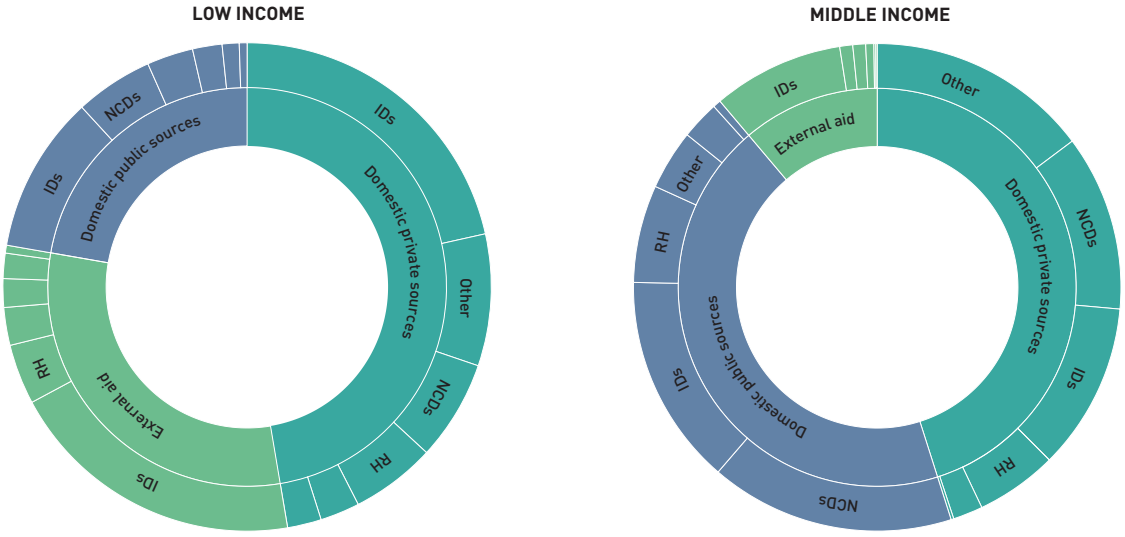
In low income countries, domestic private sources were the main funding source for all disease groups, providing as much as an average 57% of spending on injuries. The share of spending on infectious and parasitic diseases coming from domestic private sources was

39%, and the share of spending on noncommunicable diseases was 48%. External aid for health was the second largest source of funding for infectious disease at 38%—comparable to the share from private sources. For noncommunicable diseases, the second most important funding source was domestic public sources at an average of 37%, compared with 15% for external aid (Figure 2.2.b).

But in middle income countries, the main funding source for all disease groups was domestic public sources, which provided 49% of the spending on infectious and parasitic diseases and 59% of the spending on noncommunicable diseases. The other sources for infectious diseases, after domestic public sources, were domestic private sources (providing 30% of spending) and external aid (21%).

FIGURE 2.2.a Two-thirds of external aid for health went to infectious diseases—65% in low income countries and 78% in middle income countries

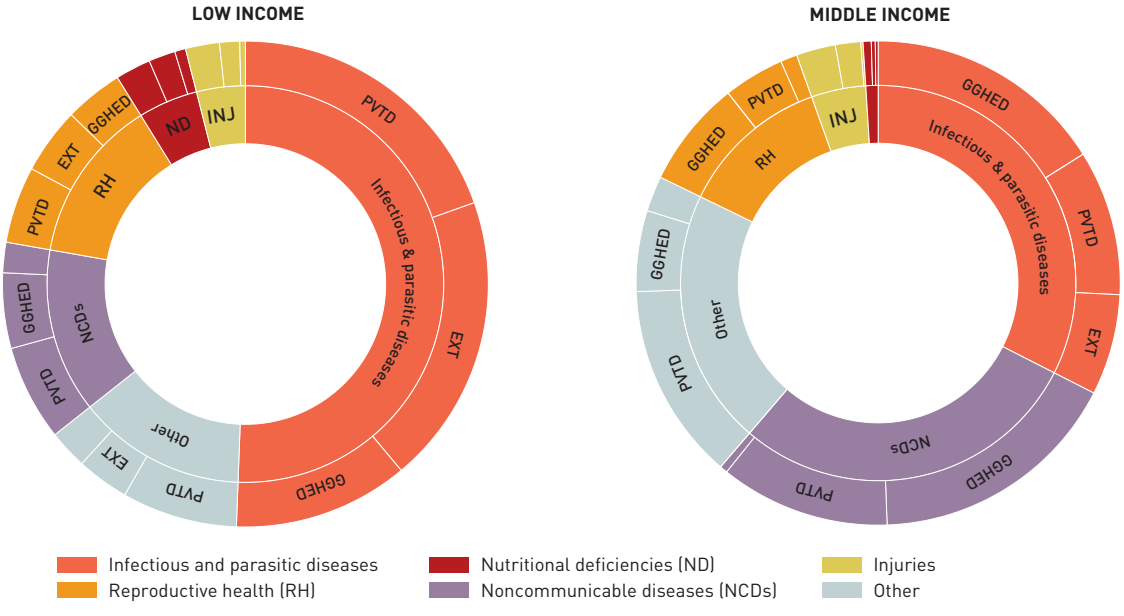
Shares of funding from each source going to each disease and programme group, by country income group, 2018



Note: IDs: infectious and parasitic diseases; RH: reproductive health; NCDs: noncommunicable diseases.

FIGURE 2.2.b Of total spending on noncommunicable diseases, 37% came from domestic public funds in low income countries and 59% in middle income countries

Shares of spending on each disease coming from each funding source, by country income group, 2018



Note: GGHED: domestic public sources; EXT: external aid; PVTD: domestic private sources.

For noncommunicable diseases, the second most important source was domestic private funding, providing an average of 39% of spending. External aid accounted for a minimal share of spending on noncommunicable diseases—2% on average (see Figure 2.2.b).

Specific diseases and programmes: domestic public sources and external aid

Figure 2.3 uses more granular data to examine the roles of domestic public sources and external aid in funding for HIV/AIDS, tuberculosis, malaria, infectious diseases, noncommunicable diseases, maternal conditions, family planning and immunization programmes. Table 2.1 presents average spending per targeted person for each disease or programme group, by country income group and source of funds (external aid or domestic public funds).

SPENDING ON HIV/AIDS, TUBERCULOSIS AND MALARIA RELY MORE ON EXTERNAL AID THAN DOMESTIC PUBLIC SOURCES

Funding for **HIV/AIDS** in both low and middle income countries continues to rely more on external aid and less on government spending. In most low and middle income countries, spending per person living with HIV receiving antiretroviral treatment from external aid was greater than spending from domestic public sources (Figure 2.3.a). Three countries—Afghanistan, Central African Republic and South Sudan—are clearly dependent (they are the countries at the bottom of the red area in the figure). Only a few countries allocated more funding in the public budget for HIV than external aid provided, including Georgia, Moldova, Niger and Uzbekistan. Countries with the highest numbers of HIV-infected persons receiving antiretroviral treatment (the largest bubbles in the figure) were receiving more from external aid than from domestic public sources.

Funding for **tuberculosis** treatment in both low and middle income countries depends on external aid. The low income countries spent on average twice as much from external aid per tuberculosis case on treatment as from domestic public sources (Figure 2.3.b). In 12 middle income countries, more resources went to tuberculosis from public budgets than from external donors, but in 10 others, external aid significantly funded tuberculosis treatment—with a six-to-one ratio of external aid to domestic public sources.[7] This matches an earlier report that international donor funding remains crucial in low and middle income countries, accounting for 44% of the total funding for tuberculosis in countries that have 40% of the world's reported cases *[17]*.[8]

External aid funding leads **malaria** spending in low income countries. External aid contributed twice as much to malaria—an average of US$ 22 per case—as domestic public sources in low income countries—US$ 10. In middle income countries, the epidemiological situation varied, affecting spending patterns. In many, malaria does not represent a risk to the population,[9] so the spending is smaller from both domestic public sources and external aid. But some middle income countries like Myanmar and Cambodia are affected by malaria and still relied heavily on external aid for malaria spending, compared with funding from government sources (Figure 2.3.c).

INFECTIOUS AND PARASITIC DISEASES RECEIVE MORE FUNDING FROM EXTERNAL AID, WHILE NONCOMMUNICABLE DISEASES RECEIVE MORE FROM DOMESTIC PUBLIC SOURCES

In low income countries, external aid plays a major role in addressing **infectious diseases,** outweighing spending from domestic public sources. Spending from external aid—US$ 8 per capita—was twice that from domestic sources—US$ 4 (Figure 2.3d). The exceptions were Nepal, Niger, the United Republic of Tanzania and Tajikistan, which provided more infectious disease funding through domestic public sources than external sources. But in middle income countries, government sources predominated in spending on infectious and parasitic diseases, at an average of US$ 22 per capita, compared with US$ 13 coming from external aid.

In both low and middle income countries, domestic public sources were primary in funding for **noncommunicable diseases** (Figure 2.3.e). Low income countries spent an average US$ 2 per capita, and middle income countries, US$ 46. Unlike for other diseases, external funds played a minor role in funding for noncommunicable diseases, an average of US$ 1 per capita regardless regardless of country income group. In Central African Republic and South Sudan, though, spending per capita from external sources allocated to noncommunicable diseases was far higher than spending from domestic public sources. In those two countries, the higher spending is due to external aid funding the health system as a whole, rather than donors directly targeting noncommunicable diseases.[10]

MATERNAL CONDITIONS FUNDING DEPENDED LESS ON EXTERNAL AID THAN IMMUNIZATION AND FAMILY PLANNING DID

Maternal-related health services were principally funded by government sources in both low and middle income countries, but spending amounts varied dramatically by country income group (Figure 2.3.f). In low income countries, spending averaged US$ 22 per pregnant woman, while in middle income countries, it was much higher, at an average US$ 278. Some low income countries relied more on external sources for maternal conditions spending, including Afghanistan, Central African Republic and South Sudan.

Spending on **family planning** relied less on domestic public sources than maternal-related health services. On average, spending from external aid on family planning per woman of fertile age was US$ 1.30 in both the low and middle income countries included in this analysis. In low income countries, spending from domestic public sources was US$ 0.60 on average, and in middle income countries, it was US$ 1.30 (Figure 2.3.g). In middle income countries, spending from domestic public sources, US$ 3.30 per woman of fertile age on average, outweighed spending from external aid. Few countries prioritized family planning by contributing more from domestic public sources. Other work suggests that government participation in funding family planning services is even greater.[11] Further investigation will study which parts of spending on family planning services are lumped in with reproductive health (not treated separately), due to the limitations of the underlying health information systems.

External aid was the primary source of spending on **immunization** in low income countries. Spending on immunization per live birth from external aid spent was an average of US$ 17–18 in both low and middle income countries. In low income countries, external aid provided three times as much funding as domestic public sources, which averaged US$ 6 per live birth (Figure 2.3.h). But in middle income countries, average government spending on immunization programmes was US$ 81—about five times spending from external aid. Four middle income countries were totally independent of external aid for immunization: Botswana, Namibia, North Macedonia and Tunisia.

The governments of the low and middle income countries included in this analysis could have shifted their spending towards the diseases and programmes targeted less by external aid, such as noncommunicable diseases and maternal conditions. Or those governments could have changed their service delivery model. Fungibility can be positive, since countries can reallocate displaced funds within the health sector or to other social sectors such as education *[18]*. But if the rate of substituting external aid for government spending on health is one-to-one, the purpose of external aid for health would be defeated. In reality, countries make some substitutions, but rarely to extreme levels *[19]*.

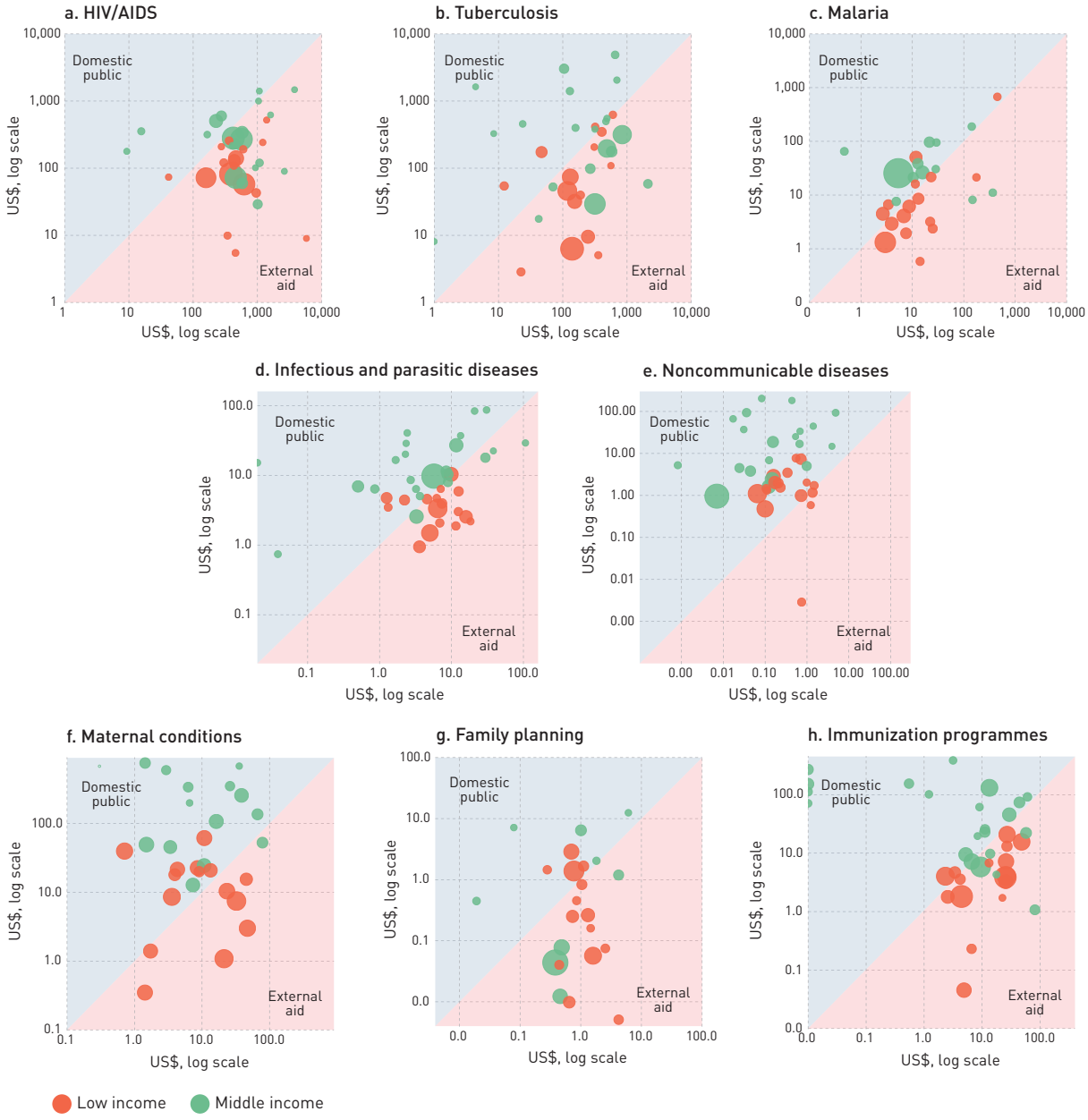
TABLE 2.1 In 2018, in low income countries, external aid was the main funding source for the disease groups except for maternal conditions and noncommunicable diseases. In middle income countries, there was less reliance on external aid for disease funding except for infectious diseases

Average expenditure amounts per targeted person for each disease/programme group, by country income group and source, US$, 2018

		Low income countries		Middle income countries	
Diseases/programmes	Persons targeted for each disease group	Domestic public sources	External aid	Domestic public sources	External aid
Infectious and parasitic diseases	Whole population	4	8	22	13
HIV/AIDS	People living with HIV receiving antiretroviral treatment	134	836	413	864
Tuberculosis	Tuberculosis cases in treatment	181	257	796	388
Malaria	Malaria cases	10	22	51	65
Maternal conditions	Pregnant women	22	14	278	18
Family planning	Women of fertile age	0.6	1.3	3.3	1.3
Noncommunicable diseases	Whole population	2	1	46	1
Immunization programmes	Live births	6	18	81	17

FIGURE 2.3 External aid for health was mainly funding infectious and parasitic diseases in low and middle income countries, while domestic public funds focused more on noncommunicable diseases

Expenditure on selected diseases and programmes from domestic public sources and aid, per targeted person for each disease/programme group, 2018 (US$)



Bubble sizes: a: number of people living with HIV and receiving treatment; b: number of tuberculosis cases in treatment; c: number of malaria cases; d and e: population, 2018; f: four or more antenatal care visit coverage (inverse); g: women of fertile age; h: diphtheria-tetanus-pertussis (DTP3) immunization coverage (inverse).

Note: The Y-axis represents spending from domestic sources on a particular disease in 2018 divided by a key epidemiological indicator, and the X-axis refers to the spending from external sources on that same disease divided by the same epidemiological indicator, both expressed in US$ (log scale). For HIV/AIDS, the specific indicator was the number of people living with HIV receiving antiretroviral treatment, while for tuberculosis, it was the number of tuberculosis cases in treatment. The specific indicator used for malaria was the number of malaria cases (the number of cases being treated was not available, so the total number of cases was used as a proxy). For infectious and parasitic diseases, and noncommunicable diseases, values are expressed in per capita terms, since population was used. For maternal conditions, the number of live births was used as a proxy for pregnant women. For family planning, the specific indicator selected was the number of women of fertile age, and for immunization programmes, the number of live births. The 45-degree line separates the countries into two groups. The countries located in the blue area of the graph indicates where spending on the disease that comes from domestic sources was larger than spending from external sources. The number of countries varies across charts a to h depending on the availability of the epidemiological indicator.

Source: Most of the epidemiological indicators were extracted from the Global Health Observatory (WHO), except for: HIV/AIDS indicator (UNAIDS), TB indicator (WHO Global tuberculosis programme), population (UNDP), women of fertile age—female population from 15 to 49 (UNDP), and live births (UNDP).

BOX 2.4

Health care functions by disease and programme in Burkina Faso

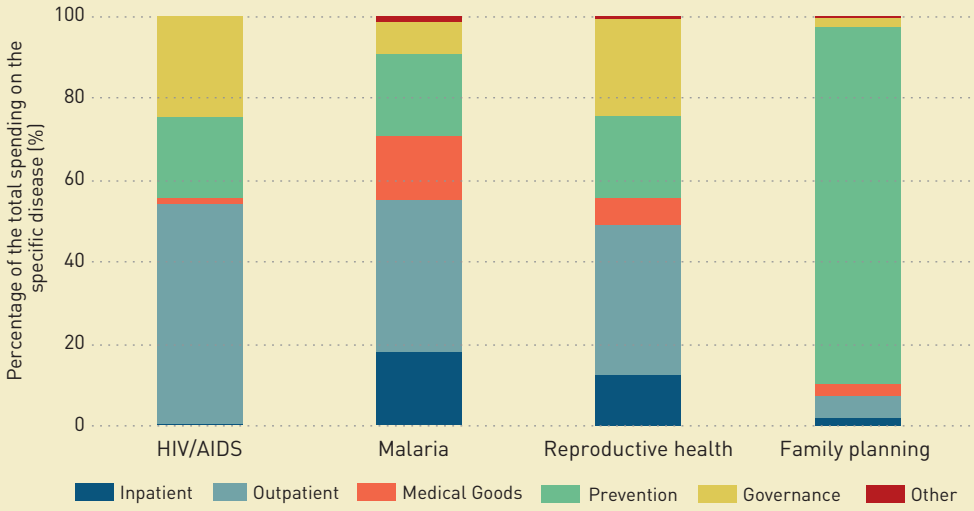
Burkina Faso, a low income country in Africa, has institutionalized the regular production and use of its health accounts since 2013. Its per capita health spending was US$ 40 in 2018, accounting for 5.6% of GDP. That year, US$ 6 (15%) of health spending came from external sources, US$ 17 (42.5%) from domestic public and US$ 17 (42.5%) from private sources. In general, outpatient care was the primary component (an average of 43%) of spending on HIV/AIDS, malaria and reproductive health. Of family planning service spending, 87% was from population-based preventive services.

Burkina Faso has an HIV prevalence of less than 1%, with 57,420 HIV-infected people receiving antiretroviral therapy in 2018. Spending on HIV accounted for 5% of the country's health spending. HIV/AIDS services were mainly consumed as outpatient care, accounting for 54% of HIV/AIDS spending (Box Figure 1). Health system governance took 25%, and preventive care, 20%. Inpatient care accounted for only 1% of HIV/AIDS spending. Studies of HIV-infected patient behaviours and studies on outcomes and predictive factors of mortality in hospitalized HIV patients in Burkina Faso could clarify the small share of spending going to inpatient care, beyond the country's low HIV prevalence. One study, for instance, showed that females are admitted to hospitals earlier than males for HIV care as an indirect result of public health initiatives targeting pregnant women *[20]*.

Malaria spending accounted for 13% of Burkina Faso's health spending in 2018. The number of malaria cases was 7,875,575 in 2018, accounting for 40% of the population at risk and resulting in 12,725 deaths *[21]*. Malaria services were primarily consumed as outpatient care, accounting for 37% of the country's malaria spending. The share allocated to prevention was 20% of malaria spending, and the share for administration of the health system was 8% (see Box Figure 1). Compared with HIV/AIDS spending, a higher share, 16%, went for medical goods, reflecting patterns in most African countries, where pharmaceuticals are directly purchased by households.[1] As a matter of fact, 50% of severe malaria patients in a hospital in Bobo-Dioulasso had used self-prescribed antimalarial treatment before being admitted, in a study of the epidemiological, clinical, biological and prognostic features of adult patients *[22]*. Furthermore, some 57% of spending on preventive services for malaria went for information, education and counselling. And Burkina Faso was one of two African countries where more than half of pregnant women were estimated to receive three doses

BOX FIGURE 1 In Burkina Faso, the spending on HIV, malaria and reproductive health services were mainly on outpatient care or malaria, a significant proportion of medical goods were purchased outside the facilities delivering the service.

Health care functions by disease and programme, Burkina Faso, 2018



Note: Other includes home-based curative care, unspecified curative care, rehabilitative care, long-term health, ancillary services and other health care services not elsewhere classified. Medical goods refer to medical products whose purpose is not known at the time of their purchase. For instance, antimalaria drugs purchased at a retailer could be for prevention, inpatient care or outpatient care.

of intermittent malaria preventive treatment in 2018, according to the latest *Malaria Report*.[2]

Fifteen percent of the country's health spending was for reproductive health. The pattern of spending, like the patterns for HIV/AIDS and malaria, was 37% for outpatient services and 20% for prevention (see Box Figure 1). Medical goods purchased outside the course of health service delivery were 7% of spending, lower than the medical goods share for malaria.

Family planning, accounting for 2% of the country's health spending, had a different pattern than HIV/AIDS, malaria or reproductive health. The largest share of spending on family planning services, 87%, was for population-based preventive services. Preventive services for family planning include service delivery–related charges, covering the salaries of the programme staff on top of the cost of contraceptives and other health care goods (condoms, implants and intrauterine devices) and the cost of regular monitoring and evaluation. So, in Burkina Faso, family planning services are less consumed on an individual basis as outpatient care or as medical goods purchased separately at a retailer. Further study will be undertaken of the reasons for this pattern, which may not necessarily reflect family planning services in other African countries.

PRIMARY HEALTH CARE, BY DISEASE AND PROGRAMME, IN BURKINA FASO

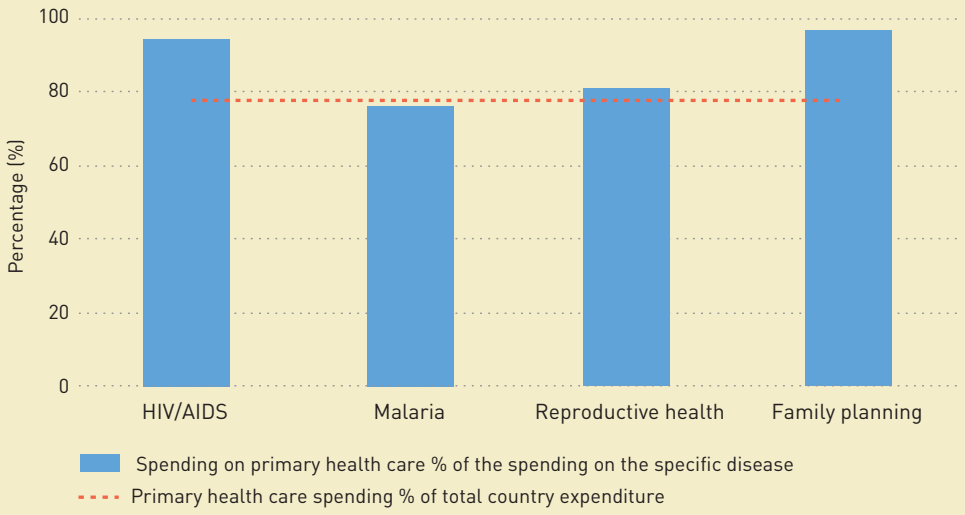
In 2018, WHO, in consultation with other technical agencies, developed a methodology to measure primary health care for cross-country comparison *[23]*. By that methodology, spending on primary health care in Burkina Faso was 78% of the country's health spending in 2018, compared with a world average of 53% (see Chapter 1). The country has placed primary health care at the heart of its national health strategic plan for 2011–2020 following recommendations from the 2008 Declaration de Ouagadougou, signed by countries from WHO's African region *[24]*. In the funding structure of primary health care in Burkina Faso, government contributions made up 78%, and external aid, 18%. Primary health care spending coming from domestic private sources was 40% of the country's health spending.

Primary health care–defined services, was 87% on average across the spending on HIV, malaria, reproductive health and family planning. Most family planning services (97% of spending) and HIV/AIDS services (94%) were categorized as primary health care (Box Figure 2). And 81% of spending on reproductive health was classified as primary health care, along with 76% of spending on malaria services, slightly below the overall share of primary health care spending in the country's total health spending.

1. Medical goods refer to medical products whose purpose is not known at the time of their purchase. For instance, antimalaria drugs purchased at a retailer could be for prevention, inpatient care or outpatient care.
2. The other is the United Republic of Tanzania.

BOX FIGURE 2 Services for HIV, malaria, reproductive health and family planning in Burkina Faso were mainly delivered as primary health care

Primary health care spending as a share of disease/programme spending in Burkina Faso, 2018



More policy insights could be drawn from looking at disease spending by health care function. The functional classification of health care under the System of Health Accounts framework delineates the boundaries of health care activities from an international perspective, including all health care goods and services provided directly to individual persons as well as collective health care services (Box 2.4) *[9]*.

