
GLOBAL REPORT
Global expenditure on health: Public spending on the rise?
2021
World Health Organization

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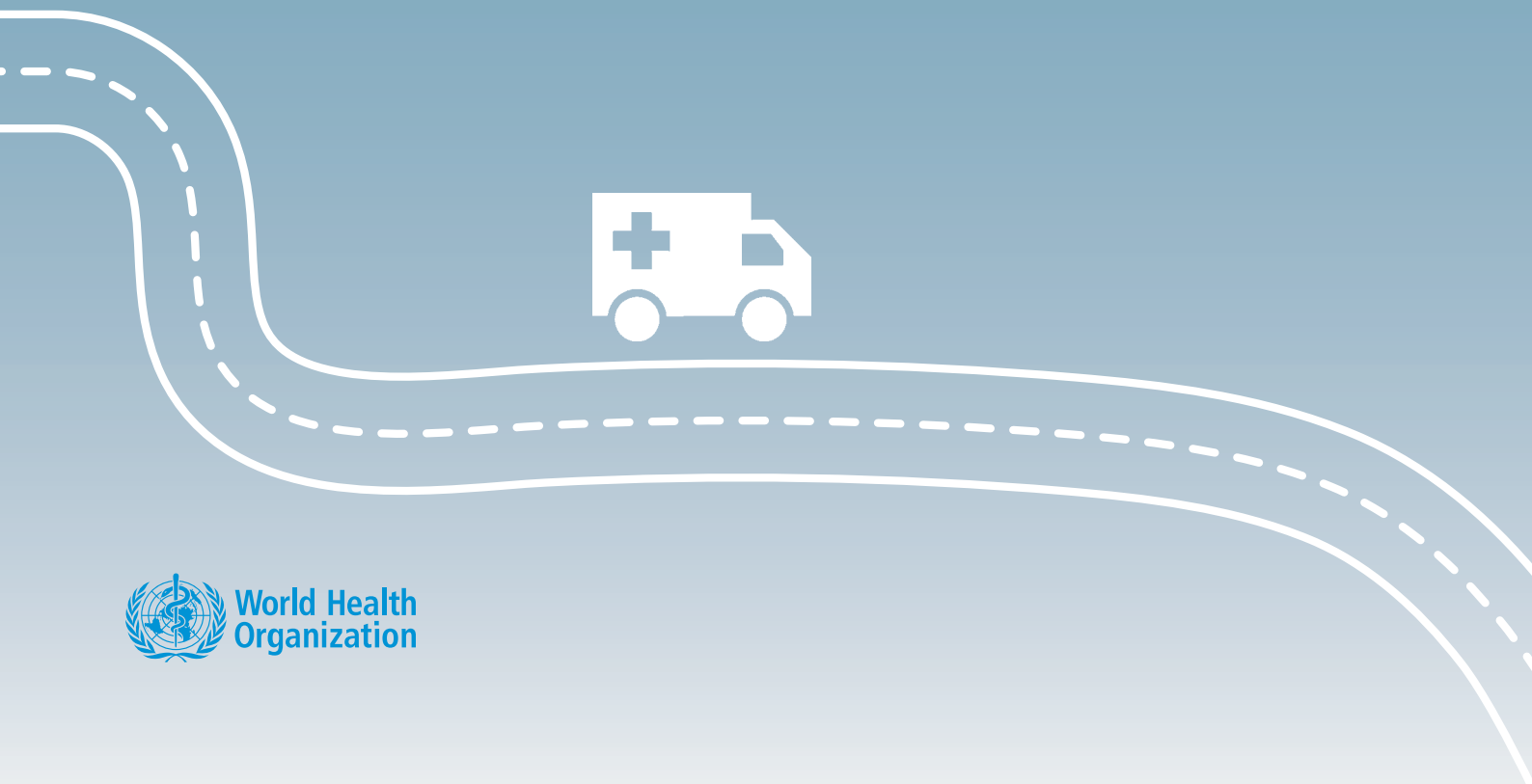

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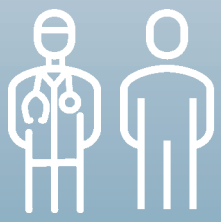

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Abbreviations

DIS	Classification of diseases and conditions
FP	Classification of factors of provision
GDP	Gross Domestic Product
HC	Classification of health care functions
HC.COV	Special reporting items to track COVID-19 spending within current health expenditure
HF	Classification of financing schemes
HIV/AIDS	Human Immunodeficiency Virus/Acquired immunodeficiency syndrome
HP	Classification of health care providers
IMF	International Monetary Fund
OECD	Organisation for Economic Co-Operation and Development
OOPS	Out-of-pocket spending
PHC	Primary health care
SHA 2011	System of Health Accounts 2011
WHO	World Health Organization

Key messages

Global spending on health from 2000 to 2019

- Global spending on health more than doubled in real terms over the past two decades, reaching US$ 8.5 trillion in 2019, or 9.8% of global GDP. But it was unequally distributed, with high income countries accounting for approximately 80%.
- Health spending in low income countries was financed primarily by out-of-pocket spending (OOPS; 44%) and external aid (29%), while government spending dominated in high income countries (70%).
- The share of health in government spending increased over the past two decades in upper-middle and high income countries, stagnated in lower-middle income countries and declined in low income countries between 2000 and 2011, before partially rebounding and stabilizing in recent years.
- Over the past two decades, OOPS rose across all income groups on a per capita basis but fell as a share of total health spending.
- External aid rose considerably over the past two decades. In countries that are highly dependent on external aid, health priority in government spending fell in line with the increased aid.
- The share of global health aid that went to low income countries was smaller than the share of the global extreme poor population living in those countries.
- In low and middle income countries, an average of two-thirds of external aid for health went to infectious diseases, while government health spending was evenly split between infectious and noncommunicable diseases.

Primary health care spending

- Primary health care (PHC) spending accounted for more than half of total health spending in 2019 and amounted to 3.1% of GDP on average. While higher-income countries spent more per capita on PHC, lower-income countries devoted a larger share of total health spending to PHC.
- Nearly half of both PHC and non-PHC spending in low and middle income countries was funded by private sources. In low income countries, the rest was funded by external aid (one-third of total PHC spending and one-fifth of total non-PHC spending) and government sources (one-fifth of total PHC spending and one-third of total non-PHC spending).
- There was little difference in the share of PHC spending from public sources or in PHC spending per capita between countries where most public spending flowed through compulsory health insurance and countries where most public spending was made by budget allocation. Even in systems where most health spending flowed through compulsory insurance schemes, some PHC components were funded by government direct budget allocation.

- In a set of low and middle income countries, the share of PHC spending in total spending for infectious diseases was significantly higher than the share of PHC spending in total spending for noncommunicable diseases and injuries.
- In the same set of countries, more than two-thirds of PHC spending for HIV/AIDS and tuberculosis was from external aid, mainly for preventive care, whereas most PHC spending for malaria was from domestic sources, with the largest share spent for medicines.

Health spending in high income countries

- Among a group of 29 countries that have been classified as high income since 2000, health spending per capita averaged US$ 4,491 and accounted for 9% of GDP in 2019, up from US$ 2,923 in real terms and 7% in 2000.
- The composition of health spending in the 29 high income countries has been stable, with public funding sources accounting for the largest share. Over the past two decades, out-of-pocket spending has gradually declined as a share of health spending, despite growing as a share of household total consumption.
- Most of the 29 high income countries maintained the level of government health spending during the global financial crisis and its aftermath (2008–2013), which was characterized by a sharp drop in output and then fiscal consolidation in many countries.
- The dominant health financing arrangement in a country was not associated with higher or lower health spending. However, since the global financial crisis, there has been a distinct shift towards greater reliance on government budget allocation mechanisms.
- Government health financing mechanisms are becoming increasingly important to health financing in high income countries, both during normal times and in response to crises. Looking forward, countries will need to ensure that health resources are used carefully to meet equity and efficiency goals.

Health spending during the COVID-19 pandemic: Early evidence

- Early estimates in 22 countries, mainly high income economies, indicate that health spending rose substantially in 2020, more than in previous years. Spending patterns in most low and middle income countries remain unknown.
- Growth in health spending in 2020 was driven primarily by higher public spending that flowed through government and compulsory insurance financing arrangements, whereas out-of-pocket spending fell in almost all the countries analysed.
- The share of health spending in total general government expenditure decreased in 2020 in 15 of 22 countries with available data, as total general government expenditure grew at a higher rate than public spending on health.
- Out-of-pocket spending as a share of total household consumption rose slightly in 2020 in 17 of 19 upper-middle and high income countries with available data, because the decline in total household consumption exceeded the decline in out-of-pocket spending. The evolution of out-of-pocket spending in low and middle income countries remains uncertain.
- Government health spending on COVID-19 activities varied widely across 16 countries with available data. In 2020, most current health spending on COVID-19 went to treatment costs, followed by testing/tracing and medical goods.