Implications

Estimates of disease-specific spending based on real country data are not widely available because most routine expenditure reporting mechanisms do not provide information with sufficient granularity. Despite some methodological challenges, this analysis of spending patterns by disease or programme across 17 low income countries and 23 middle income countries provides insights for policy. It establishes how much country health spending went for each disease category, how much each funding source contributed towards each disease or programme, and, for selected diseases and programmes, how much was spent on which health care services. This analysis is the first WHO publication of private domestic spending by disease. Further improvements are needed in data availability and reliability. The analysis in this chapter is expected to stimulate further discussion for improving both methodology and data quality. Future directions should include refining definitions and approaches and stimulating country-level peer support and collaboration to better use existing routine data.

Notes

1. See www.icd.who.int.
2. Among others, the WHO-UNICEF Joint Reporting Framework for immunization and the WHO global tuberculosis data collection system, which both have 15+-year historical data series. See https://www.who.int/immunization/programmes_systems/financing/data_indicators/en/ and https://www.who.int/teams/global-tuberculosis-programme/data.
3. The 27 African countries represent 68% of the sample. The other 13 countries are from the following WHO regions: 6 from Europe (15%), 3 from South-East Asia (8%), 2 from Eastern Mediterranean (5%), and 1 each from Western Pacific and the Americas (3% each). The full list is as follows: Afghanistan, Benin, Bhutan, Botswana, Burkina Faso, Cabo Verde, Cambodia, Central African Republic, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Eswatini, Ethiopia, Gabon, Georgia, Ghana, Haiti, Kenya, Kyrgyzstan, Liberia, Malawi, Mali, Mauritania, Mauritius, Myanmar, Namibia, Nepal, Niger, Nigeria, the Republic of North Macedonia, Republic of Moldova, Sao Tome and Principe, South Sudan, Tajikistan, Togo, Tunisia, Uganda, United Republic of Tanzania, Uzbekistan and Zambia. See Annex 2 for details.
4. By our calculations using data from the WHO Global Health Observatory at www.who.int/data/gho/data.
5. FP2020 (Family Planning 2020), an outcome of the 2012 London Summit on Family Planning, is based on the principle that all women, no matter where they live, should have access to lifesaving contraceptives. Originally targeting 69 countries, FP2020 worked with governments, civil society, multilateral organizations, donors, the private sector and the research and development community to enable 120 million more women and girls to use contraceptives by 2020. See www.familyplanning2020.org/countries. Gavi, the Vaccine Alliance, is a funding mechanism aiming at saving lives, reducing poverty and protecting the world against the threat of epidemics. Since its inception in 2000, it has helped vaccinate more than 822 million children in the world's poorest countries. In 2020, 57 countries are eligible to receive support from Gavi. See www.gavi.org. The Global Fund, created in 2002, is a partnership to accelerate the end of AIDS, tuberculosis and malaria as epidemics. It mobilizes and invests more than US$ 4 billion a year to support programs run by local experts in more than 100 countries, in partnership with governments, civil society, technical agencies, the private sector and people affected by the diseases. See www.theglobalfund.org.
6. Domestic private spending on health encompasses out-of-pocket spending, contributions to voluntary health insurance and services funded locally by non-governmental organizations and enterprises for their employees.
7. One middle income country, Zambia, is left out since its reported level of domestic public funding for tuberculosis is under discussion.
8. The Global TB report, a yearly publication, collects and reports data reported to WHO by 121 low and middle income countries accounting for 98% of the world's reported tuberculosis cases.
9. Countries with zero reported malaria cases, such as Georgia, Moldova, and Tajikistan, are not included in the averaged amounts reported in Table 2.1.
10. The allocation to noncommunicable diseases is as explained in Box 2.2.
11. The Netherlands Interdisciplinary Demographic Institute work on Financial Resource Flows for Family Planning, which is commissioned by and carried out in cooperation with UNFPA. More from https://nidi.nl/project/financial-resource-flows.

References

1. Counts CJ, Skordis-Worrall J. Recognizing the importance of chronic disease in driving healthcare expenditure in Tanzania: analysis of panel data from 1991 to 2010. Health Policy Plan. 2016;31(4):434–43.
2. Kankeu HT, Saksena P, Xu K, Evans DB. The financial burden from non-communicable diseases in low- and middle-income countries: a literature review. Health Res Policy Syst. 2013;11:31.
3. Andelkovic D. Expenditures for treatment and prevention of diseases in Yugoslavia. Nar Zdrav. 1954;10(5):154–8.
4. OECD. Expenditure by disease, age and gender. Paris: OECD Publishing; 2016. Available from: http://www.oecd.org/els/health-systems/estimating-expenditure-by-disease-age-and-gender.htm.
5. Izazola-Licea JA, Wiegelmann J, Arán C, Guthrie T, Lay PD, Avila-Figueroa C. Financing the response to HIV in low-income and middle-income countries. J Acquir Immune Defic Syndr. 2009;52(Suppl 2):S119–26.
6. Nader AA, de Quadros C, Politi C, McQuestion M. An analysis of government immunization program expenditures in lower and lower middle-income countries 2006–12; Health Policy Plan. 2015;30(3):281–8
7. Gabon Ministry of Health web page, "Comptes de la santé du Gabon", site officiel du ministère de la santé, www.csgabon.info.
8. WHO. Trends in maternal mortality 2000 to 2017: estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division: executive summary. Geneva: World Health Organization; 2019. Available from: https://apps.who.int/iris/handle/10665/327596. License: CC BY-NC-SA 3.0 IGO.
9. OECD, Eurostat, WHO. A system of health accounts 2011: Revised edition. Paris: OECD Publishing; 2017. Available from: https://www.who.int/health-accounts/methodology/sha2011.pdf?ua=1.10.
10. Hoxha K, Hung YW, Irwin BR, Grépin KA. Understanding the challenges associated with the use of data from routine health information systems in low- and middle-income countries: A systematic review. Health Inf Manag. 2020 Jun 30. Available from: https://journals.sagepub.com/doi/abs/10.1177/1833358320928729?journalCode=himd.
11. Hagel C, Paton C, Mbevi G, English M. Clinical Information Network (CIN) information systems interest group. Data for tracking SDGs: challenges in capturing neonatal data from hospitals in Kenya. BMJ Glob Health. 2020;5(3):e002108.
12. Harrison K, Rahimi N, Carolina Danovaro-Holliday M. Factors limiting data quality in the expanded programme on immunization in low and middle-income countries: A scoping review. Vaccine. 2020; 38(30):4652–4663.
13. 2020 Global Nutrition Report: Action on equity to end malnutrition. Bristol, UK: Development Initiatives.
14. WHO. Ending the neglect to attain the Sustainable Development Goals: a road map for neglected tropical diseases 2021–2030. Geneva: World Health Organization; 2020. Licence: CC BY-NC-SA 3.0 IGO.
15. Eggersdorfer M, Kraemer K, Cordaro JB, Fanzo J, Gibney M, Kennedy E, et al. Good nutrition: perspectives for the 21st century. Basel: Karger; 2016, pp. 81–91.
16. Xu K, Soucat A, Kutzin J, Brindley C, Vande Maele N, Toure H, et al. Public spending on health: a closer look at global trends. Geneva: World Health Organization; 2018. Available from: https://www.who.int/health_financing/documents/health-expenditure-report-2018/en/.
17. WHO. Global tuberculosis report 2020. Geneva: World Health Organization; 2020. Licence: CC BY-NC-SA 3.0 IGO.
18. Martínez Álvarez M, Borghi J, Acharya A, Vassall A. Is development assistance for health fungible? Findings from a mixed methods case study in Tanzania. Soc Sci Med. 2016;159:161–169.
19. WHO. Global spending on health: a world in transition. Geneva: World Health Organization; 2019 (WHO/HIS/HGF/HFWorkingPaper/19.4). Licence: CC BY-NC-SA 3.0 IGO. Available from: https://apps.who.int/iris/bitstream/handle/10665/330357/WHO-HIS-HGF-HF-WorkingPaper-19.4-eng.pdf?ua=1.
20. Saleri N, Capone S, Pietra V, De Iaco G, Del Punta V, Rizzi M, et al. Outcome and predictive factors of mortality in hospitalized HIV-patients in Burkina Faso. Infection. 2009;37(2):142–147.
21. WHO. World malaria report 2019. Geneva: World Health Organization; 2019. Licence: CC BY-NC-SA 3.0 IGO.
22. Diallo AH, Ki-Zerbo G, Sawadogo AB, Guiguemde TR. Paludisme grave et infection à VIH chez l'adulte a Bobo-Dioulasso, Burkina Faso [Severe malaria and HIV in adult patients in Bobo-Dioulasso, Burkina Faso]. Med Trop (Mars). 2004;64(4):345–50. French. PMID: 15615384.
23. Vande Maele N, Xu K, Soucat A, Fleisher L, Aranguren M, Wang H. Measuring primary healthcare expenditure in low-income and lower middle-income countries. BMJ Glob Health. 2019;4:e001497. Available from: https://gh.bmj.com/content/bmjgh/4/1/e001497.full.pdf.
24. Déclaration de Ouagadougou sur les soins de santé primaires et les systèmes de sante en Afrique : Améliorer la sante en Afrique au cours du nouveau Millenaire. Declaration des Etats Membres de la region africaine de l'OMS, 30 avril 2008. Bureau regional de l'OMS pour l'Afrique. 2008. ISBN : 92 9 023 13 43.

3

No country left behind

CAN LOWER INCOME COUNTRIES INCREASE HEALTH SPENDING?

KEY MESSAGES

A group of 32 "lower income countries" face severe health financing constraints, which slow their progress towards health security and universal health coverage.

- Lower income countries face macroeconomic vulnerabilities and high poverty and are lagging behind on the road to universal health coverage.
- The average domestic spending on health of lower income countries was only US$ 34 per capita in 2018, about 4.4% of GDP, of which nearly 60% was out-of-pocket.
- Average government spending on health was only US$ 9 per capita in 2018, about 1.2% of GDP, and the priority given to health in public spending has been declining between 2000 and 2018.
- Aid for health per capita more than doubled in real terms from 2000 to 2018, accounting for a quarter of lower income countries' health spending in 2018.

The world faces the economic impact of a global recession originating from the COVID-19 pandemic, with falling gross domestic product, high unemployment, lost household income and disrupted health care delivery. The developed and fast-growing economies can count on macroeconomic and fiscal stabilizers, and on access to financial markets to recover quicker to pre-pandemic macroeconomic figures. But the outlook seems much less favourable for the lower income economies, which depend on commodity exports, trade or tourism, and whose vulnerable populations live already under survival conditions *[1]*.

This chapter complements the 2019 report, which included a focus on countries with "fast-growing economies" *[2]*. This year, we are putting the focus on "lower income economies" that were left behind the global pattern of economic growth: countries in the low income group and lower middle income group that did not grow rapidly over the first two decades of the 21st century. A closer look at the situation between 2000 and 2018 in 32 countries identified as "countries left behind" provides a better understanding of the patterns and drivers of their health spending and the vulnerabilities they face in financing their health systems (Box 3.1).

BOX 3.1

Countries "left behind" analysed in this chapter ("lower income" countries)

This chapter identifies the category of countries "left behind," also designated as "lower income countries," as those locked in a low income trap: (1) classified as low income countries by the World Bank for 2018, or (2) lower middle income countries with a GDP per capita less than US$ 2,000 in 2018, and an annual per capita GDP growth less than 2% between 2000 and 2018. With these criteria, the lower middle income countries included are only those in the bottom part of this income group, and with slow economic growth. Countries without health spending data or with a population smaller than 600,000 were not included in the analysis. With these criteria, 32 "lower income" countries were identified, including 26 low income and six lower middle income countries, 27 of them in the WHO African region (Annex 4).

Lower income countries face macroeconomic vulnerabilities and high poverty and are lagging behind on the road to universal health coverage

More than 40% of the people in the 32 lower income countries live in extreme poverty. In 2018, they had a total population of 722 million, with an average of 67% living below the poverty line (income < $ 3.20 / day in 2011 PPP) and 41% below the extreme poverty line (< $ 1.90/day in 2011 PPP) (Figure 3.1). This nonetheless represents important progress since 2000, when 77% and 54% of the population were living below the poverty and extreme poverty line, respectively. With 10% of the world's people, these countries account for one-third of the global population living in extreme poverty, but only 0.7% of the world's GDP and 0.3% of global health spending.

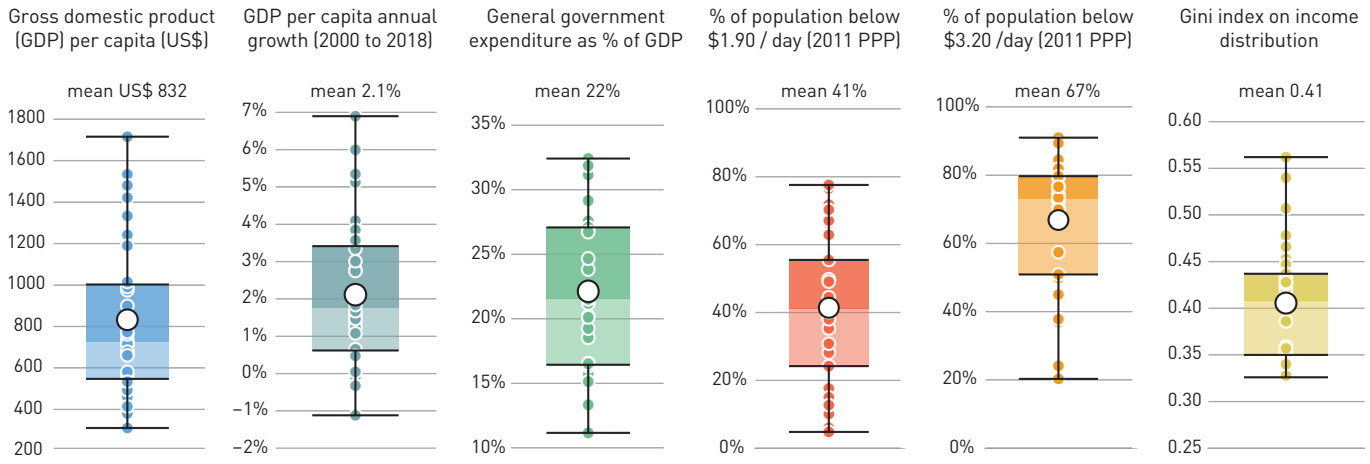
Lower income countries also have unequal income distributions. The Gini index, which captures the level of income inequality in each country, was 0.41 on average in lower income countries, ranging from 0.33 to 0.56 (Figure 3.1).[1] That was slightly higher than in other income groups and unchanged since 2000, when the Gini index in lower income countries was 0.41 (ranging from 0.30 to 0.60).

Macroeconomic vulnerabilities affect health system financing. In 2018, gross domestic product per capita was US$ 833 on average for the 32 selected lower income countries (Figure 3.1). GDP per capita growth in real terms was 2.1% annually during 2000–2018.[2] Lower income countries not only have a lower GDP, but also slower average economic growth than other lower middle income countries[3] (US$ 2,551 per capita in 2018, growing at an average rate of 3.5% yearly between 2000 and 2018). General government expenditure (GGE) in lower income countries represented on average 22% of their GDP in 2018, a slight improvement over 2000 (19% of GDP). These countries experiencing difficulties in raising public revenues, the ratio of GGE as a share of GDP in 2018 was significantly lower than in other lower middle income countries (28%).

The macroeconomic and fiscal implications of the COVID-19 crisis are expected to affect the lower income countries significantly more than the 2008–2009 global financial crisis. Even if the estimated GDP and government revenue loss is less in lower income countries than in middle and high income countries (see chapter 4), the economic crisis due to COVID-19 is likely to have a deep impact on the economy of these

FIGURE 3.1 Lower income countries face macroeconomic vulnerabilities and high poverty

Selected macroeconomic and poverty indicators for lower income countries, 2018



Note: Gross domestic product (GDP) and general government expenditure indicators are for the year 2018; household income indicators (poverty headcounts and Gini index) are the most recent data available in World Development Indicators (World Bank) for 30 of the 32 lower income countries (Afghanistan and Eritrea are not included) due to the lack of data.

Boxplots show the interquartile range (25th–75th percentile) of values. The median is marked by a line inside the bar. Each circle represents one country, and the mean is marked as a white circle. The vertical lines from the bars extend to the maximum and minimum values.

Source: WHO Global Health Expenditure Database, IMF World Economic Outlook *[3]* and World Bank World Development Indicators *[4]*.

countries. The most recent estimates of the IMF World Economic Outlook (October 2020 *[3]*) show that the average economic growth among the 32 lower income countries will be –1.5% in 2020, an almost 6 point loss from 2019 (+4.3%). The predicted loss of revenues of general government is even deeper: –2.1% in 2020, from growth of 7.6% in 2019. The 2008–2009 global financial crisis spared these countries (loss of 1 point of economic growth on average in 2008 and 2009 and stable growth of government revenues).

Lower income countries lag behind on the road to universal health coverage (UHC). Sustainable Development Goal (SDG) target 3.8 aims to achieve universal health coverage, including financial risk protection, access to quality essential health care services and access to safe, effective, high-quality and affordable essential medicines and vaccines for all. The first tracking indicator for SDG 3.8, the UHC service coverage index,[4] was 43 on average in lower income countries in 2017, below that of other lower middle income countries (58) and upper middle and high income countries (75). Only Comoros, Rwanda and Tajikistan had an index above 50. Lower income countries increased essential health service coverage since 2000, when their index was 22, but more slowly than other lower middle income countries: the gap between the two country groups was 16 in 2018, up from 13 in 2000, leaving lower income countries even further behind.

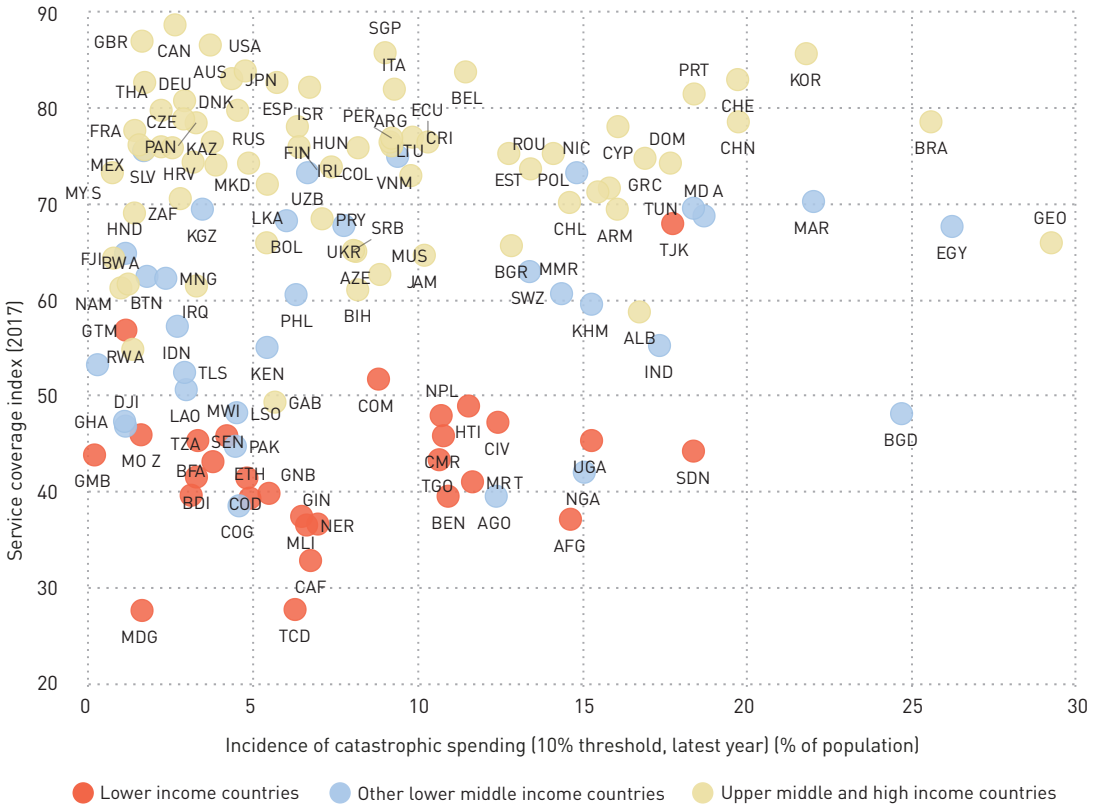
The second indicator for UHC, tracking financial protection, shows that the share of the population having health expenditures higher than 10% of their total expenditure was not higher in lower income countries than in other lower middle income countries (Figure 3.2). The lack of use and access to services in lower income countries largely explains this pattern. Variation in financial protection in these countries is larger than that in service coverage.[5]

The lag on the road to UHC may have been further exacerbated during the COVID-19 pandemic. WHO surveys of 105 countries between May and July 2020 show that disruptions of services affected a wider scope of essential services in low income countries. Even if the magnitude of disruptions remains uncertain, 10 of 22 (45%) low income countries reported disruptions in at least 75% of essential services, far more than lower middle income countries (30%) and upper middle and high income countries (8%) *[7]*.

Most of the lower income countries are in fragile contexts. Fragility is the combination of exposure to risk and insufficient coping capacity of the state, systems and/or communities to manage, absorb or mitigate those risks across the economic, environmental, political, security and societal dimensions *[7]*. In such fragile contexts, it is important to set clear priorities on health financing (Box 3.2).

FIGURE 3.2 **Lower income countries are lagging behind on the road to UHC**

Sustainable Development Goal 3.8 indicators



Note: See Annex 1 for country codes.

Are included 132 countries with available data for both service coverage and financial protection. Among lower income countries, Eritrea and Liberia are not included due to lack of data; Sierra Leone is not included for the financial protection indicator (54% of the population for the incidence of catastrophic spending at 10% threshold).

Source: WHO Global Health Observatory *[5]* and WHO/World Bank Global monitoring report on financial protection in health 2019 *[6]*.

BOX 3.2

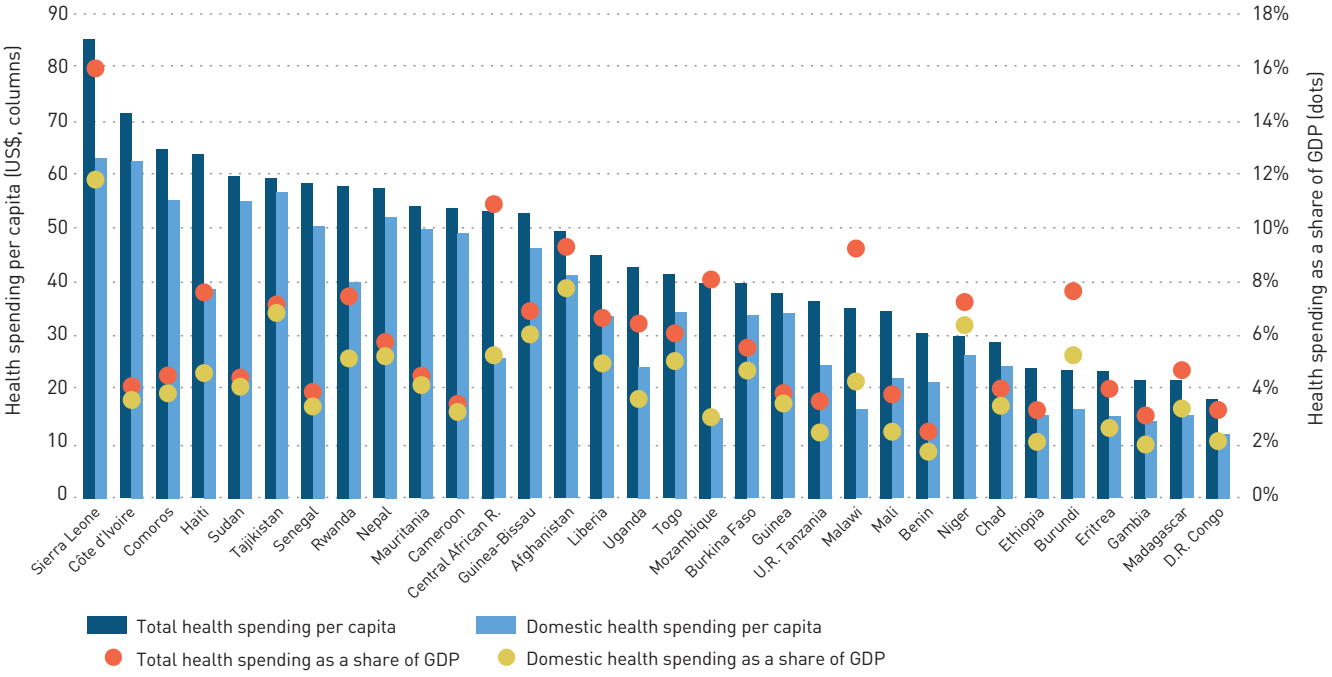
Spending priorities in fragile and conflict affected states *[9]*

A recent study highlights health spending priorities in fragile and conflicted-affected states or situations. First, it is critical to safeguard spending on common goods for health, critical population-based interventions such as disease surveillance, legislation and regulation, animal and environmental health, quality of water and sanitation systems. Second, such countries should minimize further fragmentation of the system into multiple uncoordinated and often incoherent schemes or subsystems undermining the resilience of the health system in both the short and longer term. Third, they should prioritize cash and voucher assistance (CVA) to protect both health and nonhealth needs as a complement to supporting free-at-the-point-of-use delivery of essential health services.

Total health spending, both in absolute terms and as a share of GDP, grew slower in the 32 lower income countries than in other lower middle income countries. In 2018, total health spending per capita was US$ 45 on average among the 32 lower income countries, ranging from US$ 19 to US$ 86 (Figure 3.3). During 2000–2018, health spending grew faster than GDP in real terms: the annualized growth rate for per capita health expenditure during this period was +2.8%, versus +2.1% for GDP. But the growth of health spending per capita has been slower than GDP since 2016, and slower than the average annual growth of lower middle and upper middle income countries.

FIGURE 3.3 Total and domestic health spending varies widely in both absolute terms and as a share of GDP among lower income countries

Health spending per capita (total and domestic) and as share of GDP in lower income countries, 2018



In 2018, total health spending in lower income countries represented 6% of GDP on average, a 1 percentage point increase since 2000. But that average is driven by a high level of spending as a share of GDP in a few countries. Wide variations exist: half the 32 countries spent less than 5% of their GDP on health in 2018 (Figure 3.3). From 2000 to 2018 in 15 countries, GDP grew faster than health spending, so total health spending as a share of GDP decreased. In 6 of those countries, the growth of total health spending was negative—a loss both in absolute terms and as a share of GDP (Figure 3.4).

The average domestic spending on health of lower income countries was only US$ 34 per capita in 2018, about 4.4% of GDP, of which nearly 60% was out-of-pocket

Domestic health spending, including both public and private financing sources, was on average US$ 34 per capita in lower income countries, ranging from US$ 12 to US$ 64 (Figure 3.3).[6] Domestic health spending was 4.4% of GDP in the 32 lower income countries, almost the same as in 2000. Domestic health spending per capita grew at 2.2% a year in lower income countries between 2000 and 2018, slower than in other lower middle income countries (4% a year) and in upper middle and high income countries (3.4% a year). Eight of the 32 had negative growth of domestic health spending since 2000. Sixteen countries had a lower share of domestic health spending in GDP in 2018 than in 2000, since their GDP growth was higher than their domestic health spending growth in real terms per capita (Figure 3.4).

Patterns of health spending growth by financing sources are country-specific. Among the 26 lower income countries with increased total health spending per capita since 2000, domestic financing sources were the main driver of health spending growth between 2000 and 2018 in 13 countries, while external aid was the main driver in 8 countries. In 5 countries, the growth was driven approximately in the same proportions by domestic and external sources. In the 6 countries where total health spending decreased in real terms, the loss is explained by the decline in domestic spending, except in Gambia, which had external financing fall. Among 24 lower income countries with increases in domestic health spending between 2000 and 2018, the growth was driven by government spending (from public sources) in only five countries. In 13 countries, the main driver was private domestic spending, a less desirable pattern (Figure 3.5).

FIGURE 3.4 Domestic health spending as a share of GDP decreased in about half the lower income countries from 2000 to 2018

Annual growth of health spending (total and domestic) and GDP per capita between 2000 and 2018

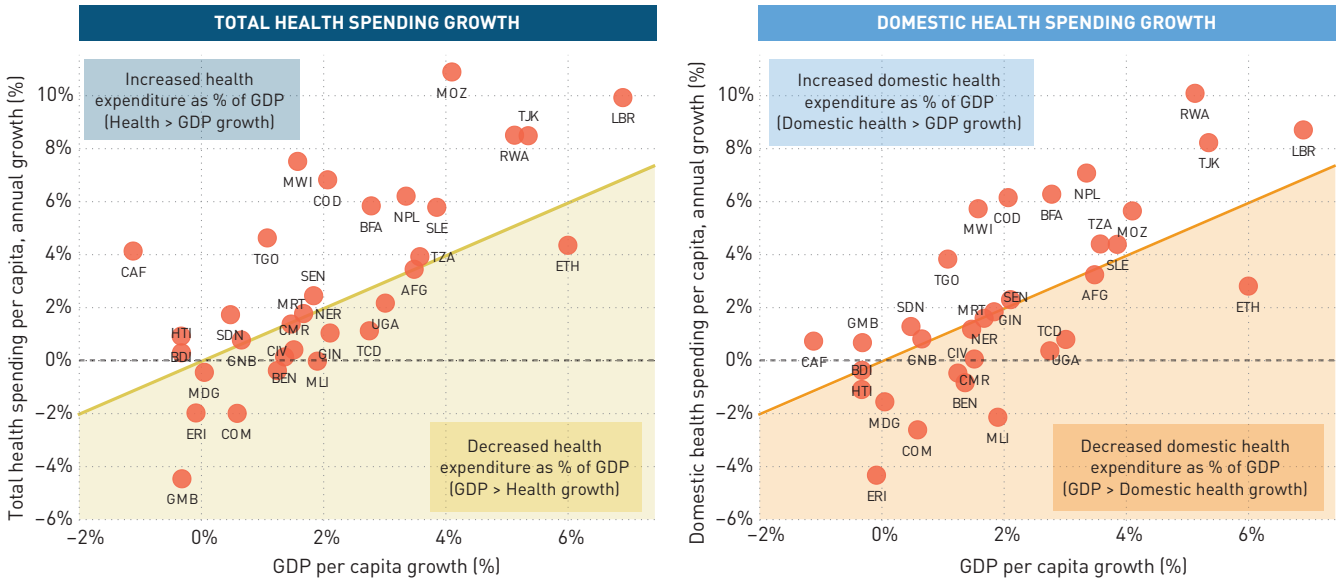
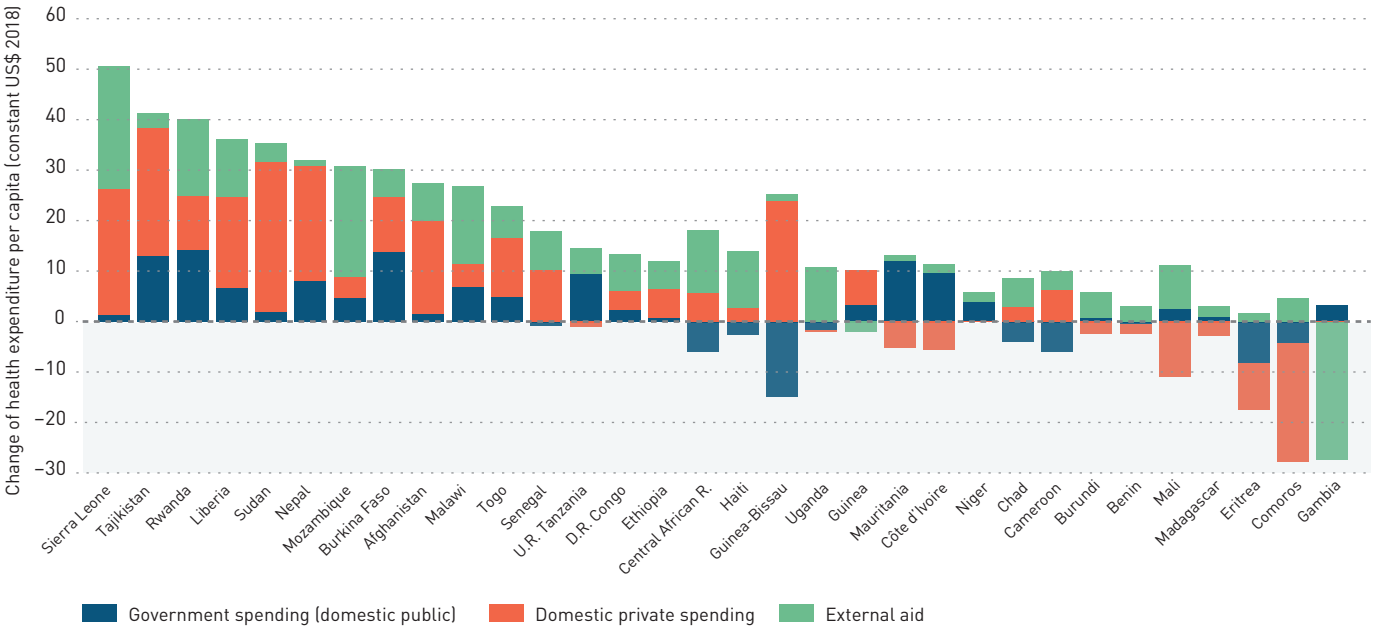


FIGURE 3.5 Health spending growth was driven by private domestic and external aid in most of the lower income countries

Change of health spending per capita (constant US$ 2018) by financing sources, between 2000 and 2018

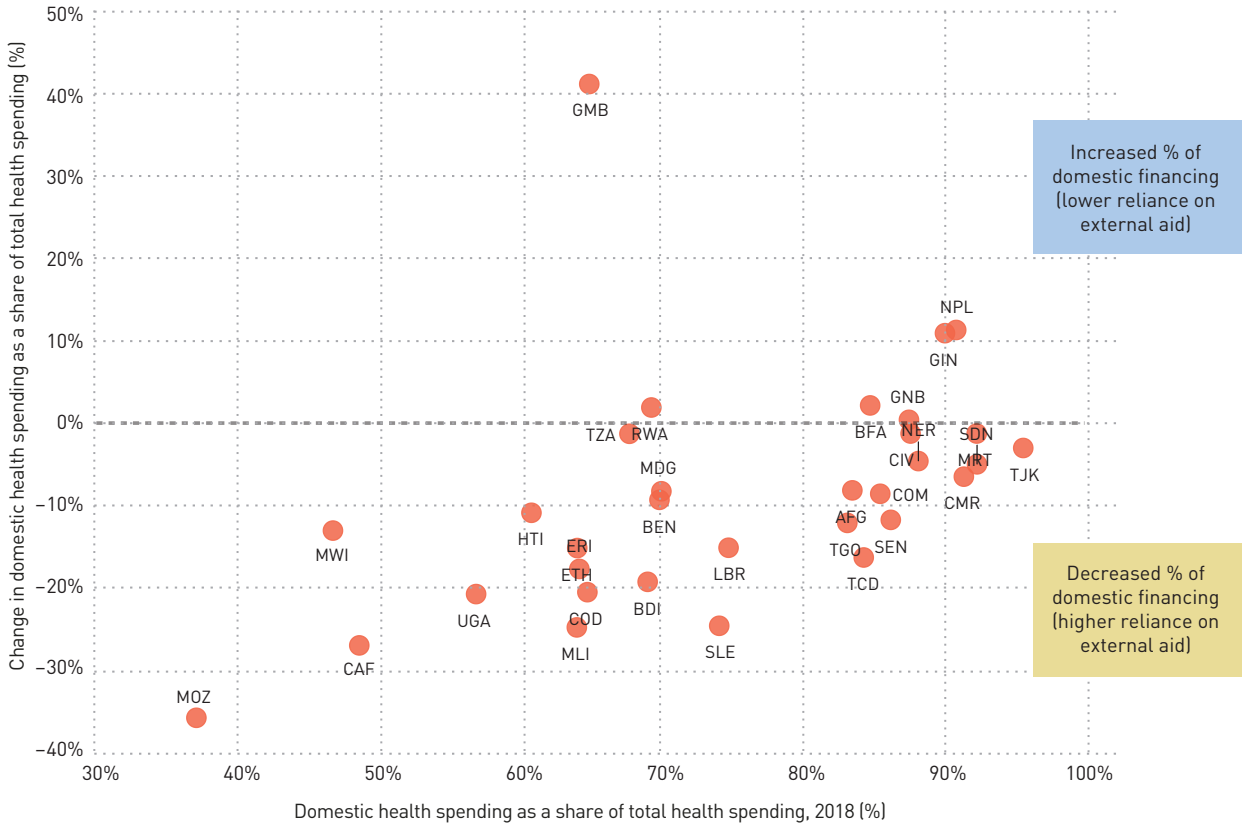


Note: Change calculated as the difference between health spending averages by source for 2000–2002 and for 2016–2018.

Domestic health spending was 75% of total health spending in lower income countries in 2018, down from 83% in 2000, increasing the dependence on external aid. In other words, their health financing relied more on external sources in 2018 than in 2000 (going to 25% of health spending from 17% in 2000). This downward pattern in domestic funding was visible in almost all lower income countries except five of them. For example, Uganda, which financed 57% of its health spending through domestic sources in 2018, reduced this share by 20 percentage points since 2000, when 77% of its health spending was from domestic sources (Figure 3.6).

FIGURE 3.6 The share of health spending from domestic sources has been falling, increasing the dependence on external aid

Changes in the share of domestic health spending as a share of total health spending in lower income countries between 2000 and 2018



Note: Change in domestic health spending as a share of total health spending calculated as the difference between averages for 2000–2002 and for 2016–2018.

Lower income countries relied primarily on private sources for their domestic health financing. In 2018, private sources financed on average 69% of domestic health spending in lower income countries, with public financing at 31%. In contrast, only about half of domestic health spending (49%) was from private sources in other lower middle income countries and 38% in upper middle and high income countries in 2018. In 27 of 32 lower income countries, more than half the domestic spending was financed from private sources (Figure 3.7). Most of this private financing came from households out-of-pocket payments. In some cases, other private financing sources were a significant share of domestic spending: voluntary prepayments (to voluntary insurance schemes, including microinsurance) and other revenues from enterprises and nonprofit institutions.

Out-of-pocket spending remains the main source of domestic health spending in lower income countries. In 2018, the average out-of-pocket spending (OOPS) share in domestic sources was nearly 60%, about twice that of government spending on health. In 23 of 32 countries, OOPS made up more than half of domestic health spending, and in 13, it accounted for more than two-thirds of domestic spending (Figure 3.7). In contrast, only five countries had government sources financing more than half of domestic health spending. In 2018, OOPS was US$ 21 per capita on average among the 32 lower income countries, ranging from US$ 4 to a maximum of US$ 49.

The OOPS share in overall private consumption in 32 lower income countries was 3.4% in 2018. The burden of OOPS in households' total expenditure is thus slightly higher than in other lower middle income countries (2.8% of private final consumption). From 2000 to 2018, the burden of out-of-pocket spending in overall private consumption increased in 12 lower income countries (OOPS grew faster than final private consumption). In 20 countries, OOPS as a share of private final consumption decreased, and in 8 of these countries, OOPS fell in absolute terms (Figure 3.8).

FIGURE 3.7 **Nearly 60% of domestic health spending in lower income countries was out-of-pocket**

Composition of domestic health expenditure by main financing sources by country, 2018

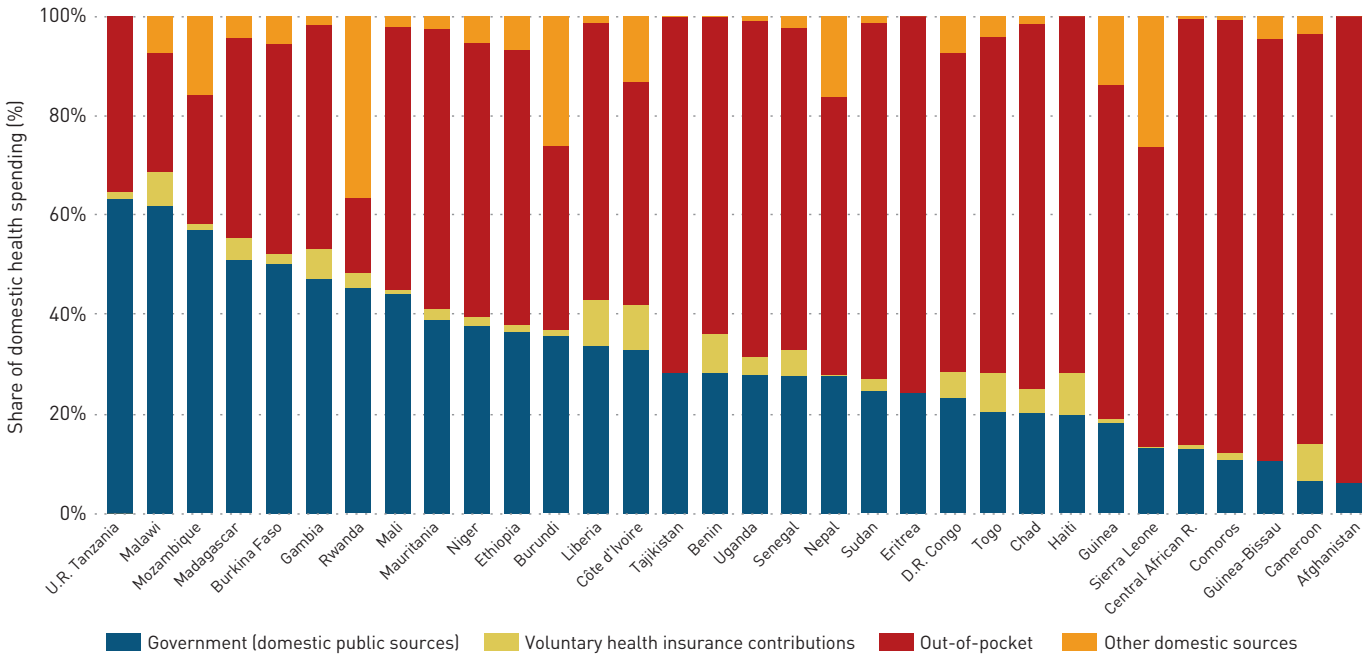
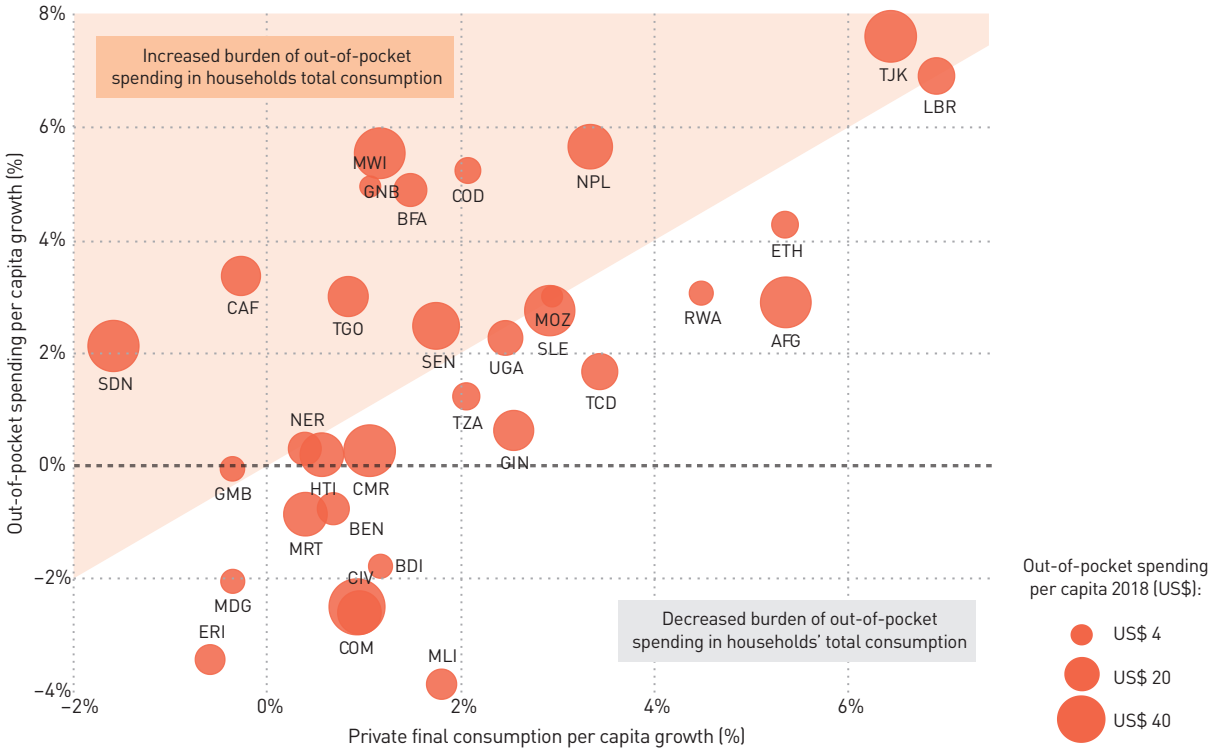


FIGURE 3.8 **The burden of out-of-pocket health spending in households' total consumption increased in one-third of the lower income countries**

Annual growth of out-of-pocket spending and final private consumption per capita between 2000 and 2018



Average government spending on health in lower income countries was only US$ 9 per capita in 2018, about 1.2% of GDP, and the priority given to health has been declining between 2000 and 2018

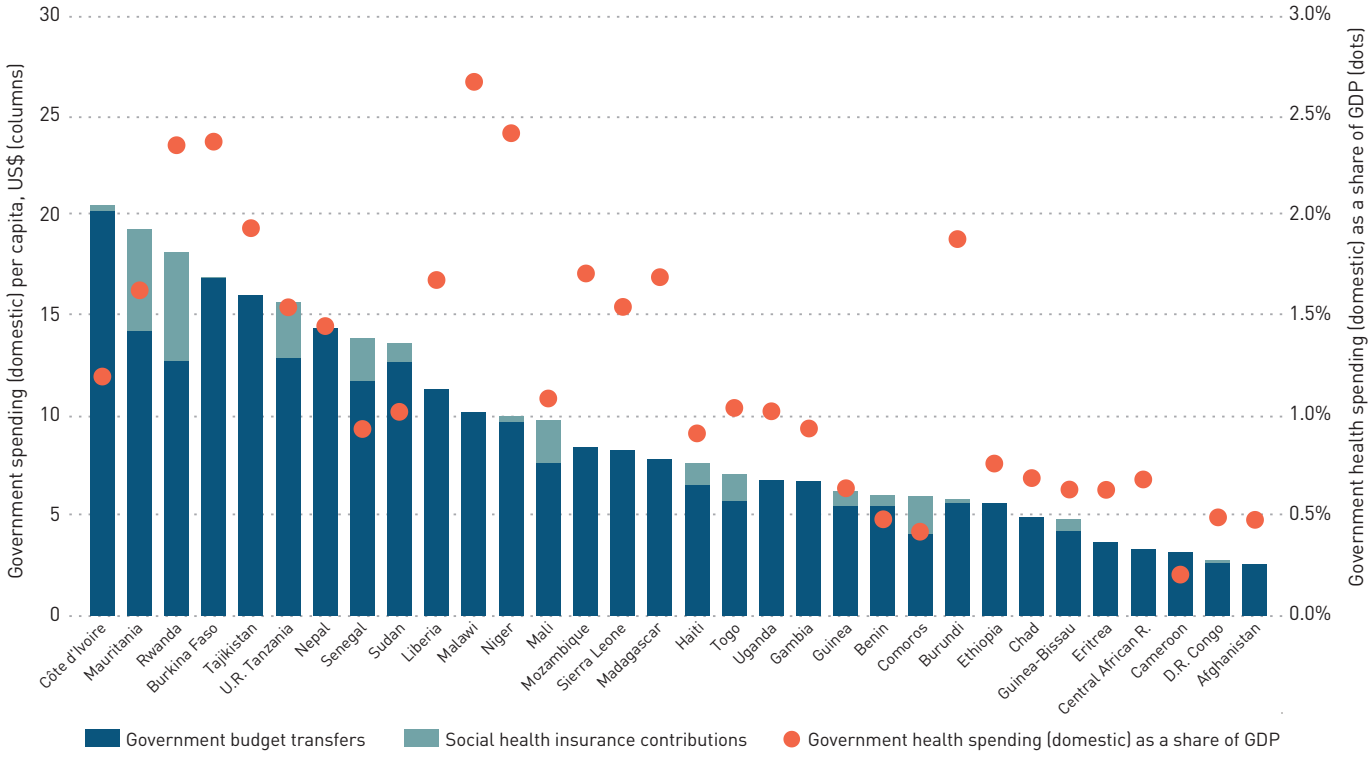
Average government spending on health[7] in lower income countries was only US$ 9 per capita in 2018—1.2% of GDP. Almost two-thirds of the 32 lower income countries spent less than US$ 10 on health per capita (from domestic sources) in 2018 (Figure 3.9), most from government budget transfers. Social health insurance contributions were marginal, only greater than US$ 5 per capita in Rwanda and Mauritania.

The drivers of government health spending are complex. The potential government spending on health is determined by GDP (the size of the economy), government revenues and expenditures as a share of GDP (the fiscal capacity) and government health spending as a share of total general government spending (the priority for health in the overall budget allocation). These three factors often do not move in the same direction. GDP growth may not increase government revenue when institutions and mechanisms for revenue collection are lacking. Priority setting in budget allocations is a political choice, but it is also constrained. Governments face multiple competing priorities in the social sector (health, education, nutrition), the economic sector (infrastructure) and national defense. Nondiscretionary spending such as debt service also constrains health spending.

In 2018, general government revenues in lower income countries and total general government spending were 19% and 22% of GDP respectively, representing a lower fiscal capacity than in other lower middle income countries (Figure 3.10).[8] Most recent data available for lower income countries show that tax revenues represented less than 13% of GDP in 2018, compared with 17% in other lower middle income countries. Governments in lower income countries initially improved their capacity to raise revenues between 2000 and 2006. But there was no further improvement on average since 2009. Overall general government expenditure grew slowly, from 19% of GDP in 2000 to 22% in 2018 but has been decreasing since 2015 (Figure 3.10).

FIGURE 3.9 Government spending was less than US$ 10 per capita in almost two-thirds of the 32 lower income countries

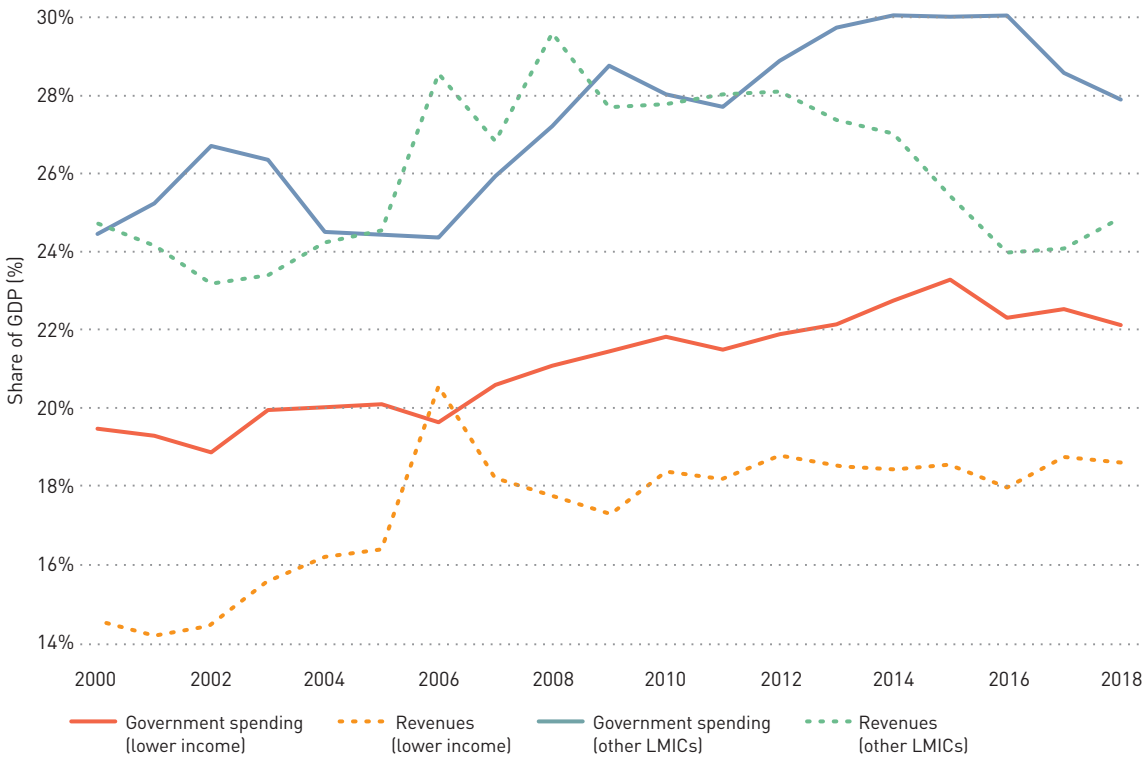
Government health spending per capita and as a share of GDP in lower income countries, 2018



Note: Government health spending = Government budget transfers + Social health insurance contributions

FIGURE 3.10 The 32 lower income countries have less capacity for raising revenues than lower middle income countries

General government spending and revenues as a share of GDP in lower income countries and other lower middle income countries, 2000–2018



Since 2009, the patterns in government revenues and spending as a share of GDP were less clear: a third of lower income countries had a lower growth of general government spending (Figure 3.11) than GDP, meaning a reduction in the ratio of overall government spending (GGE) as a percentage of GDP. But six lower income countries had a negative growth rate of general government spending, reducing their government spending per capita in real terms between 2008 and 2018.