OVERVIEW

Global expenditure on health: Public spending on the rise?

This year's Global Health Expenditure Report comes at a time of heightened uncertainty about future investment in health at the country, regional and global levels. The path out of the COVID-19 pandemic and related global economic crisis is unclear: despite the most rapid development of vaccines in history, the health and economic benefits of this stunning technological achievement have been grossly unequal as a result of inequities in distribution and slow rollouts. The pandemic has also shed light on the underlying weaknesses of health systems, including insufficient investment in common goods for health—core public health actions that need to be financed collectively because they are public goods or have large externalities—as well as the need for greater investment in the health system foundations of low and lower-middle income countries, such as human resources for health and primary care infrastructure *[1]*. As the emergence of the Delta variant—and, more recently, the Omicron variant—of COVID-19 show, no one is safe until everyone is safe.

An uncertain pandemic outlook means that the magnitude, duration and location of the macroeconomic and fiscal impacts of the pandemic's shock remain unclear. Accordingly, the International Monetary Fund has attached a high degree of downside risk to its outlook for the world economy, in particular for low and lower-middle income countries, linked largely to uncertainties around the pace and distribution of the vaccine rollout and overall pandemic control *[2]*.

The 2021 Global Report uses a wide-angle lens, drawing on the full set of data available in the Global Health Expenditure Database,[1] to identify trends in health spending across the world over the past 20 years and to provide an update on recent developments. The results are clear: as health spending has increased, so too has the importance of public spending on health, albeit with huge and persistent disparities across country income groups.

Overall, global spending on health has doubled in real terms over the past two decades, reaching US$ 8.5 trillion in 2019 and 9.8% of GDP (up from 8.5% in 2000). Spending on health remained highly unequal—and more unequal than the distribution of global GDP. High income countries accounted for nearly 80% of global spending on health (with the United States of America alone accounting for more than 40%), and their average spending per capita was more than four times the average GDP per capita of low income countries.

In countries for which data were available, about half of health spending went towards primary health care (PHC), representing about 3% of GDP on average. Nearly half of PHC spending was funded by private sources,

1. The data from the Global Health Expenditure Database *[3]* used in this report are collected annually from WHO Member States and were updated in December 2021 with data for 2019. The data follow the international standard methodology of the System of Health Accounts 2011 and its boundaries for current health expenditure (referred to as "health spending" in the report).

the same as for non-PHC services. Among the low income countries for which data were available, about one-third of PHC spending came from external aid and one-fifth came from government sources, whereas the composition was reversed for non-PHC spending. Further analysis from a set of low and middle income countries indicates that the share of PHC spending that went to infectious diseases was significantly higher than the share that went to noncommunicable diseases and injuries.

Patterns of health spending by source varied greatly across income groups: government sources financed most health spending in upper-middle and high income countries, whereas out-of-pocket spending and external aid together financed most health spending in low and lower-middle income countries.

Across middle and high income countries, the share of health spending financed by domestic public sources has risen over the past 20 years, with a commensurate decline in reliance on out-of-pocket spending. The implication is that countries have been progressively orienting health financing towards compulsory prepaid sources (such as general government budgets and compulsory health insurance contributions), even though out-of-pocket spending per capita has generally been growing. This shift aligns with a key attribute of health financing arrangements that enable progress towards universal health coverage and the Sustainable Development Goal targets for health *[4]*, but further policy adjustments are needed to ensure that the growth of out-of-pocket spending does not drive inequity in service use and financial hardship.

However, low income countries exhibited a different pattern, with health's share in total government spending declining as the level of external aid has increased. Furthermore, in countries that were highly dependent on aid, health prioritization in government spending decreased in line with the aid increase —that is, aid has not been purely additional. An important function of external aid is to supplement government budgets—but to be sustainable, aid must also leverage domestic financing. However, the expenditure data are consistent with "aid fungibility," suggesting that this leveraging role is yet to be realized.

In upper-middle and high income countries, government spending on health as a share of overall government spending increased, whereas in lower-middle income countries, health prioritization stagnated. On average across low income countries, health prioritization fluctuated: falling between 2000 and 2011, as aid flows grew substantially, before rising in 2012 and 2013 and then maintaining a steady share of about 5% of total general government spending.

Changing priorities are reflected in the allocation of public resources. This malleability has been clearly demonstrated during periods of volatility, such as the 2007–2008 global financial crisis and more recently during the COVID-19 pandemic. High income countries, which relied most heavily on public spending, were generally able to protect government health spending during the global financial crisis, even as economic activity declined. Health spending was then protected during the rapid fiscal consolidation in subsequent years that resulted in spending cuts elsewhere in the budget.