Health spending in 2018 in lower income countries was only 5.5% of general government spending on average, smaller than the share of military spending. The priority for health in general government total expenditure (GGE) was reduced in lower incomes countries, from 7% between 2000 and 2005 to 5.5% in 2018 (considering only domestic funding). In contrast, military spending represented an average of 7% of government spending in 2018, with 17 of the 32 lower income countries allocating more public funding to military spending than health spending. Together, health (domestic sources) and education represented less than 22% of overall government spending (Figure 3.12).

The increasing debt burden of lower income countries affects the available resources for health. The weight of external debt service was reduced between 2000 and 2011 due to the external debt relief initiatives. But debt payments have increased since 2011 and were almost the same as government spending on health in 2018 (Figure 3.12). In 14 of the 32 lower income countries, general government debt service (on external debt only) was a bigger share of public spending than domestic public spending on health in 2018.

The total external debt stock of government was reduced from 77% of GDP in 2000 to its lowest level (20%) in 2012. Since 2012, however, external debt is growing and was at an average of 27% of GDP in lower income countries in 2018. Total gross debt (external plus domestic), after years of decrease, has been rising since 2011, from an average of 36% of GDP to 56% in 2018 (64% projected for 2020 according to the 2020 IMF World Economic Outlook *[3]*). So, it is probable that the debt service charge in government budgets will continue to grow and reduce even more

FIGURE 3.11 **Economic growth in lower income countries did not always increase fiscal capacity**

Government fiscal capacity in lower income countries, 2000–2008 and 2008–2018

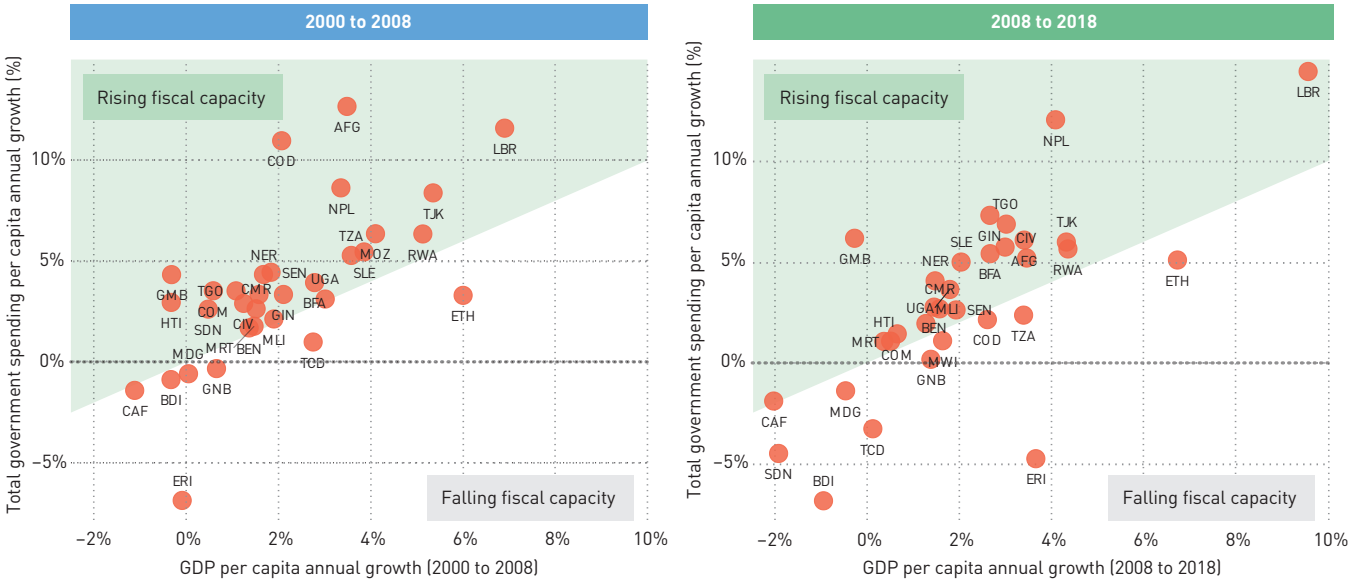
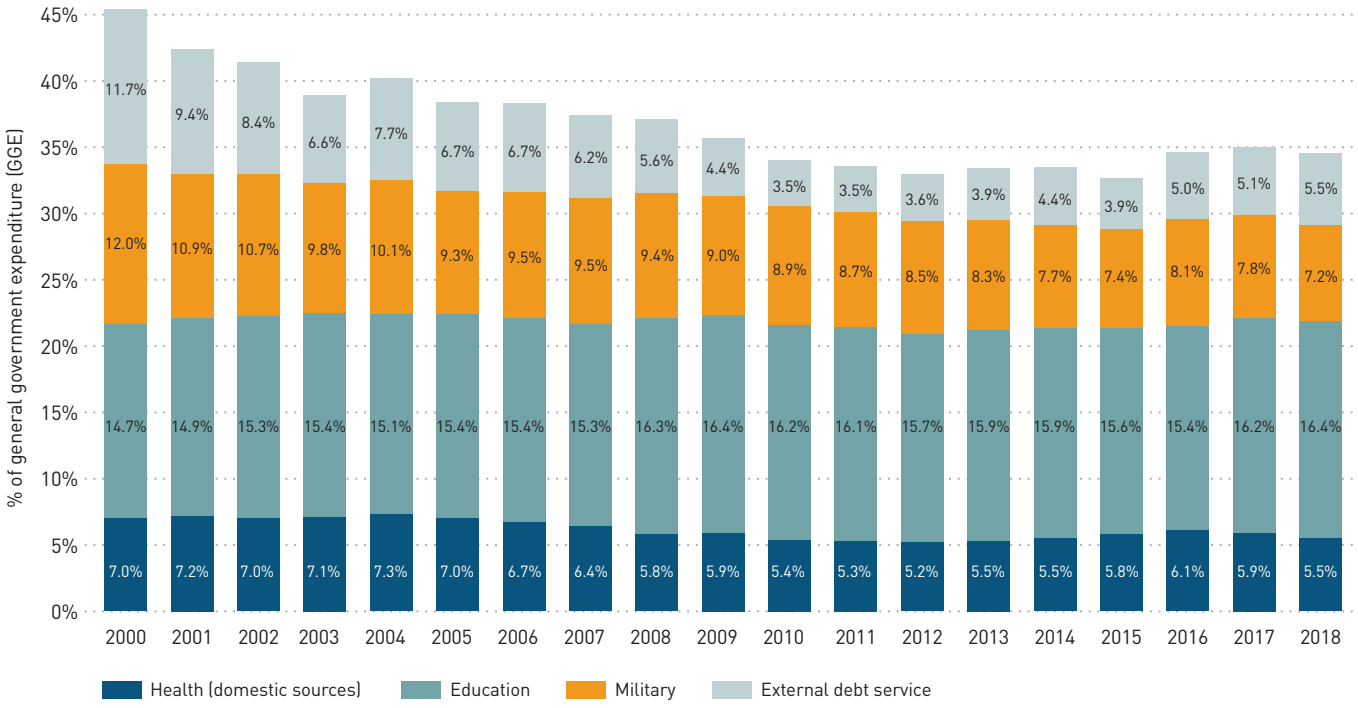


FIGURE 3.12 **Government health spending (domestic) has the same share in public budgets as external debt service and less than military spending**

Public spending on health, education, the military and external debt service as a % of general government expenditure (GGE) in lower income countries



Note: External debt service considered in this figure is general government debt service on external debt as reported by World Bank International Debt Statistics: the sum of principal repayments and interest actually paid in currency, goods, or services on long-term obligations of general government debtors. Debt service of public corporations and private sector guaranteed by public sector are not included.

Source: Non-health expenditure data are from World Bank, World Development Indicators *[4]*, and World Bank International Debt Statistics *[11]*.

the share of public budget available for discretionary allocations.

Paradoxically, the priority for health tended to reduce over the Millennium Development Goal era in two-thirds of the lower income countries. On average, the priority for health in general government spending slipped from 7% in 2000–2005 to 5.5% in 2018 (Figure 3.12), and only one-third of lower income countries were able to increase the share of their budget going to health (Figure 3.13). This was despite the growth of overall government spending as a share of GDP in 25 of the lower income countries. Fifteen countries reduced their priority for health in a context of growing public spending. Seven countries had their fiscal capacity contract in relation to GDP, of which three slightly increased their share of the budget going to health (Figure 3.13).

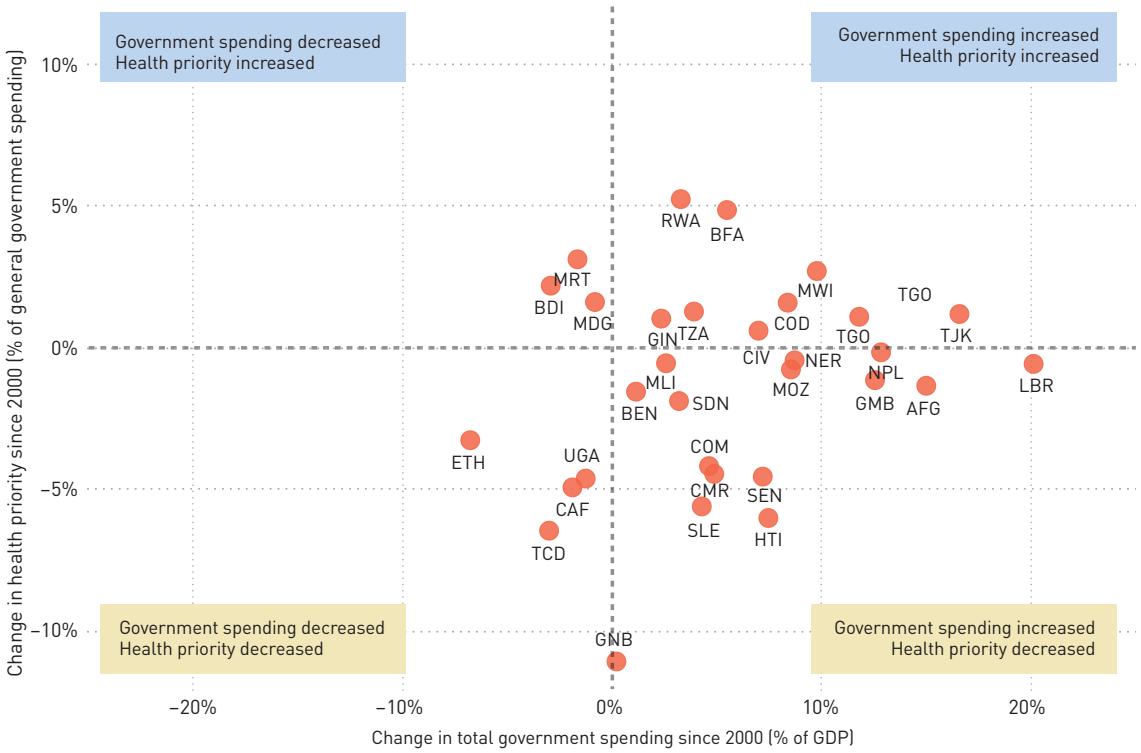
With domestic public resources projected to fall in 2020 and 2021 due to the COVID-19 pandemic, even in an optimistic scenario, the capacity of lower income countries to reverse this tendency in the reduction of priority for health will be critical to ensure the financing of public health system.

Aid for health per capita more than doubled in real terms from 2000 to 2018, accounting for a quarter of lower income countries' health spending in 2018

External aid played an increasing role in funding health care in lower income countries. Aid financed an average of US$ 10 per capita in the 32 lower income countries, an amount that has more than doubled in real terms since 2000 (Figure 3.15). In 2018, external aid financed 25% of health spending on average in lower income countries, up from 16% in 2000. In a few cases, more than half of health spending is financed with external aid (Figure 3.14). This extreme situation can be temporary, when flows of external aid follow acute health crises

FIGURE 3.13 The priority for health tended to decline in two-thirds of the lower income countries

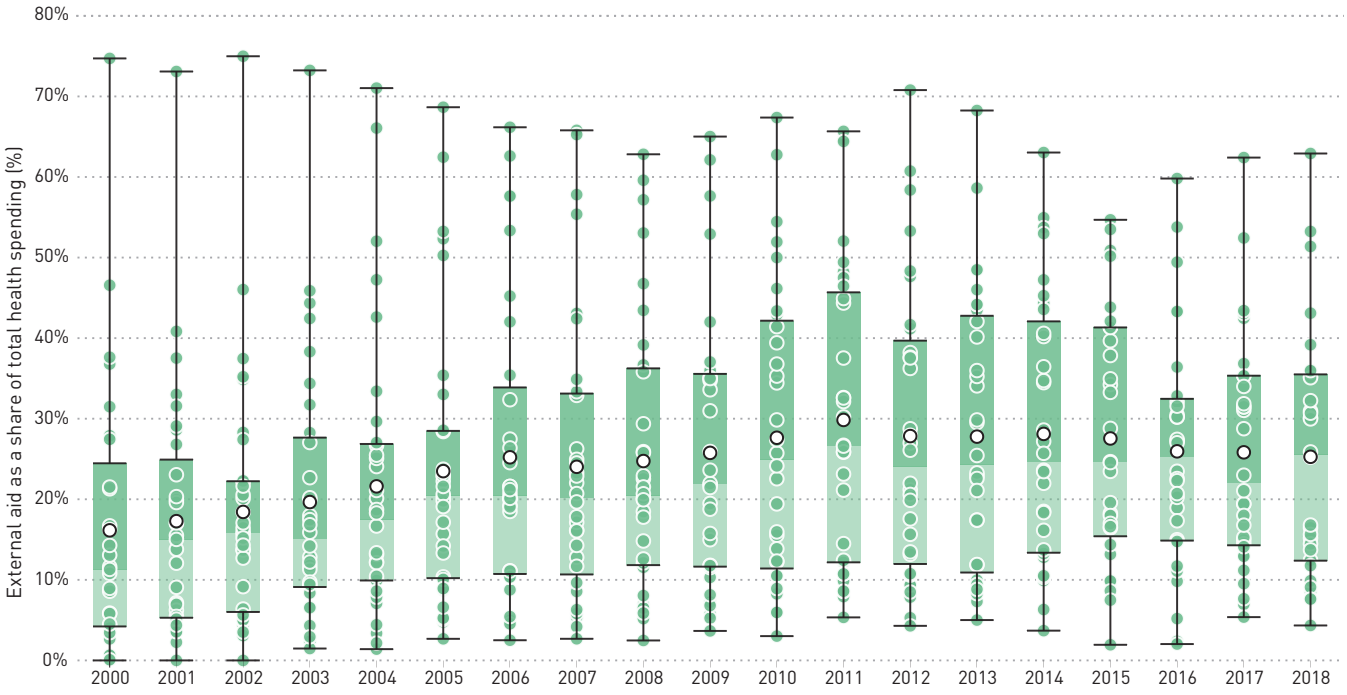
Changes in health priorities and fiscal capacity, 2000–2018



Note: Change in total government spending and health priority calculated as the difference between averages for 2000–2002 and for 2016–2018. Eritrea excluded as an outlier (change in total government spending as a share of GDP of −60% since 2000, with health priority stable).

FIGURE 3.14 External aid played an increasing role in funding health services in lower income countries

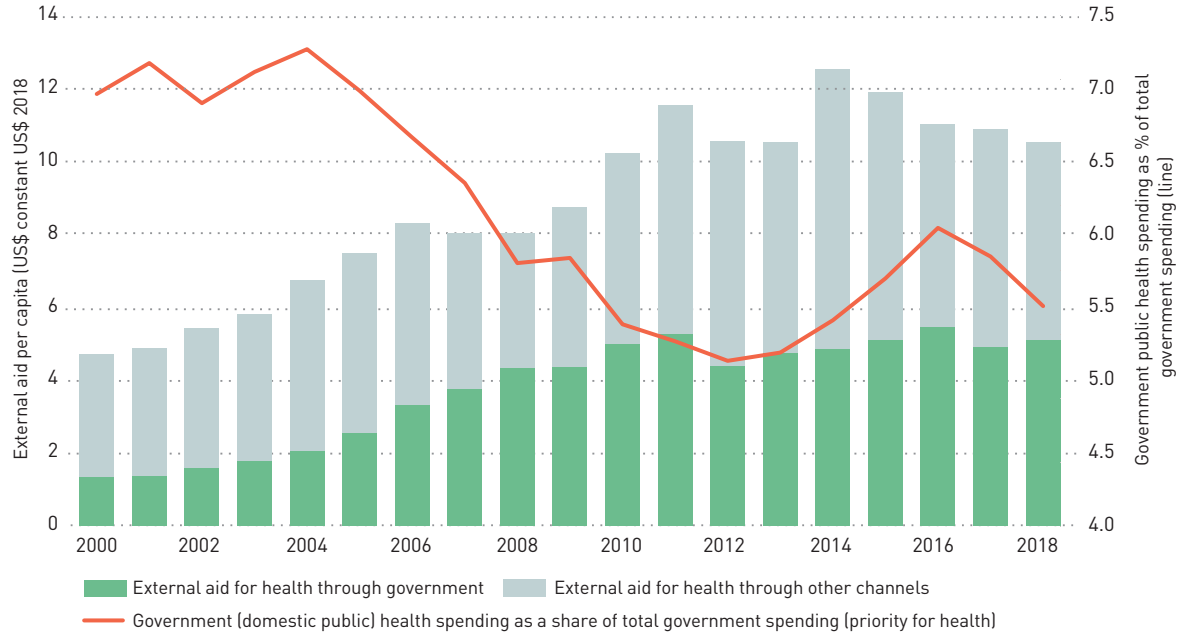
External aid for health as a share of health spending in lower income countries, 2000–2018



Note: Boxplots show the interquartile range (25th–75th percentile) of values. The median is marked by a line inside the bar. Each circle represents one country, and the mean is marked as a white circle. The vertical lines from the bars extend to the maximum and minimum values.

FIGURE 3.15 When external aid increased, health priority in domestic budget allocations declined

External aid for health per capita by channel and the priority for health in general government spending in lower income countries, 2000–2018



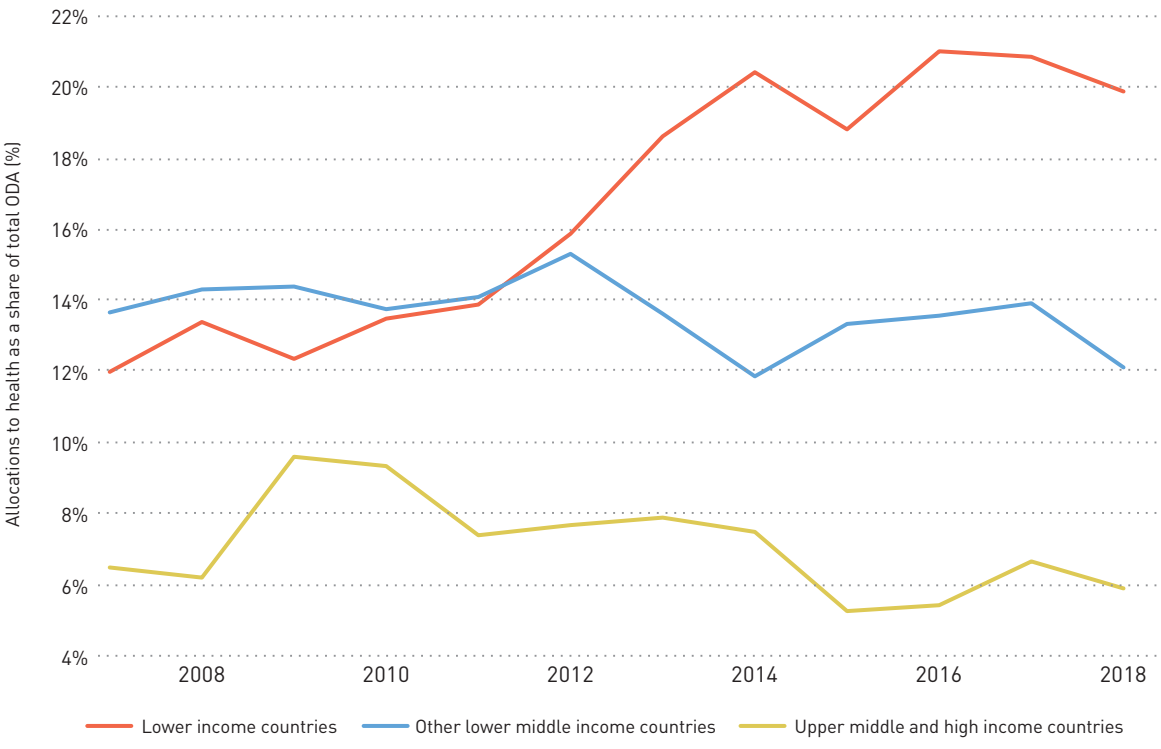
and catastrophes, as for Haiti in 2011–2012 following the 2010 earthquake and for Sierra Leone in 2014–2015 following the Ebola virus pandemic. In a few cases however, aid dependence is chronic, such as in Gambia, Malawi and Mozambique, where aid financed more than 50% of health expenditure for most of 2000–2018 (Figure 3.14).

When external aid increased, health priority in domestic budget allocations declined. External aid for health in lower income countries raises the issue of aid's fungibility, with an increase of external aid per capita accompanied by a parallel decline in domestic public resources to health (Figure 3.15). Between 2000 and 2012, lower income countries used the increasing aid to health to reallocate their discretionary spending from domestic sources. This is particularly evident for external aid channelled through the government (health spending executed by government from external sources), which more than doubled in real terms between 2000 and 2011, the same period of the more drastic reduction of health prioritization in domestic public funding. But this pattern is less clear after 2012; between 2016 and 2018, both external aid and the priority for health declined.

Donors increased their priority for health in lower income countries. From the donor's perspective, the OECD Creditor Reporting System database shows the total official development assistance (ODA) from bilateral and multilateral donors was relatively stable between 2010 and 2018 in the 32 lower income countries. But there was a clear increase in the prioritization of health as a proportion of total ODA: in 2010, only 13% of ODA to the 32 lower income countries was destined to health; in 2018, it was 20%. This trend was not observed in other lower middle income countries, where the share of total ODA allocated to health fell slightly in the past five years (Figure 3.16). At a global level, the share of ODA destined to health remained between 11% and 12% since 2010.

FIGURE 3.16 Donors increased their priority for health in lower income countries

Allocations to health as a share of total official development assistance, 2007–2018



Note: Allocations to health and total ODA data used only include recipient countries members of WHO. Allocations to health refers to ODA disbursements for the sectors "health – 120" and "population policies/programmes and reproductive health – 130", excluding CRS purposes outside the SHA 2011 definition of current health expenditure (medical education, medical research and population policies).

Source: OECD Creditor Reporting System database *[12]*.

Implications

Macroeconomic and expenditure patterns between 2000 and 2018 in 32 lower income countries show how these countries lag behind on the road to universal health coverage and face enormous constraints. With some exceptions, they had slower economic growth than other lower middle and upper middle income countries. And they had less capacity to raise revenues and execute public spending. Budget choices and fiscal constraints, such as the increasing level of debt since 2010, also reduced the priority for health in public spending.

As a result, health financing in lower income countries still depends highly on out-of-pocket payments from households, which in 2018 financed more than half of the domestic health spending in two-thirds of these countries. To finance their health systems, they increased their reliance on external aid but largely used this increase to reduce the priority for health in domestic budget allocations. The increased aid displaced public funding but did not reduce out-of-pocket funding to the level expected.

This situation is likely to worsen following the COVID-19 pandemic. With deep economic recessions in lower income countries, health system financing is likely to be hit more than during the 2008 economic crisis, with reduced government revenues and possible reductions in official development assistance just as resources are channelled to fight COVID-19.

Moving forward, the evolution of health spending, service coverage and financial protection will likely rely on the capacity of lower income countries to allocate more of their budgets to the health sector and on the decisions of bilateral and multilateral donors to lift the priority for health in these countries. Government funding needs to prioritize the common goods, or essential public health functions and public health care service, to sustain and improve UHC progress and health security. Donors should maintain flows that remain so critical to several functions of lower income countries' health systems. Aid needs to be more focused on strengthening the overall health system foundations, in particular human resource capacity and infrastructure. It should also leverage institutional change while filling the funding gap. Donors should also develop new models for this support to address the fungibility of aid so that, jointly with increased government spending, the burden of households in financing health care can be reduced quicker.

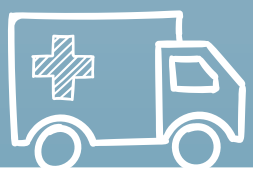
Notes

1. The Gini index of income distribution ranges from 0 to 1, a higher Gini index representing higher inequality in the distribution of income.
2. Annualized growth over the period 2000 to 2018 is calculated in this chapter as the compound annual growth rate of GDP / spending per capita in constant terms = $({}^{x_{2018}}/_{x_{2000}})^{1/18} - 1$.
3. Throughout this chapter, "other lower middle income countries" refers to countries classified as lower middle income by the World Bank in 2018, except the six LMICs included in the "lower income" group analysed (Cameroon, Comoros, Côte d'Ivoire, Mauritania, Senegal, Sudan).
4. The UHC service coverage index is reported on a scale of 0 to 100, which is computed as the geometric mean of 14 tracer indicators of health service coverage, including reproductive, maternal, newborn and child health; infectious diseases; noncommunicable diseases; service capacity and access.
5. Proportion of the population with large household expenditure on health as a share of total household expenditure or income—two thresholds are used to define "large household spending on health": greater than 10% (SDG 3.8.2_10) and greater than 25% of total household expenditure or income (SDG 3.8.2_25).
6. Domestic health spending represents health spending funded from domestic sources (government transfers from domestic revenue, social insurance contributions, compulsory/voluntary prepayments and other domestic revenues from households, corporations and nonprofit institutions). Total health spending is equal to domestic health spending plus external aid (health spending financed through external sources).
7. Government spending on health from domestic public financing sources (excluding external aid for health received by the government) includes transfers from government domestic revenues and social health insurance contributions as defined in the System of Health Accounts 2011 *[10]*.
8. Government revenues consist of taxes, social contributions, grants receivable, and other revenue. Total general government spending consists of total expenses and the net acquisition of nonfinancial assets.

References

1. World Bank. Capitalization: Global economic prospects, June 2020. World Bank: Washington DC; 2020. Available from: https://www.worldbank.org/en/publication/global-economic-prospects.
2. WHO. Global Spending on Health: A World in Transition. Geneva: World Health Organization; 2019. Available from: https://www.who.int/health_financing/documents/health-expenditure-report-2019/en/.

3. IMF. World economic outlook, October 2020: a long a difficult ascent. Washington, DC: International Monetary Fund; 2020. Available from: https://www.imf.org/en/Publications/WEO/Issues/2020/09/30/world-economic-outlook-october-2020
4. World Bank. *World Development Indicators, October 2020*. Available from: https://datatopics.worldbank.org/world-development-indicators/
5. WHO. The global health observatory: universal health coverage. Geneva: World Health Organization; 2020. Available from: https://www.who.int/data/gho/data/major-themes/universal-health-coverage-major.
6. WHO and World Bank. Global monitoring report on financial protection in health 2019. Geneva: World Health Organization and International Bank for Reconstruction and Development/World Bank; 2020. Available from: https://apps.who.int/iris/bitstream/handle/10665/331748/9789240003958-eng.pdf?ua=1.
7. WHO. Pulse survey on continuity of essential health services during the COVID-19 pandemic, interim report, 27 August 2020. Geneva: World Health Organization; 2020. Available from: https://www.who.int/publications/i/item/WHO-2019-nCoV-EHS_continuity-survey-2020.1.
8. OECD. States of fragility 2020. Paris: OECD Publishing; 2020. Available from: http://www.oecd.org/dac/states-of-fragility-fa5a6770-en.htm.
9. Jowett M, Dale E, Griekspoor A, Kabaniha G, Mataria A, Bertone M, et al. Health financing policy and implementation in fragile and conflict-affected settings: a synthesis of evidence and policy recommendations. Geneva: World Health Organization; 2020. Available from: https://www.who.int/publications/i/item/health-financing-policy-and-implementation-in-fragile-and-conflict-affected-settings
10. OECD, Eurostat and World Health Organization. A system of health accounts 2011: revised edition. Paris: OECD Publishing; 2017. Available from: https://www.who.int/health-accounts/methodology/sha2011.pdf?ua=1.10.
11. World Bank. *International Debt Statistics 2021*. Washington, DC: World Bank. Available from: https://data.worldbank.org/products/ids
12. OECD. Creditor Reporting System (CRS) aid activity database. Paris: Organisation for Economic Co-operation and Development. Available from: https://stats.oecd.org/Index.aspx?DataSetCode=crs1.




A'CARE

4

COVID-19

NEAR- AND MEDIUM-TERM IMPLICATIONS FOR HEALTH SPENDING

KEY MESSAGES

Although precise forecasting is impossible, the combined health and economic shocks triggered by COVID-19 will have both direct and indirect consequences for health spending and progress towards universal health coverage.

- COVID-19 is having a devastating impact on health systems globally.
- All countries have responded to the COVID-19 health and related economic crisis with exceptional budget allocations, with the health sector receiving a fairly small portion.
- Low income country health budgets for 2020 have been disproportionately affected by the COVID-19 health response.
- The health crisis is mirrored by a deep global economic crisis that could have a long-lasting impact on health financing.
- Public revenues are declining due to the economic crisis, forcing many countries to take on additional debt.
- The medium- to long-term health spending impact of the COVID-19 crisis will depend on broader macro-fiscal indicators and changing patterns of demand and supply for health services.
- Health financing vulnerabilities that existed prior to 2020 will also affect health spending in the coming years.
- Higher debt servicing could lower public spending on social sectors, including health, and risk progress towards universal health coverage.
- Deliberate health financing policy actions can help countries weather the COVID-19 storm and maintain progress towards Universal Health Coverage.
- The COVID-19 crisis provides an opportunity for a 'reset' in countries with weak health financing systems to progress towards universal health coverage.

Much like the year 2020, this chapter on COVID-19 and health spending is unique, without precedent in our previous global expenditure reports. Country health spending estimates in the Global Health Expenditure Database, based on actual country health spending data, are only verifiable after a two-year lag. Actual data on health spending for 2020 are thus not available. Yet some early evidence on 2020 health budget trends are available. To inform policy, it is urgent to report what is known so far about the implications of COVID-19 for health spending in both the near and medium term. So, the chapter builds on the Global Health Expenditure Database and goes beyond it with data on exceptional budget allocations to respond to COVID-19. It also assesses potential implications of the crisis on macroeconomic and fiscal indicators, building from past trends of service use and health spending. By combining historical trends with International Monetary Fund (IMF) and World Bank projections, it discusses the likely direction of change, identifies potential risks to both public and private health spending and assesses implications for universal health coverage (UHC). Due to uncertainty, the chapter does not project health spending patterns but raises policy and expenditure tracking issues that will be critical in the coming years and flags potential policies for mitigating adverse impacts to UHC progress.

COVID-19 is having a devastating impact on health systems globally

As of December 4th 2020, more than 64 million people were known to be infected with the coronavirus and more than 1.5 million to have died *[1]*. The actual numbers are likely to be much higher, especially in low and middle income countries where testing rates are low and death registration systems are weak. In late November 2020, the WHO South-East Asia Region (SEAR), Region for the Americas (AMR) and European Region (EUR) had the highest number of new daily cases. The distribution of deaths from COVID-19 has been highly skewed: just four countries—Brazil, India, Mexico and the United States—account for more than 50% of all deaths to date.

The direct effect of COVID-19 on morbidity and mortality is exacerbated by its impact on non-COVID-19 health services. Social distancing and so-called lockdown policies have lowered the use of routine health services such as immunization, antenatal care, elective surgery and chronic noncommunicable diseases *[2, 3]* (Box 4.1). Both the demand and supply of those services have been affected by the level of lockdown at a particular place and time, as well as the fear of seeking care at health facilities. Foregone care—especially for noncommunicable diseases such as cancer, diabetes and hypertension—is likely to have longer-term health consequences. Risk factors shared between COVID-19 morbidity and other health conditions create a need for comprehensive tracking and analysis of spending

BOX 4.1

COVID-19–related service disruptions

A May–July 2020 WHO survey of 105 countries found that nearly all—90%—reported the disruption of non-COVID-19–related essential health services. The disruptions were more pronounced in lower income than in higher income countries. Service disruptions affected all areas but were particularly severe for care for noncommunicable diseases, mental health and reproductive, maternal and child health.

A mix of demand and supply factors caused the disruptions. On the demand side, the top reasons were reductions in outpatient care attendance (76%), lockdowns hindering access (48%) and financial difficulties during the pandemic (33%). On the supply side, they were cancellation of elective services (66%), staff redeployment to provide COVID-19 relief (49%) and closures of services by government directive (33%).

Source: World Health Organization, *Pulse survey on continuity of essential health services during the COVID-19 pandemic: interim report, 27 August 2020.* 2020, World Health Organization *[4]*.

across the health sector and beyond. While efforts to channel money to the COVID-19 response are critical, a broader response is clearly needed to maintain other essential health services, manage the longer-term effects of contracting COVID-19 and invest in future prevention and treatment.

All countries have responded to the COVID-19 health and related economic crisis with exceptional budget allocations, with the health sector receiving a fairly small portion

Ramping up COVID-19–related prevention, testing and treatment, along with the need to bolster the economy, have led to exceptional budget allocations, even though pressures on services vary from country to country. In the COVID-19-response budgets, health represents a small share of overall funding (Box 4.2). In Indonesia, for example, the budget allocation for the health response accounts for 12% of the overall COVID-19 budgetary response *[5]*. In South Africa, it is 15% *[6]*. While public subsidies to support the economy have greatly boosted fiscal deficits, budget allocations for the health response are not a substantial portion of overall budgets, equalling less than 1% of pre-COVID-19 total public spending. While countries have had to procure additional personal protective equipment (PPE), testing and drugs, existing capacities and budget inputs for medical personnel, equipment and existing treatments have largely been able to support the response.

While budget allocations for health vary widely in the countries analysed, most low and

BOX 4.2

COVID-19 budget allocation data

Data on government budget allocations for the COVID-19 health response were collected in October–November 2020 for 113 countries. Data include both regular budget allocations and allocations to extra-budgetary funds for the COVID-19 health response. They were compiled primarily from publicly available sources from the International Monetary Fund, the Organisation for Economic Co-operation and Development, the Collaborative Africa Budget Reform Initiative and the European Observatory of Health Systems and Policies. Primary data were collected from ministries of finance and health. Although they may not reflect exact spending for the COVID-19 health response, they are the best available knowledge of government commitments globally as of November 2020.

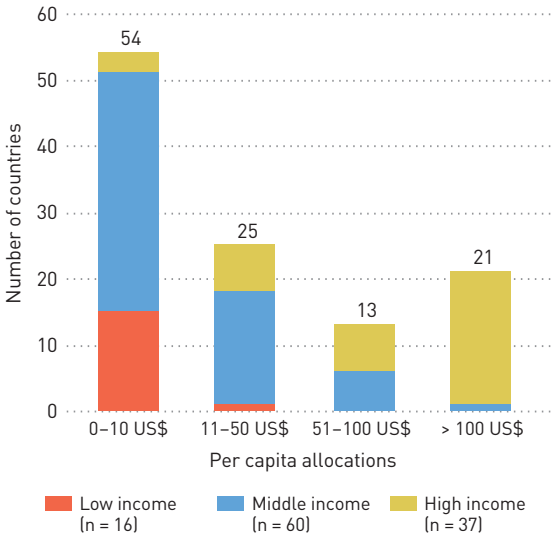
The dataset consists of budget commitments for the health response, excluding allocations for supporting the economy, in 16 low income, 60 middle income and 37 high income countries for 2020. All the data have been converted into 2018 US dollars for comparison with 2018 WHO National Health Accounts (NHA) data using World Bank local currency unit–US dollar rates. The data compilation is available for consultation and review.[1]

The analysis aims primarily to measure the burden of the health response on the health sector and on overall budgets to assess their budgetary implications. Lacking data for 2020 spending when this report was developed, the analysis cannot compare actual spending for the COVID-19 health response with 2020 data for overall government spending and public spending on health. Instead, it compares budget allocations for the health response with the most recent global data on domestic public spending on health (the 2018 NHA General Government Health Expenditure—Domestic data) to estimate the overall magnitude of the additional commitments. For a subset of 47 countries, a more precise comparison was possible with health budgets for their 2019–2020 fiscal years, for which budget laws in the public domain were retrieved. The analysis also assessed the burden of the budget allocations for the COVID-19 health response on the overall budget using 2018 NHA General Government Expenditure data (which include external sources) as a proxy for overall public spending. Finally, it examined budget execution issues in a subset of countries for which both allocation and expenditure data were available.

1. https://docs.google.com/spreadsheets/d/1sH_xgamKFJnCTIysll21OBjd58ZwKtKc/edit#gid=1248687740. Accessed 4 December 2020.

FIGURE 4.1 Most countries have allocated US$ 10 or less per capita to the COVID-19 health response

Per capita budget allocations for the COVID-19 health response by spending range, constant US$ 2018



middle income countries (50 of 76 included in this analysis) have allocated less than US$ 10 per capita to date. Most high income countries (28 of 37 included in this analysis) have allocated more than US$ 50 per capita (Figure 4.1). The mean allocation in the top 10 countries is US$ 465. Overall, the variation of per capita allocations is lowest in the low income countries, where the highest figure allocated per capita was US$ 28, while the highest per capita allocations were US$ 215 in middle income countries and US$ 886 in high income countries. Despite exceptional budget allocation increases for the health response to COVID-19, in some countries, spending for routine health services fell (Box 4.3).

BOX 4.3

COVID-19 and health spending in high income countries

The full effect of COVID-19 on spending trends in 2020 and beyond will only be clear when comprehensive financial data become available *[7]*. But early indications from some OECD countries show how health spending could develop, reflecting both the disease burden and specific health financing policies adopted to buttress the financial status of health systems against COVID-19.

In Belgium, for example, spending by Social Health Insurance for ambulatory care fell by 6% in the first five months of 2020 compared with 2019, and spending for hospital care fell by 4% in the first four months *[8]*. That said, other health activities, including testing, are financed by other payers whose spending may have increased.

In Germany, spending by Social Health Insurance—which finances around 60% of total health spending—increased by around 3% in the first half of 2020 compared with 2019 *[9]*. In addition, the German federal government increased its health budget, which also provides subsidies to hospitals.

On the other hand, the US Bureau of Economic Analysis estimated a substantial reduction in private health spending in the second quarter of 2020 (–22.5% compared with 2019) *[10]*. At the same time, the US federal government offered substantial funds for health providers and financed widespread testing, so overall spending could rise in 2020.

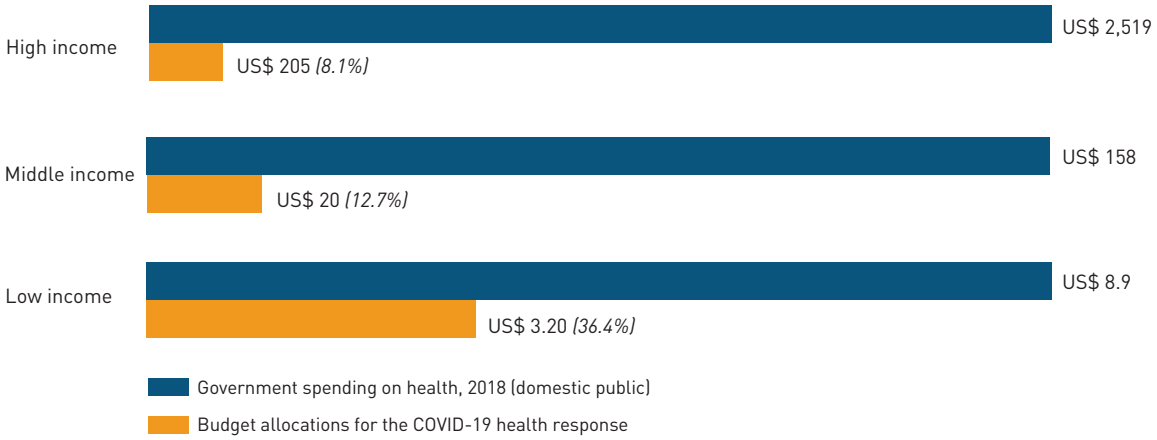
The differences partly result from the kind of provider payment system (prospective versus retrospective) and the influence of policy decisions to advance payments to providers even in systems that generally rely more on retrospective reimbursement (see the WHO European region COVID-19 Information page for more information on European country health financing policies in response to COVID-19[1]).

Although how much health spending will increase (or not) in 2020 is still unclear, a jump in the health expenditure-to-GDP ratio can be expected in high income countries, reflecting the severe economic downturn they all are experiencing. In most, the fall in GDP is expected to be much more pronounced than any eventual drop in health spending, a phenomenon observed in connection with the 2008–2009 financial crisis.

1. https://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/country-information. Accessed 4 December 2020.

FIGURE 4.2 Low income countries allocated the highest proportion of health budgets to the response

Per capita budget allocations for the COVID-19 health response and per capita pre-COVID-19 public spending on health, by income group, constant US$ 2018



Note: The scale of per capita figures differs across income groups.

Low income country health budgets for 2020 have been disproportionately affected by the COVID-19 health response

Nearly all countries increased their health budget allocations, though the proportional increases were greater in low and middle income countries. Budget allocations for the health response represent 8% of pre-COVID-19 public spending on health in high income countries, 13% in middle income countries, and 36% in low income countries.[1] In absolute terms, the average per capita budget allocation for the health response is higher among high income countries (US$ 205) than among middle income countries (US$ 20) and low income countries (US$ 3) (Figure 4.2). The proportional budget allocation for the COVID-19 health response in relation to 2018 public spending on health is when comparing it with 2019–2020 health budget allocations where data are available in a set of 47 countries (Box 4.2). In this sample, the budget share allocated to the COVID-19 health response represents 6% of health sector budget allocations in 11 high income countries, 19% in 27 middle income countries and 21% in 9 low income countries.

The exceptional budget allocations for the COVID-19 response have not been used to their full potential in many low and middle income countries, partly due to pre-existing public financial management bottlenecks that have often hindered budget implementation—such as spending authorization delays, procurement procedures and issues in channelling resources towards service providers *[11]*. So, actual spending for the COVID-19 health response may vary significantly from the budgeted allocation. The analysis of the sample groups found frequent low execution rates, compared with non-COVID spending averages (Box 4.4). Indonesia, for example, spent 29% of the 87.55 trillion rupiahs allocated for the health response *[5]*, Ukraine spent 27% of 14.3 billion hryvnias *[12]* and South Africa spent 52% of the 21.5 billion rand *[6]*.[2] Low execution rates can weaken the response. A few countries have spent more than the allocated amount, perhaps suggesting difficulties in estimating allocations where health needs are evolving and growing. For example, Côte d'Ivoire allocated 25 billion CFA francs for the health response but has spent 38 billion (as of 10 November 2020), an execution rate of 155%.

The health crisis is mirrored by a deep global economic crisis that could have a long-lasting impact on health financing

The near-term health budget response is taking place in a deep economic crisis that is affecting people's livelihoods. Social distancing and lockdowns have dramatically reduced economic activity, both globally and locally. The latest estimates project a global economic contraction of about –4.4% in 2020, much deeper than the average –1% decline during the 2009 global financial crisis (Figures 4.3 and 4.4) *[14]*. Consumption, investment and net exports have declined globally, as have services and manufacturing outputs. The severity

BOX 4.4

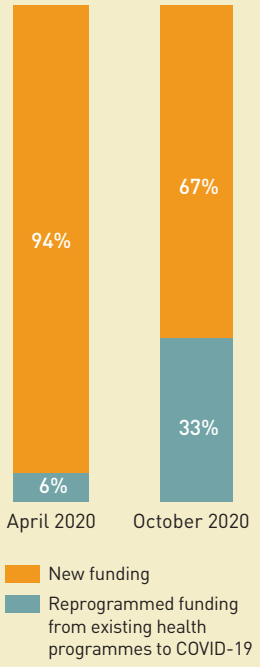
Tracking COVID-19 resources in Democratic Republic of the Congo

Between March and July 2020, the number of patients visiting health facilities in Democratic Republic of the Congo dropped dramatically. During that period, funding for routine lifesaving health services for women, children and adolescents dropped sharply as resources were shifted to the country's COVID-19 emergency response. The shift seems to be increasing—in April 2020, only 6% of the health budget was reprogrammed to the COVID-19 response, but by October, the share had grown more than fivefold to 33% (Box Figure 1).

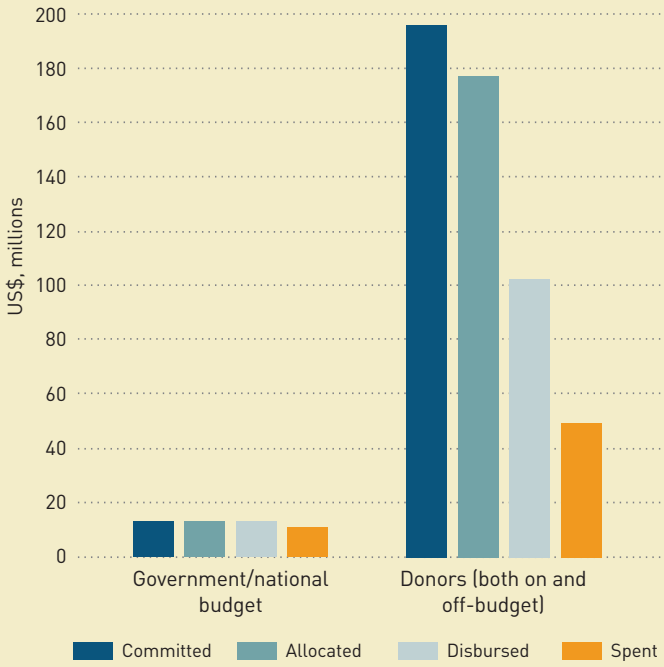
Based on the Ministry of Health COVID-19 Response Plan resource mapping and expenditure exercise (supported by Global Financing Facility (GFF), WHO, the World Bank, and other partners), data are rapidly collected on health and COVID-19-related budget commitments, disbursements and spending to help governments monitor resource availability and spending for routine health services and track investment in health systems.

Data from this exercise help monitor whether partner and domestic funding for COVID-19 could be secured without jeopardizing national health strategy, enable the health ministry to assess funding needs and understand which of the response plan's pillars are underfunded or overfunded, monitor resource distribution across geographic areas and help the government learn how efficiently the budget is executed so the ministry can address bottlenecks (Box Figure 2).

BOX FIGURE 1. New vs. reprogrammed funding for COVID-19 response



BOX FIGURE 2. Resource mobilization and use for COVID-19 by funding source

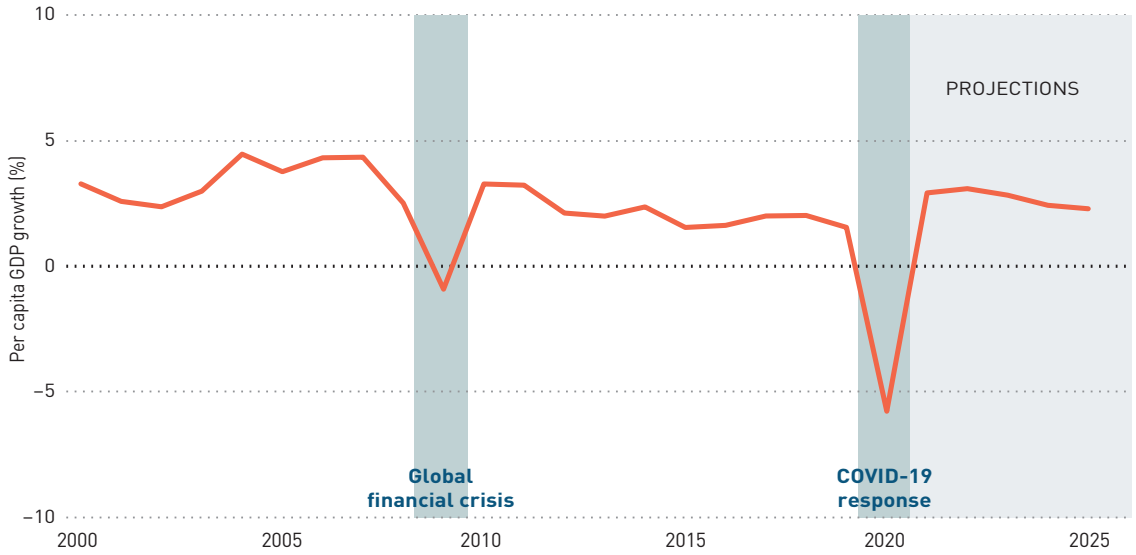


and depth of the current crisis implies several years' loss of economic output, which will likely take many years to recover (Figure 4.4) *[14]*.[3] As lockdown policies are slowly reversed, early signs of recovery have appeared across many countries, with economic growth rates expected to rebound in 2021 (though from a much lower base). But tremendous uncertainty remains, stemming largely from reimposed lockdowns in several countries (for example, across Europe) and rising infection rates leading to increased social distancing (for example, in India).

The economic impact of COVID-19 is likely to differ across countries. It will be unlike the 2009 global financial crisis, in which economies contracted in upper middle income countries and high income countries, growth slowed in lower middle income countries but the economic trajectory did not change in low income

FIGURE 4.3 **COVID-19 has triggered a deep global economic contraction**

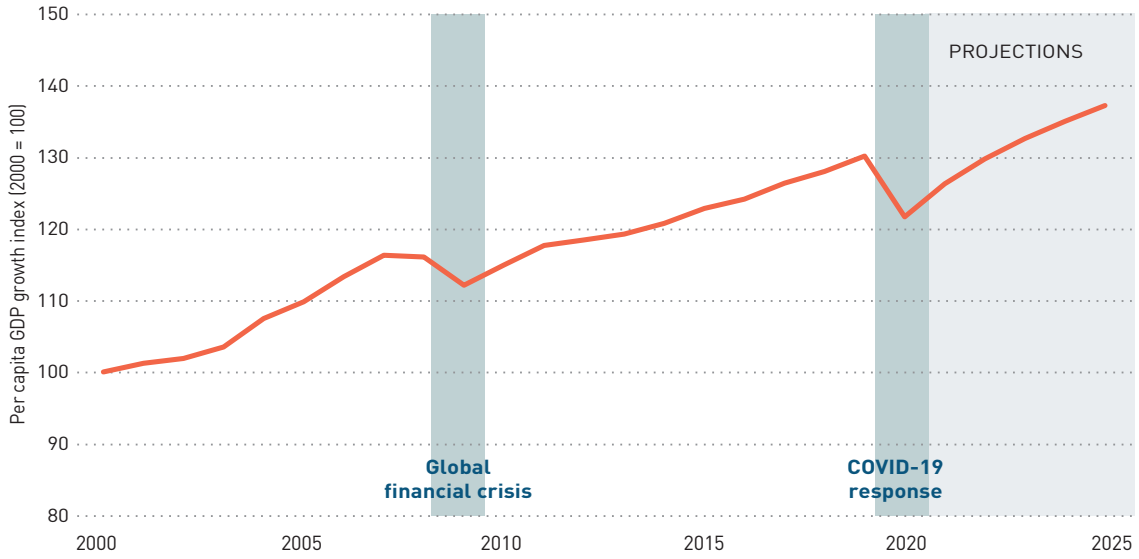
Average real per capita GDP growth, 2000–2025



Source: IMF World Economic Outlook, October 2020 *[14]*.

FIGURE 4.4 **GDP per capita will take many years to rebound**

Average real per capita GDP growth index



Source: IMF World Economic Outlook, October 2020 *[14]*.