During the COVID-19 pandemic, early indications from a limited set of mostly high income countries suggest that governments responded quickly; most of the growth in overall health spending in 2020 was due to the rapid scaling up of public spending. This more than offset declines in out-of-pocket payments and other private funding sources. Most health spending on COVID-19 went to treatments, followed by testing/tracing and medical goods. Because the immense economic shock required commensurate countercyclical fiscal support to cushion the impact on households and businesses via social assistance and economic stimulus, the share of government health spending in total government spending fell in two-thirds of the analysed countries. This suggests that during major economic shocks, it would be more relevant to gauge health prioritization by government health spending in both absolute terms and relative to historical trends rather than by the standard proportional share of overall government spending.

The subtitle of this report, "Public spending on the rise?," reflects this uncertain backdrop. Governments worldwide face important choices in the years ahead that will shape the trajectory of public spending on health. The approach of many middle and high income countries seems to show the way: countercyclical public policy to cushion the shock for their populations. More government spending for health will no doubt be needed to support common goods for health and to address equity and financial protection challenges for vulnerable populations.

A key lesson from the COVID-19 pandemic is that the benefits of health investment go

beyond the health sector to the general prosperity and security of the population more broadly. But despite the clear imperative to maintain funding for ongoing service delivery and cross-cutting public health functions, and the need to strengthen long-term investment in primary health care and pandemic preparedness, continued increases in public spending—or in spending priorities within health sector and beyond—are not a given. The extent to which such actions can be sustained will depend on managing the tension between the need for additional health investment and countries' increasingly constrained budgetary positions, which stem from the substantially higher public debt and from the lower output relative to pre-COVID-19 pandemic trajectories that will likely remain as an economic scar of the pandemic in some countries. The situation will be particularly challenging for low and lower-middle income countries. A "business as usual" approach will constrain governments' ability to maintain the spending needed in the coming years to achieve universal health coverage *[5]*.

This report provides a broad picture of global patterns of health spending over the past 20 years. It also aims to stimulate and inspire further research and discussion on health policies at the country, regional and global levels and to encourage improvements in data availability and quality. The COVID-19 pandemic will continue to shape views on future investment in health and preparedness for advancing universal health coverage and health security. Vigilance is thus required. Historical data on health spending patterns offer important insights into what is needed for the coming years and, together with timely data on current spending, shed much needed light on the path forward.

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Global spending on health from 2000 to 2019

Key messages

- Global spending on health more than doubled in real terms over the past two decades, reaching US$ 8.5 trillion in 2019, or 9.8% of global GDP. But it was unequally distributed, with high income countries accounting for approximately 80%.
- Health spending in low income countries was financed primarily by out-of-pocket spending (OOPS; 44%) and external aid (29%), while government spending dominated in high income countries (70%).
- The share of health in government spending increased over the past two decades in upper-middle and high income countries, stagnated in lower-middle income countries and declined in low income countries between 2000 and 2011, before partially rebounding and stabilizing in recent years.
- Over the past two decades, OOPS rose across all income groups on a per capita basis but fell as a share of total health spending.
- External aid rose considerably over the past two decades. In countries that are highly dependent on external aid, health priority in government spending fell in line with the increased aid.
- The share of global health aid that went to low income countries was smaller than the share of the global extreme poor population living in those countries.
- In low and middle income countries, an average of two-thirds of external aid for health went to infectious diseases, while government health spending was evenly split between infectious and noncommunicable diseases.

Health spending more than doubled over the past two decades, and high income countries accounted for 80%

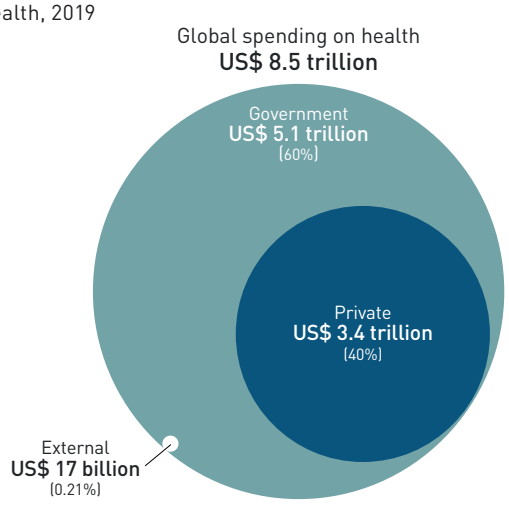
Global spending on health[1] totalled US$ 8.5 trillion in 2019, more than double, in real terms, the US$ 4.2 trillion spent in 2000. About 60% of health spending came from government sources, whereas 40% came from domestic private sources[2] and only 0.21% came from external aid (Figure 1.1). Over the same period, global GDP increased by 74%, from US$ 50 trillion to US$ 86 trillion. Consequently, health spending as a share of global GDP rose from 8.5% to 9.8%.