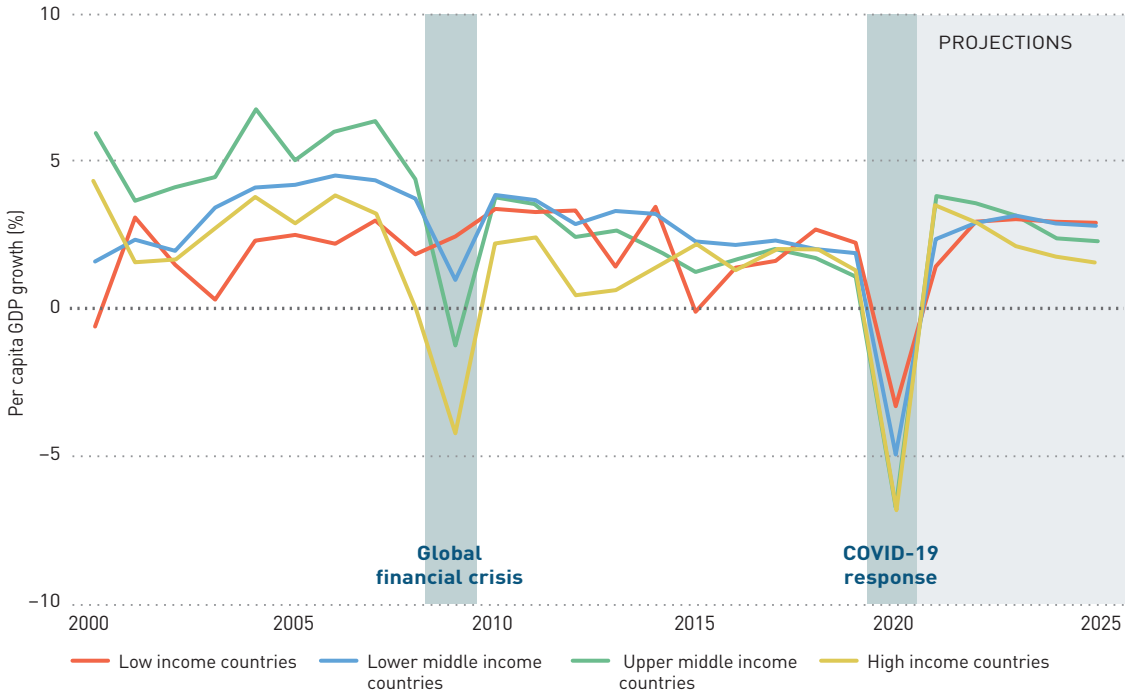
countries. The current crisis will result in a contraction across all country income groups: GDP per capita projections are –6.9% for upper middle and high income countries, –5% for lower middle income countries and –3.3% for low income countries (Figure 4.5).

Almost all countries will see an economic contraction in 2020, and the others will see a major slowdown in growth. Other factors beyond the stringent lockdowns will reduce countries' ability to cope with COVID-19's economic impact, such as constrained trade, tourism and remittances, and ongoing fiscal challenges, such as low tax revenues, high debt servicing and large deficits *[15]*.

Small countries dependent on tourism, such as Belize, Fiji, Maldives, Palau and Seychelles, will experience some of the largest economic

FIGURE 4.5 All countries, regardless of income, are affected by the economic crisis

Per capita GDP growth in real terms, 2000–2025



Source: IMF World Economic Outlook, October 2020 *[14]*.

contractions: –15% or deeper *[14]*. India, one of the world's largest economies, will have a contraction of –11% in 2020 after growing 6% a year from 2009 to 2019 (Figure 4.6). Other economies expected to contract by more than –5% include Brazil, France, Germany, Mexico, Nigeria, South Africa, Turkey and the United Kingdom. Bangladesh, China, Ethiopia and Viet Nam will not go through an economic contraction in 2020, but economic growth will slow significantly *[14]*.

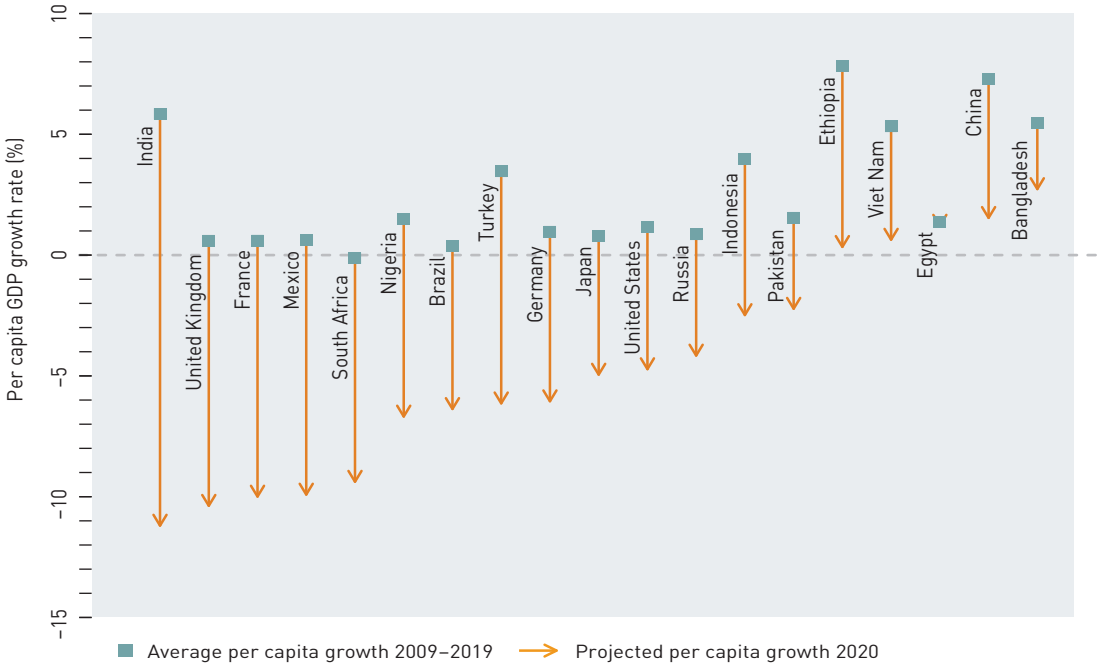
The economic contagion of COVID-19 is transmitted globally across borders through its impact on foreign direct investment and trade. Foreign direct investment flows to low and middle income countries are projected to decline by nearly one-third from their 2019 levels *[16]*. Even countries that have remained virus-free so far—such as some Pacific countries—have been affected by the economic contagion. Declining economic activity, including lower remittances, has raised poverty and lowered employment, hitting those in the informal sector especially hard *[17]*.

Declining economic activity has increased unemployment, lowered remittances and reduced working hours. Unemployment rates are projected to increase, for example, from 5.3% in 2019 to 8.0% in 2020 in Indonesia; from 2.2% to 3.3% in Viet Nam and from 10.5% to 17.3% in Colombia. The adverse labour market effects of COVID-19 are affecting women and informal sector workers the most *[18]*. Remittances—comprising more than one-quarter of the economy in countries such as Haiti, Kyrgyz Republic, Nepal and Tajikistan and an important household income source in many countries—are projected to fall 7.2% in 2020 and a further 7.5% in 2021. Job recovery and overall economic vulnerability raise concerns based on previous economic crises *[19]*. The current impact on school closures will affect children's learning outcomes, achievement gaps, nutritional status and safety *[20, 21, 22]*.

This confluence of economic factors is expected to raise the extreme poverty rate (US$ 1.90 a day) for the first time in several decades, stalling progress towards this key Sustainable Development Goal target. COVID-19 is expected to push 88 million–115 million people into extreme poverty in 2020 and boost income inequality within countries (Figure 4.7) *[18]*.[4]

FIGURE 4.6 **Some countries will be hurt more than others by the economic crisis**

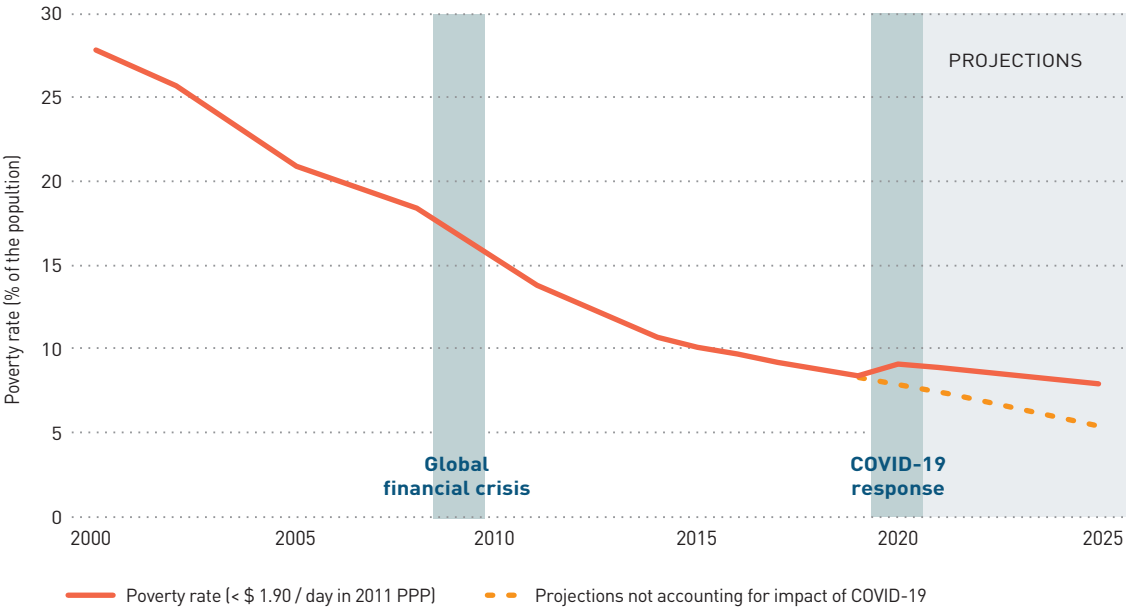
Per capita GDP falling in 2020 from its 2009–2019 trend in selected countries



Source: IMF World Economic Outlook, October 2020 *[14]*.

FIGURE 4.7 **Extreme poverty rates will increase for the first time in several decades**

Global poverty rate, 2000–2025



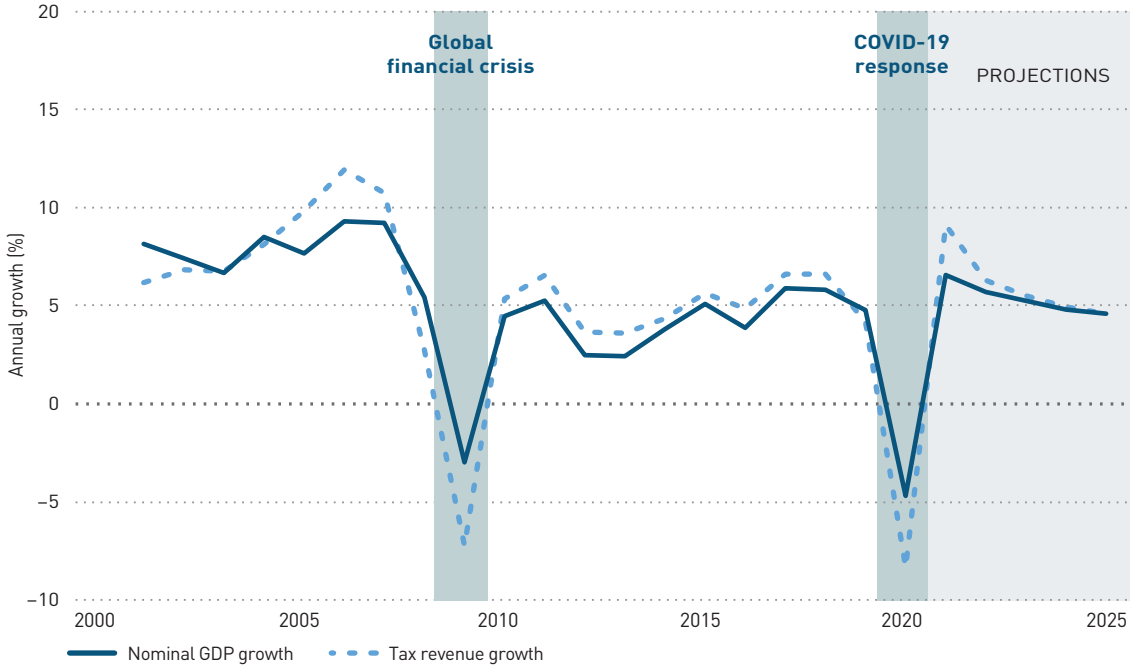
Source: World Bank Shared Poverty and Shared Prosperity, October 2020 *[18]*.

Public revenues are declining due to the economic crisis, forcing many countries to take on additional debt

Due to COVID-19, public revenues are projected to decline as a share of already declining GDP. Part of the decline is due to falling consumption and investment, while several countries have implemented tax cuts in an effort to stimulate economic activity *[23]*. Globally, public revenues (including grants) are expected to fall by almost 2% of GDP, implying that in aggregate they will fall by more than the projected decline in GDP (Figure 4.8). As GDP begins to recover,

FIGURE 4.8 **Public revenue declines will mirror the overall economic decline**

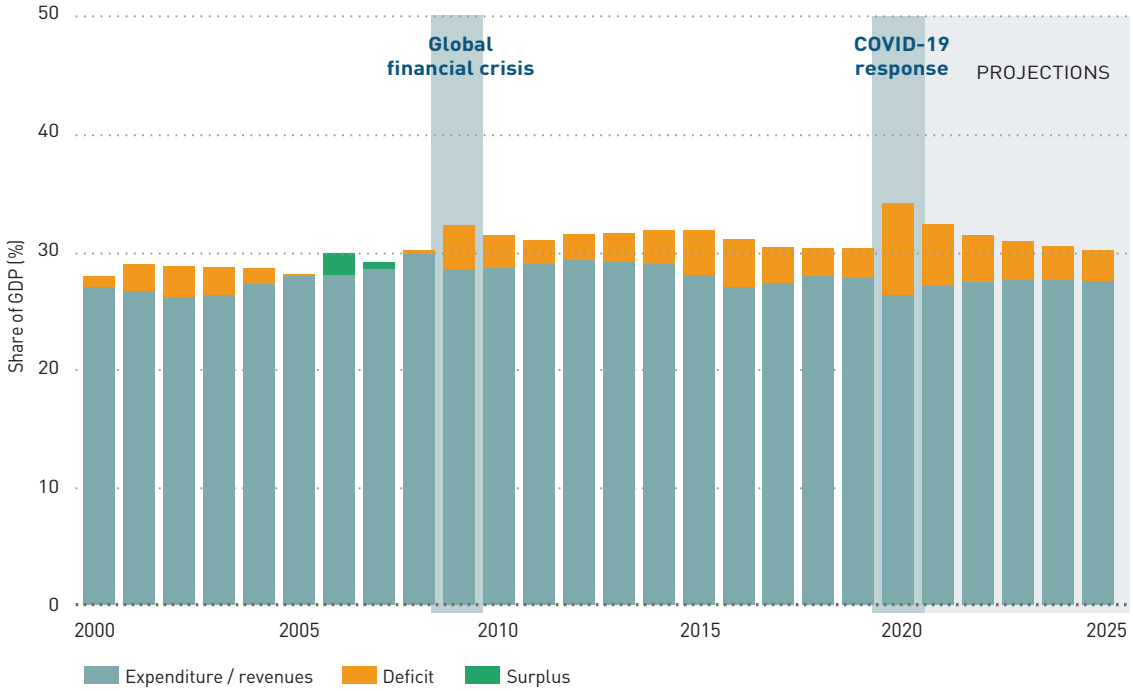
Nominal GDP and tax revenue growth rates in European Union and Organisation for Economic Co-operation and Development countries, 2000–2025



Source: IMF World Economic Outlook, October 2020 *[14].*

FIGURE 4.9 **An increasing share of public spending comes from deficits**

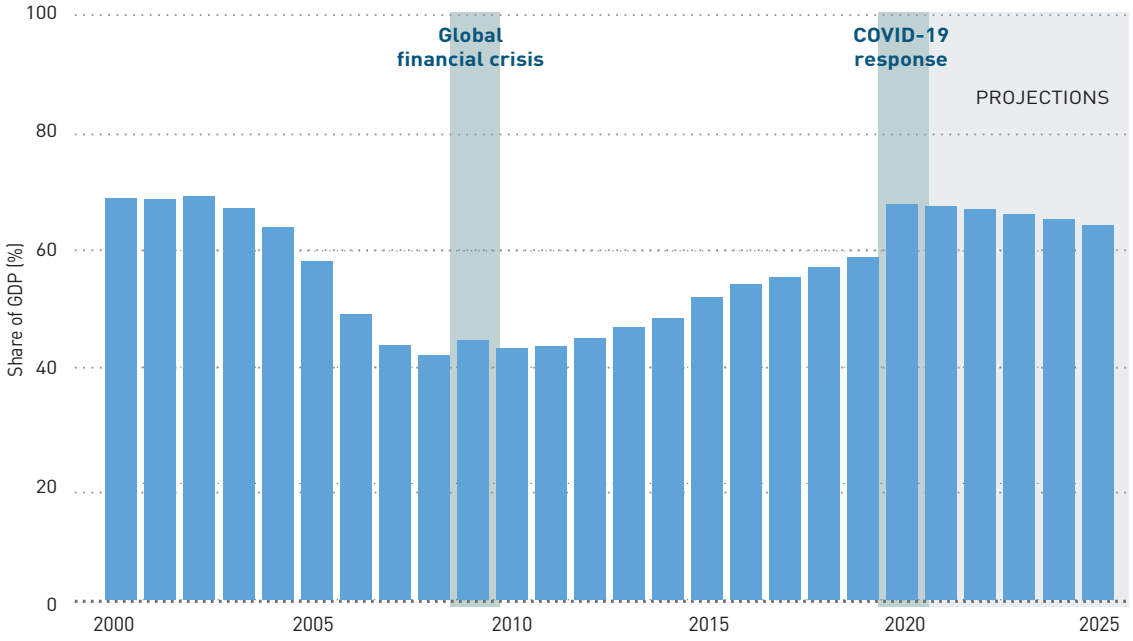
Composition of public spending/revenues as a share of GDP, 2000–2025



Source: IMF World Economic Outlook and World Bank Poverty and Shared Prosperity, October 2020 *[14, 18].*

FIGURE 4.10 Already high debt levels are expected to increase as a result of the macro-fiscal fallout from COVID-19

Gross public debt as a share of GDP, 2000–2025



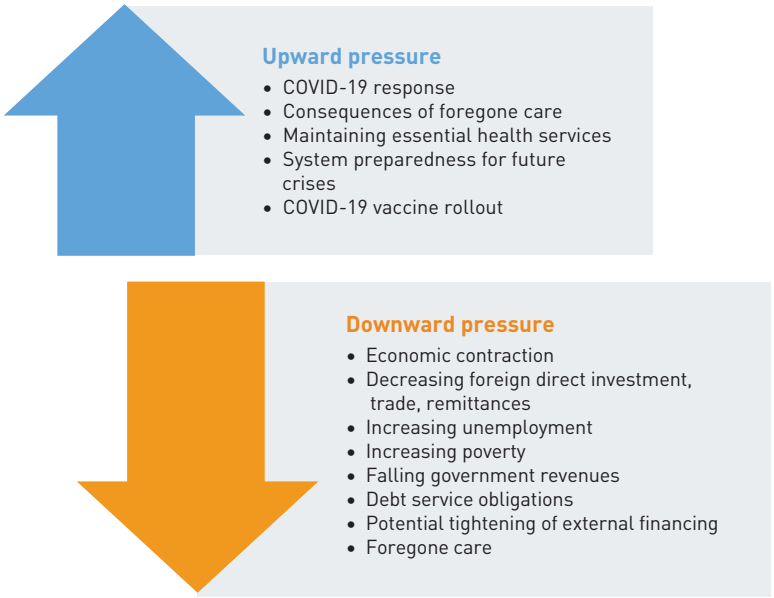
Source: IMF World Economic Outlook and World Bank Poverty and Shared Prosperity, October 2020 *[14, 18].*

countries should monitor the buoyancy of revenue response and recovery rates. During previous crises, public revenues have sometimes bounced back higher than the economic recovery, but such buoyancy is expected to be short-lived.

General government spending as a share of GDP has risen globally in 2020, financed by rising deficits and debt levels, primarily to fund the emergency response to COVID-19 and to implement countercyclical stimulus and social protection policies (Figure 4.9). Debt servicing due to the exceptional budget response will affect the composition of public spending in the medium term, possibly restricting the scope of future discretionary spending.

Even before 2020, public debt had increased dramatically, growing to almost 60% of GDP by 2019. So on average, countries entered the COVID-19 crisis in a weaker position than they entered the 2009 financial crisis and have financed their current response largely by taking on additional debt. Concerns about financial weakness are compounded by the prospect of long-term deficit financing and its links to inflation and to higher interest rates. Debt is projected to increase to well over 60% of GDP due to the COVID-19-related economic crisis (Figure 4.10).

FIGURE 4.11 Ways health spending could be affected by the COVID-19 crisis



The medium- to long-term health spending impact of the COVID-19 crisis will depend on broader macro-fiscal indicators and changing patterns of demand and supply for health services

The full impact of COVID-19 and the associated economic crisis on health spending will

depend on several near- and medium-term factors. Upward pressure will result from the protracted COVID-19 response, including the rollout of a vaccine, and the need to maintain essential health services, address harm from foregone care during the pandemic and better prepare health systems for future crises. But downward pressure will come from the overall macro-fiscal environment described above, characterized by reduced GDP, increased unemployment, lower remittances, higher poverty rates, lower foreign direct investment and trade, lower public revenues, and more reliance on deficit spending (Figure 4.11). Health care relying on out-of-pocket spending may be foregone due to declining household income. The combination of a growing need for health services and a more resource-constrained environment, including a possible decline in external financing, will directly affect UHC, possibly reversing progress and widening inequalities.

The following section summarizes the key determinants of health spending, as well as lessons from previous crises. It identifies potential changes to health financing landscapes and the pathways through which health spending is likely to be changed in the medium to long term. The possible changes to health financing could reverse, without deliberate policy intervention, recent decades' global progress towards advancing UHC.

Health financing vulnerabilities that existed prior to 2020 will also affect health spending in the coming years

Macroeconomic, fiscal and health financing factors that affected a country's health spending patterns prior to 2020 will also influence how health spending reacts in the coming years. For example, higher unemployment is likely to affect health spending and overall coverage rates in countries that link service entitlement with payroll contributions. As unemployment increases, the revenues from employment-based contributions could decrease just as needs expand due to economic and health vulnerabilities. In the 2009 financial crisis in Europe, the health insurance funds in Belgium, Bulgaria, Estonia and Slovenia were all forced to dip into reserves to compensate for falling revenues *[19]*. While such withdrawals can decrease the availability of revenues for the coverage schemes, they can also place upward pressure on general government revenues for the health sector if policy mandates countercyclical spending mechanisms (automatic stabilizers). Previous crises have triggered increases in the role of general government revenue relative to employment-based contributions to expand coverage, especially for the poor—a reform that can weaken the contribution-entitlement link *[19, 24]*.

The share of total health spending in lower income countries that comes from external sources makes them more vulnerable to global economic crisis. Deep economic contractions in donor countries threatens the external financing flows to lower income countries, for which aid makes up nearly 30% of health spending on average, though evidence suggests that some external aid substitutes for domestic government health spending.

Countries relying heavily on out-of-pocket spending and facing large economic contractions will likely have some of the biggest challenges sustaining the level and equity of health service. India, Nigeria and the Philippines, where more than half of health financing comes out-of-pocket, are projected to undergo a more than 5% contraction in per capita GDP. They are particularly vulnerable, as are other countries where precrisis out-of-pocket spending was high (Figure 4.12). Given the nature and size of the income contraction expected due to the pandemic, out-of-pocket spending will likely go down. But those declines will likely reflect foregone care rather than improved financial protection (Box 4.5). Such foregone care is likely to hit the poor much harder than other segments of society, exacerbating pre-existing inequities in coverage *[25]*.

Countries must protect public spending on health to sustain progress towards universal health coverage. Public spending on health remains all the more central to UHC in the time of COVID-19 *[27, 28]*. It reflects the underlying macro-fiscal factors discusses earlier, along with the priority given to health in overall public budgets and the ability of the health sector to absorb funds. Over 2000–2018, public spending on health—including all spending financed by domestic government resources, external financing flowing through governments and social health insurance contributions—grew the fastest in low income countries. The increase was an average 5% per capita a year in real terms, though from a low base of only

FIGURE 4.12 Countries with high out-of-pocket spending and facing large economic contractions may be hit the hardest

Out-of-pocket spending on health in 2018 and projected per capita income growth in 2020

Source: WHO Global Health Expenditure Database and IMF World Economic Outlook, October 2020 *[12]*.

BOX 4.5

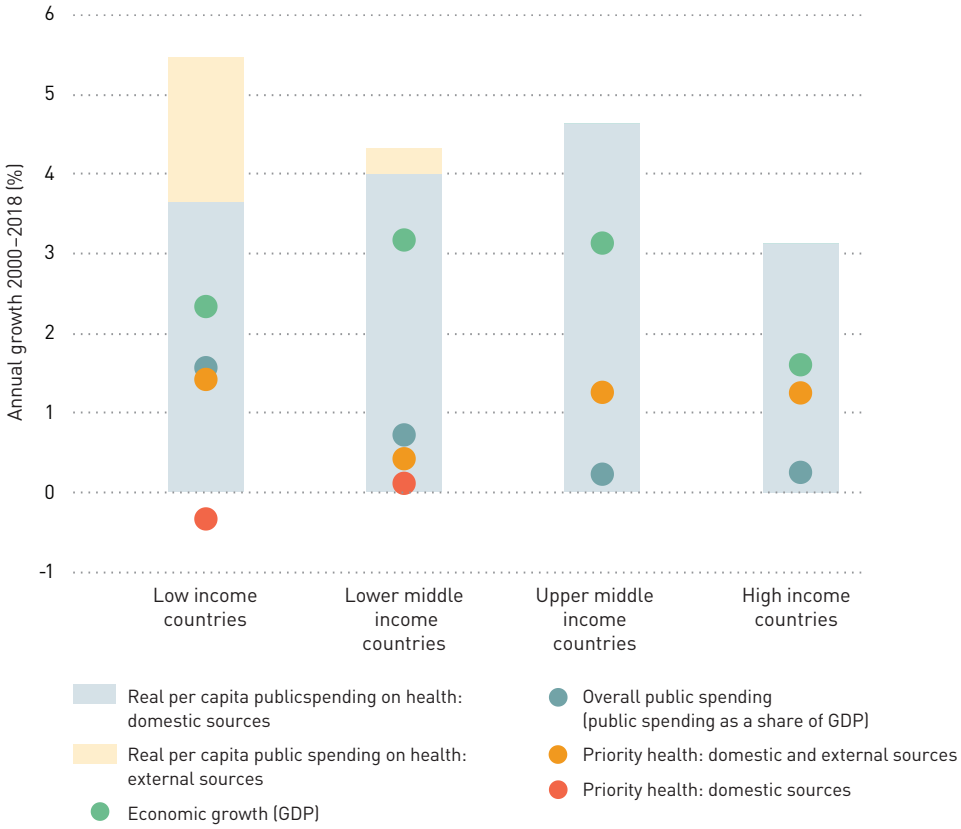
Out-of-pocket spending during the 2009 financial crisis in Europe

Analysis of out-of-pocket spending (OOPS) on health in the WHO European Region during the 2009 financial crisis shows that the countries hit hardest by the crisis also tended to experience the largest reductions in OOPS per capita [19]. For example, private spending (mostly out-of-pocket) declined heavily in Iceland and Greece, two countries hit particularly hard by the crisis, and also declined in Portugal. The trend was not automatic, though: per capita OOPS on health initially increased in Ireland, a country also hit hard by the crisis *[26]*.

The pattern of OOPS as a share of total health spending is different. Between 2007 and 2012, that share fell in 31 of 53 countries, again with some of the largest changes in countries most affected by the financial crisis. The OOPS share of health spending fell by almost 5 percentage points in Estonia and Greece but grew by more than 2 percentage points in Iceland, Latvia and Lithuania and by more than 6 percentage points in Portugal. These variations reflect different patterns in those countries, in terms of changes in public spending, and in the specific policy responses implemented *[19]*.

FIGURE 4.13 Public spending on health is driven by many factors

Average growth of real per capita public spending on health and its drivers, 2000–2018



Note: Priority health is public spending on health as a share of general government expenditure.
Source: World Bank calculations based on World Development Indicators and Global Health Expenditure Database data.

about US$ 11 (in 2018 US dollars) in 2000. As Chapter 1 discussed in more detail, most of that increase came from external sources. In high income countries, in contrast, increased public spending on health grew about 3% from a much higher base of US$ 1,408 in 2000 (Figure 4.13).

Without sustained countercyclical public spending and increased priority in government budgets for health and other sectors contributing to health, the growth of public spending on health will likely slow or even reverse. That growth is a function of economic growth—more accurately, of the additional revenues and borrowing facilitated by economic growth. But it is also a function of trends in overall public spending, health's share of overall public spending (the priority health receives in government budgetary allocations) and the health sector's ability to absorb and use allocations effectively. Between 2000 and 2018, economic growth grew faster (almost half or more) on average across income groups, in comparison with other drivers of public spending on health. (Figure 4.13). The current economic crisis, with contracting public revenues, raises clear concerns over the prospects of public spending on health in 2021 and beyond.

If governments prioritize health, concerns can be lowered. In some countries, the combination of countercyclical increases in public spending and declining per capita GDP could prompt tightening across the board. Unless priority is restored to health, growth in public spending on health is likely to fall or even become negative in some countries, threatening recent decades' progress towards UHC. The need to prioritize health is particularly important in lower income countries. When external sources that run through government budgets were removed from public spending on health between 2000 and 2018, the priority of public spending on health fell in lower income countries. Since these are average trends, both macro-fiscal and budget

BOX 4.6

Decomposing public spending on health growth in India

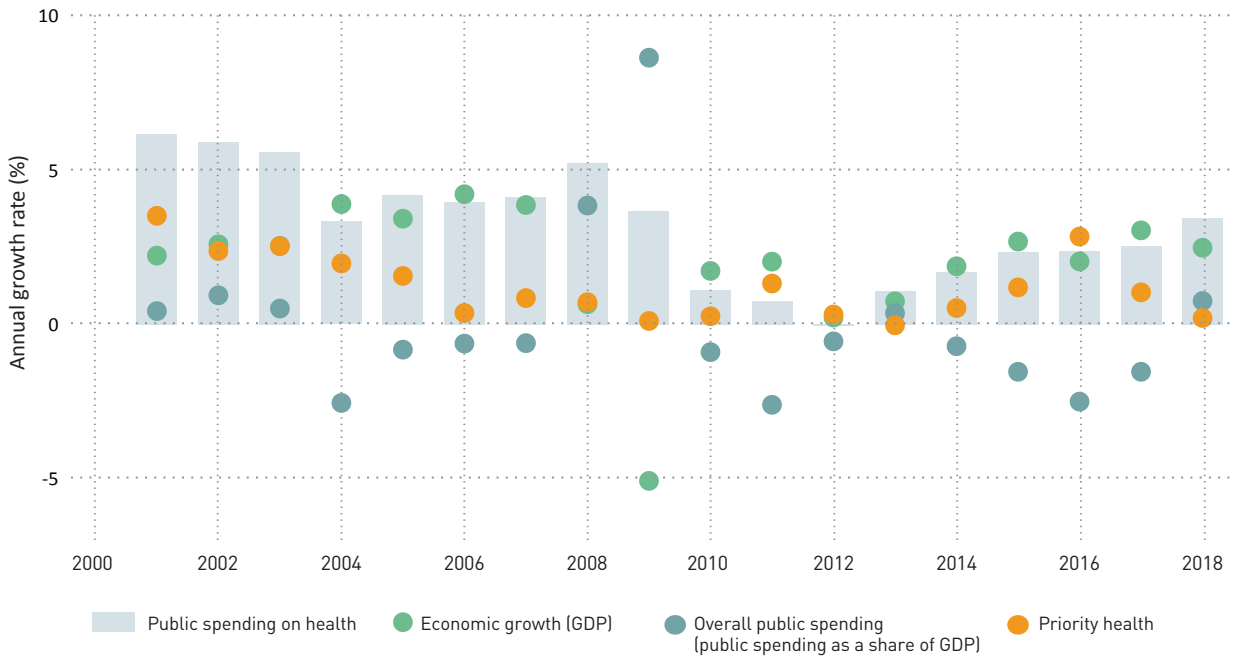
Decomposing the drivers of public spending on health shows why the macro-fiscal impact of COVID-19 raises concerns for the future. As an illustration, India's 2018 figures were:

- Per capita GDP: US$ 2,000.
- Public spending as a share of GDP: 27% (20% of GDP from government revenue and 7% of GDP from borrowing).
- Health spending as a share of public spending: 4% (averaged across centre and states).
- Per capita public spending on health: US$ 20.
- Public spending on health as share of GDP: 1%.

With the economy projected to contract –11.2% in 2020 and per capita GDP expected to take several years to return to levels that existed prior to this crisis, public spending on health will have to increase as a share of GDP. That could happen either through overall sustained countercyclical public spending or through increasing health's share of overall public spending. The increase in health spending as a share of GDP is needed to protect already low levels of public spending on health and keep growth rates from declining.

FIGURE 4.14 Health was not prioritized in the 2009 financial crisis

Growth of public spending on health in EU and OECD countries, 2000–2018



Source: World Bank calculations based on World Development Indicators and Global Health Expenditure Database data.

allocation data need careful country-by-country monitoring to understand the specific dynamics of health spending patterns (see Box 4.6 for an example).

Higher debt servicing could lower public spending on social sectors, including health, and risk progress towards universal health coverage

Increasing reliance on deficit spending will create longer-term contingent liabilities that could limit budgetary space to allocate additional resources to the health sector. The experience

of the 2009 financial crisis can partly inform a potential response to the large increase in deficit spending. Despite an average economic contraction of 5% across OECD and EU countries, overall public spending continued to grow through increased deficit spending (Figure 4.14). Aggregate deficit spending grew considerably in those countries—from 1.2% of GDP in 2008 to 5.7% of GDP in 2009—in the face of declining revenues, underscoring the critical role of countercyclical policies in smoothing the impact of economic downturns. But the share of health spending in overall public spending fell in 44 of the 53 WHO European Region countries between 2007 and 2011. That reversal of the previous decade's trend indicates that health was not protected in government budgets—a finding aligned with the findings on initial COVID-19 budget allocations presented earlier in this chapter *[19]*. Although not all spending that affects health flows through the health sector, safeguarding investments promoting UHC and health security will require closely monitoring and participating in budget discussions.

Deliberate health financing policy actions can help countries to weather the COVID-19 storm and maintain progress towards Universal Health Coverage. The depth of economic and fiscal declines and the time they will take for recovery will affect health spending, the use of health services and financial protection. The use of services and, often, OOPS tend to be driven by household income (GDP per capita) and total health spending. The extent to which individuals have to pay out-of-pocket depends on public spending on health, with the effectiveness of public spending and of policies protecting against high OOPS critical. So, countries where public spending on health recovers faster than GDP per capita, if they mount an effective policy response, may have less risk of increasing the share of OOPS in total health spending. But since public spending may not be large enough to drive major service use increases, unmet needs must be closely monitored. Where economic recovery outpaces fiscal recovery, countries may experience rapid increases in the use of services by those able to pay, so they should monitor inequities in the use of services and the heightened risk of households experiencing financial hardship due to OOPS.

The dynamic relationship between public spending and OOPS on health has been seen before, as when real per capita public spending and OOPS on health both grew in the vast majority of countries between 2000 and 2018. For 75% of the 101 countries with estimates available for both service coverage and catastrophic health spending for more than one year (as tracked by Sustainable Development UHC indicators), public spending and OOPS on health grew simultaneously. Improved service coverage (proxied by SDG indicator 3.8.1) mirrors these improvements *[29, 30]*. Where the growth in OOPS per capita growth in real terms, though faster than the growth in public health spending per capita in real terms, it implies that service use gains have come at the cost of household ability to spend on other basic needs such as education, housing, food and living standards, compromising financial protection *[30]*. Only about 1 in 3 countries with per capita public spending and OOPS on health both increasing have managed to decrease the incidence of catastrophic health spending (according to WHO staff calculations based on the Global SDG Database, UN Statistics Division, and the WHO Global Health Observatory Database). As countries move beyond the initial crisis phase of the COVID-19 response, they should pay careful attention to the way they design, implement and govern coverage policies. Those decision are critical to improving financial protection—different results are possible even when countries start with similar service coverage and have similar growth rates for public spending and OOPS on health, or when public spending increases much faster than OOPS *[30]*.

Deliberate health financing policy actions can help countries weather the COVID-19 storm and maintain progress towards universal health coverage

Safeguarding public spending on health, and its associated impact on UHC progress, will require targeted policies. As seen in the 2009 European and 1996 Asian financial crises, this can include measures to protect financing for particular populations or for particular services, as well as to limit the exposure of service users to large out-of-pocket payments *[19]*. But it can also include broader engagement by the health sector in debt relief discussions that can prioritize health spending, as in the Highly Indebted Poor Countries (HIPC) initiative in the early 2000s. In general, countercyclical public spending can be important in protecting health and well-being at times of high unemployment, falling household incomes and increased need for health services.

The health sector must work closely with the finance authorities to gain renewed priority

in public spending, particularly given the attention to health sector's role in delivering the COVID-19 vaccine and other common goods for health.[5] As shown above, budget prioritization for health has not historically driven increased public spending on health. But COVID-19 has laid bare the interlinkages between health and economic growth and productivity. That stark realization can trigger different approaches to health within overall budgeting.

Trends in total health spending need close monitoring—of both financing sources and spending purposes—in relation to UHC-related indicators for service coverage and financial protection. Countries where OOPS is a larger share of total health spending and GDP per capita also declines may see OOPS go down in the near term. Such decreases likely reflect unmet needs and lower use of health services, not improved financial protection. Then as income begins to recover, OOPS could increase faster than public spending on health, so policies are needed to protect against the potentially impoverishing effects of OOPS while concurrently prioritizing access to services for lower-income populations. In general, aligning spending with the broader macro-fiscal environment and health sector performance indicators is critical for effective policy dialogue and decisionmaking.

Monitoring the overall level and distributional impact of catastrophic spending, especially if it drives the poor deeper into poverty, is needed. The spending trends discussed in this chapter and throughout this report focus on averages, which can mask differences suggesting inequality across population groups. Increased poverty rates due to the COVID-19 crisis particularly raise this concern, since even a small decline in public spending on health can lead to catastrophic spending for poorer groups or to more need going unmet. Policies to protect poorer groups can include increasing explicit budget-funded coverage programs, effective implementation of policies to eliminate or limit copayments (user fees) and targeted cash transfers. Protecting the most vulnerable requires measurement and related policy attention.

The COVID-19 crisis provides an opportunity for a 'reset' in countries with weak health financing systems to progress towards universal health coverage

Despite all the challenges COVID-19 presents, the crisis can also act as a reset to strengthen weak health financing systems. The surge in financing the COVID-19 emergency response can catalyse broader system strengthening for routine health services, including general testing capacity and information systems for surveillance. The increased attention to the health sector can provide opportunities for reforms to ensure that revenues are raised, pooled, allocated and used efficiently and equitably. The reforms must go beyond spending levels and look towards the ultimate use of that spending. Priority needs to be given to Common Goods for Health, which include, population-based, essential health functions and preparedness for epidemics and environmental threats. Financing reforms also need to focus on enhancing efficiency and equity on the delivery of services, such as softening the link between employment and health coverage and greater use of strategic purchasing methods.

Notes

1. Pre-COVID-19 health spending data is from 2018.
2. In Ukraine, low budget execution rates have been attributed to governance issues between health and finance authorities over releasing funds, difficulties in procuring certain goods and developing procedures to transfer funds to health facilities to increase health worker salaries (Ministry of Finance, 2020). In South Africa, provinces whose allocations represent the bulk of the country health response (44% of spending between April and November 2020) reported delays in procurement [*10*].
3. The –4.4% projection represents the decrease in global real GDP in 2020. Based on October 2020 IMF estimates, the country-averaged GDP per capita growth decline is –6%.
4. Although the discussion uses the global measure of extreme poverty defined by the World Bank, country-specific, relative poverty rates may differ. So, the number of people cited as pushed into extreme poverty, resulting in higher income inequality, is likely an underestimate.
5. Common goods for health are population-based functions and interventions that require public financing (supplemented by donor sources where relevant) because they are public goods or have large social externalities and thus will not be provided through market forces. CGH can be situated at community, sub-national, national, regional or global levels. The level at which their financing is derived and where the function ultimately sits will vary based on context and the nature of the good itself. Global and regional CGH go beyond the boundaries of individual nations and can address transnational issues.

References

1. WHO. Coronavirus disease (COVID-19) pandemic. Geneva: World Health Organisation; 2020. Available from: https://www.who.int/emergencies/diseases/novel-coronavirus-2019. Accessed 05 December 2020.
2. WHO. Coronavirus disease (COVID-19): Herd immunity, lockdowns and COVID-19. Geneva: World Health Organisation; 15 October 2020. Available from: https://www.who.int/news-room/q-a-detail/herd-immunity-lockdowns-and-covid-19. Accessed 05 December 2020.
3. International Monetary Fund. World economic outlook, April 2020: the great lockdown. Washington, DC; International Monetary Fund.
4. WHO. Pulse survey on continuity of essential health services during the COVID-19 pandemic: interim report, 27 August 2020. Geneva: World Health Organization; 2020. Available from: https://www.who.int/publications/i/item/WHO-2019-nCoV-EHS_continuity-survey-2020.1.
5. Indonesia budget allocation and absorption for COVID-19 control, year 2020. Jakarta: Indonesia Ministry of Finance; 2020.
6. South African National Treasury. Allocations for COVID response: 2020/21. Pretoria: Government of South Africa; 2020.
7. OECD. COVID-19: tracking the impact on health spending Unpublished meeting document presented at the 3rd Meeting of the OECD Working Party on Health Statistics. Paris: OECD Publishing; 2020.
8. RIZIV. COVID-19—Nous voulons connaître l'impact sur les dépenses INAMI et suivre la situation de près. 2020. Available from: https://www.riziv.fgov.be/fr/nouvelles/Pages/impact-covid19-depenses-inami.aspx. Accessed 17 November 2020.
9. German Ministry of Health. Finanzergebnisse der GKV: Vorläufige Rechnungsergebnisse. 2020. Available from: https://www.bundesgesundheitsministerium.de/themen/krankenversicherung/zahlen-und-fakten-zur-krankenversicherung/finanzergebnisse.html. Accessed 17 November 2020.
10. U.S. Bureau of Economic Analysis. Gross domestic product, 2nd quarter 2020 (advance estimate) and annual update. 2020. Available from: https://www.bea.gov/news/2020/gross-domestic-product-2nd-quarter-2020-advance-estimate-and-annual-update. Accessed 17 November 2020.
11. Rahim F, Allen R, Barroy H, Gores L, Kutzin J. COVID-19 funds in response to the pandemc. Washington, DC: International Monetary Fund; 2020.
12. Ukraine Ministry of Finance. Central COVID-19 allocations 2020 data. Kiev: Government of Ukraine. 28 October 2020. Available from : https://mof.gov.ua/uk/data_and_analytics-433.
13. Yuma S, Cros M, Nana A, Nabyonga J, Ke X, Cockerham S. Responding to COVID-19 while protecting essential services for women, children and adolescents. Washington DC: Global Financing Facility; 2020. Available from: https://www.globalfinancingfacility.org/responding-covid-19-while-protecting-essential-services-women-children-and-adolescents. Accessed 1 December 2020.
14. IMF. World economic outlook, October 2020: a long and difficult ascent. Washington, DC: International Monetary Fund; 2020.
15. Tandon A, Roubal T, McDonald L, Cowley P, Palu T, de Oliveira Cruz V, et al. Economic impact of COVID-19: implications for health financing in Asia and Pacific.Washington, DC: World Bank; 2020.
16. Ratha D, De S, Kim EJ, Plaza S, Seshan D, Yameogo ND. Phase II: COVID-19 crisis through a migration lens. Migration and development brief 33. Washington, DC: KNOMAD-World Bank; October 2020.
17. Tandon A, et al., Economic contraction from COVID-19 in the Pacific: implications for health financing. Health Systems & Reform; forthcoming.
18. World Bank. Shared poverty and shared prosperity 2020: reversal of fortunes. Washington, DC: World Bank; October 2020.
19. Thomson S, Figueras J, Evetovits T, Jowett M, Mladovsky P, Maresso A, et al. Economic crisis, health systems and health in Europe. ed. European Observatory on Health Systems and Policies. New York: World Health Organization; 2015.
20. Christakis DA, Van Cleve W, Zimmerman FJ. Estimation of US children's educational attainment and years of life lost associated with primary school closures during the coronavirus disease 2019 pandemc. JAMA Network Open. 2020;3(11):e2028786–e2028786.
21. Van Lancker W, Parolin Z. COVID-19, school closures and child poverty: a social crisis in the making. Lancet Public Health. 2020;5(5):e243–e244.
22. Hanushek EA, Woessmann L. The economic impacts of learning losses. Paris: Organisation of Economic Co-operation and Development; September 2020.
23. World Bank. Global economic prospects. Washington, DC: World Bank; June 2020.
24. Yazbeck AS, Savedoff WD, Hsiao WC, Kutzin J, Soucat A, Tandon A, et al. The case against labor-tax-financed social health insurance for low- and low-middle-income countries: a summary of recent research into labor-tax financing of social health insurance in low- and low-middle-income countries. Health Affairs. 2020;39(5):892–897.
25. Wagstaff, A. Poverty and health sector inequalities. Bull World Health Organ. 2002;80(2):97–105.
26. Thomson S, Jowett M, Mladovsky P. Health system responses to financial pressures in Ireland. Copenhagen: World Health Organization; 2014.
27. Kutzin J. Anything goes on the path to universal health coverage? No. Bull World Health Organ. 2012;90(11):867–868.
28. Barroy H, Vaughan K, Tapsoba Y, Dale E, Van de Maele N. Towards universal health coverage: thinking public. Geneva: World Health Organization; 2017.
29. WHO. Primary health care on the road to universal health coverage: 2019 monitoring report. Geneva: World Health Organization; 2019.
30. WHO and World Bank. 2019 global monitoring report on financial protection in health. World Health Organization and World Bank; April 2020.

5

Weathering the storm

CHARTING A NEW COURSE TOWARDS THE SUSTAINABLE DEVELOPMENT GOAL FOR HEALTH

KEY MESSAGES

The COVID-19 pandemic caught the world by surprise, but confirmed the need for greater and more secure public funding for health

- The COVID-19 pandemic hit when the world had established a stable pattern of growing health spending.
- The specific macro-fiscal impact of COVID-19 on health spending remains uncertain. Targeted and deliberate policies will be needed to counteract demands on financing systems and protect vulnerable populations.
- Individually and collectively, countries need to chart courses to a new horizon, progressing on six recommendations for a new health financing compact in a COVID-19 world.
  - Secure domestic public spending on health as both a societal and an economic priority.
  - Fund Common Goods for Health as step zero of universal health coverage at country level.
  - Invest in global Common Goods for Health to enable global health security.
  - Prioritize public funding to ensure equity of access and financial protection through a primary health care approach.
  - Increase the level of aid to lower income countries, but adjust aid modalities.
  - Fund national institutions for transparent and inclusive tracking of health spending at both country and global levels.

The lessons of the COVID-19 crisis are still being drawn. But a consensus already holds that when the virus hit and spread globally, countries were not sufficiently prepared, whatever their income level *[1]*. The COVID-19 disruptions to health, health services and systems, and the social and economic environment are massive. The global devastation to health and the economy is far from over. As of December 1, 2020, approximately 1.5 million deaths had occurred, and a –4.4% contraction of GDP is expected *[2, 3]*.

The combined health and economic shocks have had direct and indirect consequences for health spending patterns in 2020 (Chapter 4). Many uncertainties lie ahead, and only change is certain. Forthcoming—and needed—change will have to embrace more than piecemeal sector reforms. It will require adjustments of every country's economic and political system and a new global health paradigm.

This WHO 2020 report on global health spending, analysing 2000–2018 data for 190 countries, describes the health spending trajectory towards the Sustainable Development Goals (SDGs) before this crisis hit. It also analyses disease-specific spending comprehensively with standardized data collection and estimation methods. The report also highlights the weakness of progress, through an in-depth analysis of 32 countries that have consistently lagged behind economically in the past two decades of public spending jointly with partners providing aid. Furthermore, the report provides an early assessment on how the COVID-19 crisis is affecting the health spending trajectory, drawing links between global spending trends of the past two decades, the current situation and future perspectives. It aims overall to stimulate policy discussions and inspire countries and global communities charting new courses for building sustainable and resilient health systems to ensure health security and enable progress towards Universal Health Coverage (UHC).

The COVID-19 pandemic hit when the world had established a stable pattern of growing health spending

The COVID-19 pandemic hit when the world had established a rather stable pattern of growing health spending, which rose continuously from 2000 to 2018. In 2018, global spending on health reached US$ 8.3 trillion, or 10% of global GDP. That growth had, however, slowed in recent years. In 2018, and for the first time in five years, health spending grew more slowly than the world economy. Government spending on health also grew more slowly in recent years. Out-of-pocket payments from households remained high, continuing to finance a major share of health spending. In low and lower middle income countries, in particular, out-of-pocket-spending still made up more than 40% of total health spending in 2018, though this share has decreased from even higher levels in 2000. External aid also continued to play an important role, representing 30% of total health spending in low income countries and 10% in lower middle income countries in 2018. In terms of the source of expenditure, total external aid for health has decreased slightly since its peak in 2014, but somewhat surprisingly, the amount absorbed by lower middle income countries has increased in recent years, surpassing the amount absorbed by low income countries.

This report revealed no evident pattern to the types of health services funded at country level. Expenditure allocations vary widely. Primary health care spending, for example, which includes general outpatient services (consultation and medicines) and some population based public health functions (prevention, surveillance and policy development and implementation), as the share of total health spending varied widely across countries. Analysis of spending patterns by disease in 40 low and middle income countries showed that infectious diseases accounted for half of health spending in low income countries and one-third in middle income countries. Non-communicable diseases accounted for about 13% of health spending in low income countries and about 30% in middle income countries. In both country groups, external aid played its largest role in funding infectious and parasitic disease control.

The report looked more closely into 32 "left-behind" countries: low and lower middle income countries with GDP per capita below US$ 2,000 that exhibited slow economic growth over 2000–2018. Those countries, locked in a lower income trap, lagged on both economic development and UHC. They experienced growing dependency on external financing, while domestic funding mainly came from private sources, in particular out-of-pocket spending. Domestic public spending remained very low—US$ 9 per capita on average in 2018—and the priority assigned to

health in overall domestic public spending fell over 2000–2018. Allocation of public resources to health is a political choice, and competing priorities and obligations—such as those for the military and for debt service—limit government discretion in reallocating resources to the health sector. As aid inflows for health grew over the period, several countries in the lower income group reallocated domestic public funding from health to other purposes, exhibiting fungibility between external aid and domestic public spending.

The specific macro-fiscal impact of COVID-19 on health spending remains uncertain. Targeted and deliberate policies will be needed to counteract demands on financing systems and protect vulnerable populations

Past patterns provide important insights to shape future health spending. Throughout 2020, the pandemic exerted multiple pressures on health spending. All countries responded with exceptional budget allocations. Supplementary budgets for the health response to COVID-19 represent on average 36% of pre-COVID-19 public spending on health in low income countries, 13% in middle income countries, and 8% in high income countries. It is unclear how much of these budget allocations are additional and how much is reallocation. We also still do not know how supplementary budget allocations will interact with allocations for other diseases and health care functions. Health spending is only a small share of the overall government response to COVID-19, which also focuses on economic stabilization, social protection and social assistance for vulnerable populations.

COVID-19 raised alarms on the sustainability and future trajectory of many economic and social developments. Progress on access to essential services and financial protection are likely to be set back unless deliberate responses to the shock address the underlying weaknesses of societies and health systems. Experience shows that public spending on social sectors is key to progress towards SDGs *[4, 5, 6, 7, 8, 9]*. How much and on what functions governments spend on health will directly affect progress towards universal health coverage. COVID-19 has shown starkly that countries have underinvested in health systems, both for preparedness and for ensuring the whole population access to services without provoking fear of financial hardship. They must reverse that underinvestment to build trust in the government and strengthen the social contract. UHC is essential to achieving the health, economic, and social equity and cohesion SDGs *[10]*.

The medium-term impact of COVID-19 on health spending will depend on a range of factors, including government revenues, debt servicing obligations and broader macro-fiscal indicators such as GDP, the demand for health services and the priority given to health spending in the overall government budget. Countries with low public spending on health, high debt service obligations and historical dependence on out-of-pocket spending and external aid for health are particularly vulnerable to the macroeconomic and fiscal pressures of COVID-19. The ability of these countries to ensure health security and sustain progress towards universal health coverage is at stake.

The specific macro-fiscal impact of COVID-19 on health spending remains uncertain. Even so, targeted and deliberate policies will be needed to counteract demands on financing systems and protect vulnerable populations. Careful monitoring of spending patterns, disbursements, service coverage and financial protection indicators will be critical for calibrating policy actions with a focus on allocating spending to promote progress towards health security on the way to universal health coverage.

Individually and collectively, countries need to chart courses to a new horizon, progressing on six recommendations for a new health financing compact in a COVID-19 world

SECURE DOMESTIC PUBLIC SPENDING ON HEALTH AS BOTH A SOCIETAL AND AN ECONOMIC PRIORITY

Two decades into the 21st century, health has never before drawn such simultaneous attention in all regions and in all countries at all income levels. The case for investing in health has been made once and for all. The global GDP loss due to the COVID-19 pandemic in 2020 is estimated to be approximately US$ 4 trillion, while needed funding for Common Goods for Health to ensure epidemic preparedness is estimated to be approximately US$ 150 billion per year *[2, 11]*. Investing in the Common Goods for Health should incorporate the implementation of International Health Regulations, epidemic preparedness, essential public health functions, animal health and environmental health.

The COVID-19 pandemic has revealed profound underlying weaknesses of human societies in various settings, whether related to the economy, society or health systems. It has demonstrated to the world the importance of investing in health by protecting health spending and directing it to priority services—particularly common goods for health—and ensuring access to services for all.

In the short run, more resources are needed for contact tracing, testing, treatment, surveillance and the expected vaccines. In the mid-term, enhanced investments will be needed to help countries finance the preparedness of health systems to anticipate epidemics and environmental and climate change risks. Countries must also create stronger social contracts in which the public purse provides access to quality health services for all, taking a people centered primary health care approach, building social cohesion and trust.

The 2020 drop in economic activity has constrained tax revenues and increased government spending, mainly funded by debt. Although debt-financed stimulus has been essential, it has raised concerns about government capacity to sustain future health and other social spending. Lessons from the response to the 2008 economic crisis, particularly the shortcomings of harsh austerity policies, should be taken on board. More than ever, countries must institutionalize societal dialogue to collectively define the size and use of the collective purse and ensure inclusive and participatory budget processes.

FUND COMMON GOODS FOR HEALTH AS STEP ZERO OF UNIVERSAL HEALTH COVERAGE AT COUNTRY LEVEL

The foremost rationale for public spending on health is to fund public goods and address market failures in achieving policy objectives. Much, though not all, of the health security investment needed to provide a foundation for sustainable economic recovery will be reflected in health spending for common goods for health, such as surveillance, laboratory systems and vaccine programmes. Additional investments are also required beyond the health sector for such areas as veterinary health and ecological mitigation. Some investments will take the form of spending under allied sectors, others the form of policy measures such as taxation and regulation to level the playing field for health and ecological sustainability.

Common Goods for Health, which include international health regulations and epidemic and emergency preparedness, are core public health functions. They are the top priority. They include the core population-based health system functions requiring collective action, which can be grouped in five categories: policy coordination, laws and regulations, information (including surveillance), taxes and subsidies and public health programs *[12]*. Countries should fund these functions as "step zero" of UHC.

INVEST IN GLOBAL COMMON GOODS FOR HEALTH TO ENABLE GLOBAL HEALTH SECURITY

Investments in global common goods, such as preparedness for pandemics and for the health consequences of climate change and environmental degradation, have been long delayed. The global international architecture is not well suited to the health challenges of our times and has no sustained source of revenue for common goods for health. No explicit mechanism exists for the actual or virtual pooling of funds managed by different global agencies (WHO, other UN organizations, the World Bank, Global Fund, Gavi, the Coalition for Epidemic Preparedness Innovations and others) to ensure adequate revenue raising and coherence of investments in Common Goods for Health. Unified guidance is lacking on using the funds for preparedness and on making trade-offs between research and development, regulation, and surveillance and information *[12]*. Tracking resources for global public goods is not easy, since funding is fragmented among institutions. A mechanism for such tracking is needed to identify spending beyond that of any one country (for example, for WHO core functions, research and development, and so on).

PRIORITIZE PUBLIC FUNDING TO ENSURE EQUITY OF ACCESS AND FINANCIAL PROTECTION THROUGH A PRIMARY HEALTH CARE APPROACH

Increasing equity and leaving no one behind in universal health coverage is another rationale for public spending on health. Clear priorities for public spending need to ensure access for everyone to essential health services *[4]*. As income increases, households spend more on health services. But if basic health care relies mainly on out-of-pocket spending, universal health coverage will not be reached. Public subsidies are needed to ensure universal equitable access and to redress the market failure of voluntary health insurance *[13]*. How much governments fund, what health functions

and services they support, and how effective systems are in using public funds will define the role of private health spending. Only with well-organized public funding will it be possible for private sources to play a complementary role.

INCREASE THE LEVEL OF AID TO LOWER INCOME COUNTRIES, BUT ADJUST AID MODALITIES

Lower income countries face severe fiscal constraints, including increasing debts that may limit the space for social sector spending in the future.

This is happening in a context where external aid has been decreasing. In the interconnected world, ensuring every country has a functioning health system and every person has access to basic health service is an underpinning of global health security and stability. External aid helped low and middle income countries to meet the Millennium Development Goals with a focus on infectious diseases. The Sustainable Development Goals have set a much broader challenge focused on sustainability and leaving no one behind. Strengthening health system institutions and health security will allow countries to face evolving noncommunicable disease challenges, advance infectious disease control and prepare for future pandemics. Sustained aid in the form of grants, concessional lending and debt relief will be needed to strengthen health systems so countries build preparedness and strengthen public health systems that deliver universal health coverage.

Donors should keep their promise to sustain the level of aid. However, new aid models should be developed to address the fungibility between external and domestic health resources. Whether external or domestic, public funding for health needs to increase. Not just aid, but the combination of domestic public and external aid should contribute to a sustained increase in public spending on health to help countries weather the storm *[14]*.

FUND NATIONAL INSTITUTIONS FOR TRANSPARENT AND INCLUSIVE TRACKING OF HEALTH SPENDING AT BOTH COUNTRY AND GLOBAL LEVELS

Timely monitoring of spending is essential for monitoring health system performance and ensuring transparency and accountability. Both governments and donors have mobilized additional resources to respond to the COVID-19 crisis. Current health account reports, based on audited data, become available only two years after spending, so information on 2020 health spending will mostly be unavailable before 2022. Given the vast effort and resources devoted to COVID-19 control, real time monitoring is needed to assess how actual spending supports health system performance. Participatory budget tracking and monitoring is an important tool for demonstrating transparency and accountability so governments gain the trust of their population, a proven factor for the effective control of the COVID-19 pandemic. Institutionalizing expenditure tracking, including citizen and civil society oversight, will bolster timeliness and granularity in health expenditure data reporting. At the global level, Universal Health Coverage 2030 and the Partnership for Maternal, Newborn and Child Health are increasingly joining hands to establish a global platform for civil society actor oversight on progress towards universal health coverage. As noted above, data sources and methods need to be developed to capture spending on global common goods.

WHO will continue to support countries in institutionalizing their health expenditure tracking. The support will aim to improve country-level policy dialogue and the quality of evidence made available to parliamentarians and civil society budget watchdogs. Ongoing areas of tracking, by funding source, financing arrangement (scheme), function, diseases and so on, will be updated and refined. New areas of interest will also be developed, including spending on COVID-19 pandemic control and health security preparedness. WHO will continue working with partners to support country-level data collection and data quality improvement.

References

1. WHO. Coronavirus disease (COVID-19) pandemic. Geneva: World Health Organization; 2020. Available from: https://www.who.int/emergencies/diseases/novel-coronavirus-2019.
2. IMF. World economic outlook, October 2020: a long and difficult ascent. Washington, DC: International Monetary Fund; 2020.
3. IMF. World economic outlook, April 2020: the great lockdown. Washington, DC: International Monetary Fund; 2020.
4. Kutzin J. Anything goes on the path to universal health coverage? No. Bull World Health Organ. 2012;90(11):867–868.
5. Jamison DT, Summers LH, Alleyne G, Arrow KJ, Berkley S, Binagwaho A, et al. Global health 2035: a world converging within a generation. Lancet. 2013;382(9908):1898–1955.
6. WHO Regional Office for Europe. Can people afford to pay for health care? New evidence on financial protection in Europe. Copenhagen: WHO Regional Office for Europe; 2019.
7. WHO. Primary health care on the road to universal health coverage: 2019 monitoring report. Geneva: World Health Organization; 2019.
8. Wagstaff A, Flores G, Hsu J, Smitz MF, Chepynoga K, Buisman LR, et al. Progress on catastrophic health spending in 133 countries: a retrospective observational study. Lancet Glob Health. 2018;6(2):e169–e79.
9. WHO and World Bank. Global monitoring report on financial protection in health 2019. World Health Organization and International Bank for Reconstruction and Development/World Bank; 2019.
10. WHO. Together on the road to universal health coverage: A call to action. 2017. https://www.who.int/universal_health_coverage/road-to-uhc/en/
11. WHO. Estimation of global investment in preparedness. WHO Health Systems Governance and Finance Department. 17 September 2020.
12. Soucat A, Kickbusch I. Global Common Goods for Health: towards a new framework for global financing. Glob Policy. 2020;11:628–635. Available from: https://doi.org/10.1111/1758-5899.12875.
13. Yazbeck AS, Soucat A. When both markets and governments fail health. Health Syst Reform. 2019;5(4):268–279. Available from: https://doi.org/10.1080/23288604.2019.1660756.
14. Jowett M, Brunal MP, Flores G, Cylus J. Spending targets for health: no magic number (Health Financing Working Paper No. 1). Geneva: World Health Organization; 2016. https://apps.who.int/iris/handle/10665/250048.

Annexes

ANNEX 1 Country codes and WHO region

Country	WHO Region	Country code
Afghanistan	EMR	AFG
Albania	EUR	ALB
Algeria	AFR	DZA
Andorra	EUR	AND
Angola	AFR	AGO
Antigua and Barbuda	AMR	ATG
Argentina	AMR	ARG
Armenia	EUR	ARM
Australia	WPR	AUS
Austria	EUR	AUT
Azerbaijan	EUR	AZE
Bahamas	AMR	BHS
Bahrain	EMR	BHR
Bangladesh	SEAR	BGD
Barbados	AMR	BRB
Belarus	EUR	BLR
Belgium	EUR	BEL
Belize	AMR	BLZ
Benin	AFR	BEN
Bhutan	SEAR	BTN
Bolivia Plurinational States of	AMR	BOL
Bosnia and Herzegovina	EUR	BIH
Botswana	AFR	BWA
Brazil	AMR	BRA
Brunei Darussalam	WPR	BRN
Bulgaria	EUR	BGR
Burkina Faso	AFR	BFA
Burundi	AFR	BDI
Cabo Verde Republic of	AFR	CPV
Cambodia	WPR	KHM
Cameroon	AFR	CMR
Canada	AMR	CAN
Central African Republic	AFR	CAF
Chad	AFR	TCD
Chile	AMR	CHL
China	WPR	CHN
Colombia	AMR	COL
Comoros	AFR	COM
Congo	AFR	COG
Cook Islands	WPR	COK
Costa Rica	AMR	CRI
Côte d'Ivoire	AFR	CIV
Croatia	EUR	HRV
Cuba	AMR	CUB
Cyprus	EUR	CYP
Czech Republic	EUR	CZE
Democratic People's Republic of Korea	SEAR	PRK
Democratic Republic of the Congo	AFR	COD
Denmark	EUR	DNK
Djibouti	EMR	DJI
Dominica	AMR	DMA
Dominican Republic	AMR	DOM
Ecuador	AMR	ECU
Egypt	EMR	EGY
El Salvador	AMR	SLV
Equatorial Guinea	AFR	GNQ
Eritrea	AFR	ERI
Estonia	EUR	EST
Eswatini	AFR	SWZ
Ethiopia	AFR	ETH
Fiji	WPR	FJI
Finland	EUR	FIN
France	EUR	FRA
Gabon	AFR	GAB
Gambia	AFR	GMB
Georgia	EUR	GEO
Germany	EUR	DEU
Ghana	AFR	GHA
Greece	EUR	GRC
Grenada	AMR	GRD
Guatemala	AMR	GTM
Guinea	AFR	GIN
Guinea-Bissau	AFR	GNB
Guyana	AMR	GUY
Haiti	AMR	HTI
Honduras	AMR	HND
Hungary	EUR	HUN
Iceland	EUR	ISL
India	SEAR	IND
Indonesia	SEAR	IDN
Iran (Islamic Republic of)	EMR	IRN
Iraq	EMR	IRQ
Ireland	EUR	IRL
Israel	EUR	ISR
Italy	EUR	ITA
Jamaica	AMR	JAM
Japan	WPR	JPN
Jordan	EMR	JOR
Kazakhstan	EUR	KAZ
Kenya	AFR	KEN
Kiribati	WPR	KIR
Kuwait	EMR	KWT
Kyrgyzstan	EUR	KGZ
Lao People's Democratic Republic	WPR	LAO
Latvia	EUR	LVA
Lebanon	EMR	LBN
Lesotho	AFR	LSO
Liberia	AFR	LBR
Libya	EMR	LBY

Country	WHO Region	Country code
Lithuania	EUR	LTU
Luxembourg	EUR	LUX
Madagascar	AFR	MDG
Malawi	AFR	MWI
Malaysia	WPR	MYS
Maldives	SEAR	MDV
Mali	AFR	MLI
Malta	EUR	MLT
Marshall Islands	WPR	MHL
Mauritania	AFR	MRT
Mauritius	AFR	MUS
Mexico	AMR	MEX
Micronesia (Federated States of)	WPR	FSM
Monaco	EUR	MCO
Mongolia	WPR	MNG
Montenegro	EUR	MNE
Morocco	EMR	MAR
Mozambique	AFR	MOZ
Myanmar	SEAR	MMR
Namibia	AFR	NAM
Nauru	WPR	NRU
Nepal	SEAR	NPL
Netherlands	EUR	NLD
New Zealand	WPR	NZL
Nicaragua	AMR	NIC
Niger	AFR	NER
Nigeria	AFR	NGA
Niue	WPR	NIU
North Macedonia	EUR	MKD
Norway	EUR	NOR
Oman	EMR	OMN
Pakistan	EMR	PAK
Palau	WPR	PLW
Panama	AMR	PAN
Papua New Guinea	WPR	PNG
Paraguay	AMR	PRY
Peru	AMR	PER
Philippines	WPR	PHL
Poland	EUR	POL
Portugal	EUR	PRT
Qatar	EMR	QAT
Republic of Korea	WPR	KOR
Republic of Moldova	EUR	MDA
Romania	EUR	ROU
Russian Federation	EUR	RUS
Rwanda	AFR	RWA
Saint Kitts and Nevis	AMR	KNA
Saint Lucia	AMR	LCA
Saint Vincent and the Grenadines	AMR	VCT
Samoa	WPR	WSM

Country	WHO Region	Country code
San Marino	EUR	SMR
Sao Tome and Principe	AFR	STP
Saudi Arabia	EMR	SAU
Senegal	AFR	SEN
Serbia	EUR	SRB
Seychelles	AFR	SYC
Sierra Leone	AFR	SLE
Singapore	WPR	SGP
Slovakia	EUR	SVK
Slovenia	EUR	SVN
Solomon Islands	WPR	SLB
Somalia	EMR	SOM
South Africa	AFR	ZAF
South Sudan	AFR	SSD
Spain	EUR	ESP
Sri Lanka	SEAR	LKA
Sudan	EMR	SDN
Suriname	AMR	SUR
Sweden	EUR	SWE
Switzerland	EUR	CHE
Syrian Arab Republic	EMR	SYR
Tajikistan	EUR	TJK
Thailand	SEAR	THA
Timor-Leste	SEAR	TLS
Togo	AFR	TGO
Tonga	WPR	TON
Trinidad and Tobago	AMR	TTO
Tunisia	EMR	TUN
Turkey	EUR	TUR
Turkmenistan	EUR	TKM
Tuvalu	WPR	TUV
Uganda	AFR	UGA
Ukraine	EUR	UKR
United Arab Emirates	EMR	ARE
United Kingdom	EUR	GBR
United Republic of Tanzania	AFR	TZA
United States of America	AMR	USA
Uruguay	AMR	URY
Uzbekistan	EUR	UZB
Vanuatu	WPR	VUT
Venezuela (Bolivarian Republic of)	AMR	VEN
Viet Nam	WPR	VNM
Yemen	EMR	YEM
Zambia	AFR	ZMB
Zimbabwe	AFR	ZWE

ANNEX 2 Countries by region, income group, policy interest for selected diseases and programmes

Country	WHO Region	World Bank income group	World Bank income group, aggregated	High burden for tuberculosis*	Gavi, the Vaccine Alliance	Global Fund	FP2020	High burden for neglected tropical diseases
Afghanistan	EMR	Low	Low income	0	1	1	1	1
Benin	AFR	Low	Low income	0	1	1	1	0
Bhutan	SEAR	Lower middle	Middle income	0	0	1	1	0
Botswana	AFR	Upper middle	Middle income	1	0	1	0	0
Burkina Faso	AFR	Low	Low income	0	1	1	1	0
Cabo Verde	AFR	Lower middle	Middle income	0	0	1	0	0
Cambodia	WPR	Lower middle	Middle income	1	1	1	1	0
Central African Republic	AFR	Low	Low income	1	1	1	1	0
Congo	AFR	Lower middle	Middle income	1	1	1	1	0
Côte d'Ivoire	AFR	Lower middle	Middle income	0	1	1	1	1
Democratic Republic of the Congo	AFR	Low	Low income	1	1	1	1	1
Eswatini	AFR	Lower middle	Middle income	1	0	1	0	0
Ethiopia	AFR	Low	Low income	1	1	1	1	1
Gabon	AFR	Upper middle	Middle income	0	0	1	0	0
Georgia	EUR	Upper middle	Middle income	0	0	1	0	0
Ghana	AFR	Lower middle	Middle income	0	1	1	1	0
Haiti	AMR	Low	Low income	0	1	1	1	0
Kenya	AFR	Lower middle	Middle income	1	1	1	1	0
Kyrgyzstan	EUR	Lower middle	Middle income	1	1	1	1	0
Liberia	AFR	Low	Low income	1	1	1	1	0
Malawi	AFR	Low	Low income	1	1	1	1	0
Mali	AFR	Low	Low income	0	1	1	1	1
Mauritania	AFR	Lower middle	Middle income	0	1	1	1	0
Mauritius	AFR	Upper middle	Middle income	0	0	1	0	0
Myanmar	SEAR	Lower middle	Middle income	1	1	1	1	1
Namibia	AFR	Upper middle	Middle income	1	0	1	0	0
Nepal	SEAR	Low	Low income	0	1	1	1	0
Niger	AFR	Low	Low income	0	1	1	1	0
Nigeria	AFR	Lower middle	Middle income	1	1	1	1	1
The Republic of North Macedonia	EUR	Upper middle	Middle income	0	0	0	0	0
Republic of Moldova	EUR	Lower middle	Middle income	1	0	1	0	0
Sao Tome and Principe	AFR	Lower middle	Middle income	0	1	1	1	0
South Sudan	AFR	Low	Low income	0	1	1	1	1
Tajikistan	EUR	Low	Low income	1	1	1	1	0
Togo	AFR	Low	Low income	0	1	1	1	0
Tunisia	EMR	Lower middle	Middle income	0	0	1	0	0
Uganda	AFR	Low	Low income	1	1	1	1	1
United Republic of Tanzania	AFR	Low	Low income	1	1	1	1	1
Uzbekistan	EUR	Lower middle	Middle income	1	1	1	1	0
Zambia	AFR	Lower middle	Middle income	1	1	1	1	0
Total				**20**	**29**	**39**	**30**	**10**

* On at least one of the three high-burden lists—drug-susceptible tuberculosis, TB/HIV or multi-resistant tuberculosis.

Note: Regions: AFR: African; AMR: the Americas; EMR: Eastern Mediterranean; EUR: European; SEAR, South-East Asia; WPR: Western Pacific.

ANNEX 3 Full list of diseases and conditions by category

Disease/condition code	Disease/condition name
DIS.1	**Infectious and parasitic diseases**
DIS.1.1	HIV/AIDS and other sexually transmitted diseases (STDs)
DIS.1.1.1	HIV/AIDS and opportunistic infections (OIs)
DIS.1.1.1.1	HIV/AIDS
DIS.1.1.1.2	TB/HIV
DIS.1.1.1.3	Other OIs due to AIDS
DIS.1.1.1.nec	Unspecified HIV/AIDS and OIs (n.e.c.)
DIS.1.1.2	STDs other than HIV/AIDS
DIS.1.1.nec	Unspecified HIV/AIDS and other STDs (n.e.c.)
DIS.1.2	Tuberculosis (TB)
DIS.1.2.1	Pulmonary TB
DIS.1.2.1.1	Drug-susceptible tuberculosis (DS-TB)
DIS.1.2.1.2	Multidrug-resistant tuberculosis (MDR-TB)
DIS.1.2.1.3	Extensively drug-resistant tuberculosis (XDR-TB)
DIS.1.2.1.nec	Unspecified pulmonary tuberculosis (n.e.c.)
DIS.1.2.2	Extra pulmonary TB
DIS.1.2.nec	Unspecified tuberculosis (n.e.c.)
DIS.1.3	Malaria
DIS.1.4	Respiratory infections
DIS.1.5	Diarrhoeal diseases
DIS.1.6	Neglected tropical diseases (NTDs)
DIS.1.7	Vaccine preventable diseases
DIS.1.8	Hepatitis
DIS.1.9	Emergencies / outbreak / surge (such as Ebola, Avian flu)
DIS.1.nec	Other and unspecified infectious and parasitic diseases (n.e.c.)
DIS.2	**Reproductive health**
DIS.2.1	Maternal conditions
DIS.2.2	Perinatal conditions
DIS.2.3	Contraceptive management (family planning)
DIS.2.nec	Unspecified reproductive health conditions (n.e.c.)
DIS.3	**Nutritional deficiencies**
DIS.4	**Noncommunicable diseases (NCDs)**
DIS.4.1	Cancers
DIS.4.2	Endocrine and metabolic disorders
DIS.4.2.1	Diabetes
DIS.4.2.nec	Other and unspecified endocrine and metabolic disorders (n.e.c.)
DIS.4.3	Cardiovascular diseases
DIS.4.3.1	Hypertensive diseases
DIS.4.3.nec	Other and unspecified cardiovascular diseases (n.e.c.)
DIS.4.4	Mental & behavioural disorders, and neurological conditions
DIS.4.4.1	Mental (psychiatric) disorders
DIS.4.4.2	Behavioural disorders
DIS.4.4.3	Neurological conditions
DIS.4.4.nec	Unspecified mental & behavioural disorders and neurological conditions (n.e.c.)
DIS.4.5	Respiratory diseases
DIS.4.6	Diseases of the digestive system
DIS.4.7	Diseases of the genito-urinary system
DIS.4.8	Sense organ disorders
DIS.4.9	Oral diseases
DIS.4.nec	Other and unspecified noncommunicable diseases (n.e.c.)
DIS.5	**Injuries**
DIS.5.1	Road traffic accidents
DIS.5.nec	Other and unspecified injuries (n.e.c.)
DIS.6[a]	**Non-disease specific (administration and governance at the central level)**
DIS.nec	**Other and unspecified diseases/conditions (n.e.c.)**

Note: N.e.c.: not elsewhere classified.

a. This DIS.6 category was initially meant to capture health system-related spending pertaining to central administration and governance that could not immediately be linked to a particular disease. But it is not a disease, and in a methodological perspective, this type of spending is best traced under the health care function classification, which records the purpose of the spending incurred, or under the health care provider classification. For some countries, however, splitting administration and governance-related spending by disease represents a challenge, since the underlying routine health information management system is not necessarily equipped with details that permit such distribution. So, some countries are still using this DIS.6 category in their health accounts. WHO, when it receives such results, proceeds with DIS.6 amount redistribution to the actual disease categories before level release, since consistency is crucial for international comparability. The share of DIS.1-DIS.5 & DIS.nec is applied to DIS.6.

ANNEX 4 Lower income countries included in chapter 3

Country	Code	Region	GDP per capita, 2018 (US$)	Annual GDP per capita growth, 2000–2018 (%)
Low income group				
Afghanistan	AFG	EMR	530	3.5%
Benin	BEN	AFR	1,242	1.4%
Burkina Faso	BFA	AFR	715	2.8%
Burundi	BDI	AFR	310	–0.3%
Central African Republic	CAF	AFR	488	–1.1%
Chad	TCD	AFR	713	2.7%
Democratic Republic of the Congo	COD	AFR	561	2.1%
Eritrea	ERI	AFR	581	–0.1%
Ethiopia	ETH	AFR	735	6.0%
Gambia	GMB	AFR	716	–0.3%
Guinea	GIN	AFR	975	2.1%
Guinea-Bissau	GNB	AFR	762	0.7%
Haiti	HTI	AMR	835	–0.3%
Liberia	LBR	AFR	674	6.9%
Madagascar	MDG	AFR	460	0.0%
Malawi	MWI	AFR	380	1.6%
Mali	MLI	AFR	900	1.9%
Mozambique	MOZ	AFR	493	4.1%
Nepal	NPL	SEAR	990	3.3%
Niger	NER	AFR	414	1.7%
Rwanda	RWA	AFR	773	5.1%
Sierra Leone	SLE	AFR	534	3.9%
Tajikistan	TJK	EUR	827	5.3%
Togo	TGO	AFR	679	1.1%
Uganda	UGA	AFR	661	3.0%
United Republic of Tanzania	TZA	AFR	1,015	3.6%
Lower middle income group				
Cameroon	CMR	AFR	1,534	1.5%
Comoros	COM	AFR	1,421	0.6%
Côte d'Ivoire	CIV	AFR	1,716	1.2%
Mauritania	MRT	AFR	1,190	1.5%
Senegal	SEN	AFR	1,481	1.8%
Sudan	SDN	EMR	1,339	–0.2%

Note: Syria, Yemen, South Sudan, Somalia and North Korea are not included due to the lack of health expenditure data for several years; Kiribati is not included as the population size is less than 600,000.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