TOTAL GLOBAL SPENDING ON HEALTH REMAINED UNEQUAL ACROSS INCOME GROUPS

The distribution of global spending on health by income group remained highly unequal in 2019, with high income countries accounting for approximately 80% of the total, compared with 17% for upper-middle income countries, 2.8% for lower-middle income countries and 0.24% for low income countries (Figure 1.2a).[3] The United States alone accounted for 42% of global health spending, equivalent to what the 83 lowest spending countries spent combined.

FIGURE 1.1 Global spending on health reached US$ 8.5 trillion in 2019

Major sources of financing of global spending on health, 2019



Data source: WHO Global Health Expenditure Database, 2021.

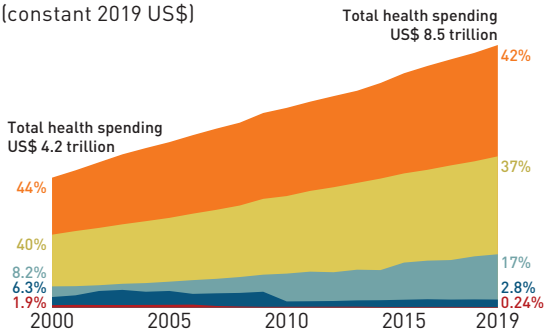
Strikingly, the distribution of health spending was more unequal than the distribution of global GDP, as high income countries spent a larger share of their wealth on health (Figure 1.2b).

HEALTH SPENDING PER CAPITA IN HIGH INCOME COUNTRIES WAS MORE THAN FOUR TIMES THE AVERAGE GDP PER CAPITA IN LOW INCOME COUNTRIES

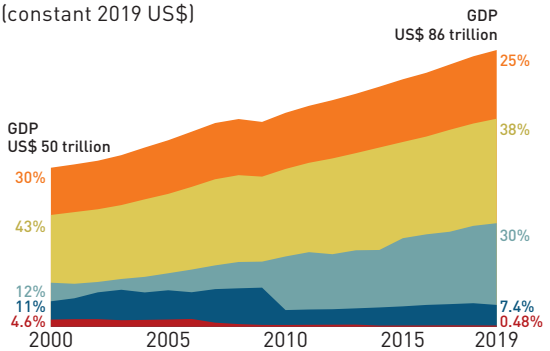
Global average health spending per capita was US$ 1,105 in 2019, but there was wide variation across income groups. The average was only US$ 39 a person in low income countries,

FIGURE 1.2 The distribution of global spending on health across income groups was more unequal than the distribution of global GDP

a. Total health spending
(constant 2019 US$)



b. Global GDP
(constant 2019 US$)



Note: The income groups in this figure are dynamic—that is, each country is placed in the group it belongs to for each year. So, a country can move from one group to another from year to year.
Data source: WHO Global Health Expenditure Database, 2021.

1. The terms "spending on health" and "total health spending" in this report are used synonymously with "current health expenditure." Capital expenditure is not included.

2. Throughout this report the terms "government spending" and "domestic public spending" refer to spending from government budget transfers and from social health insurance contributions. Domestic private sources include out-of-pocket spending, contributions to voluntary health insurance schemes and expenditures from enterprises and from locally funded nongovernmental organizations.

3. Country income group classifications in this report follow World Bank 2019 classifications, unless otherwise specified. Group averages do not apply to all figures and exclude countries with fewer than 600,000 people.

compared with US$ 3,191 in high income countries—more than 80 times larger, and about four times the average GDP per capita in low income countries (US$ 693 in 2019). Health spending per capita was US$ 119 in lower-middle income countries and US$ 472 in upper-middle income countries.

Most of the countries with low health spending were in South Asia and Sub-Saharan Africa, while most of the countries with high health spending were in Europe, North America and East Asia (Figure 1.3). WHO estimates that an additional US$ 41 per person per year in health spending, on average, is needed in low and middle income countries to make progress towards the health targets of Sustainable Development Goal 3 by 2030 *[1]*. This implies more than doubling current health spending in low income countries and a 34% increase in lower-middle income countries.

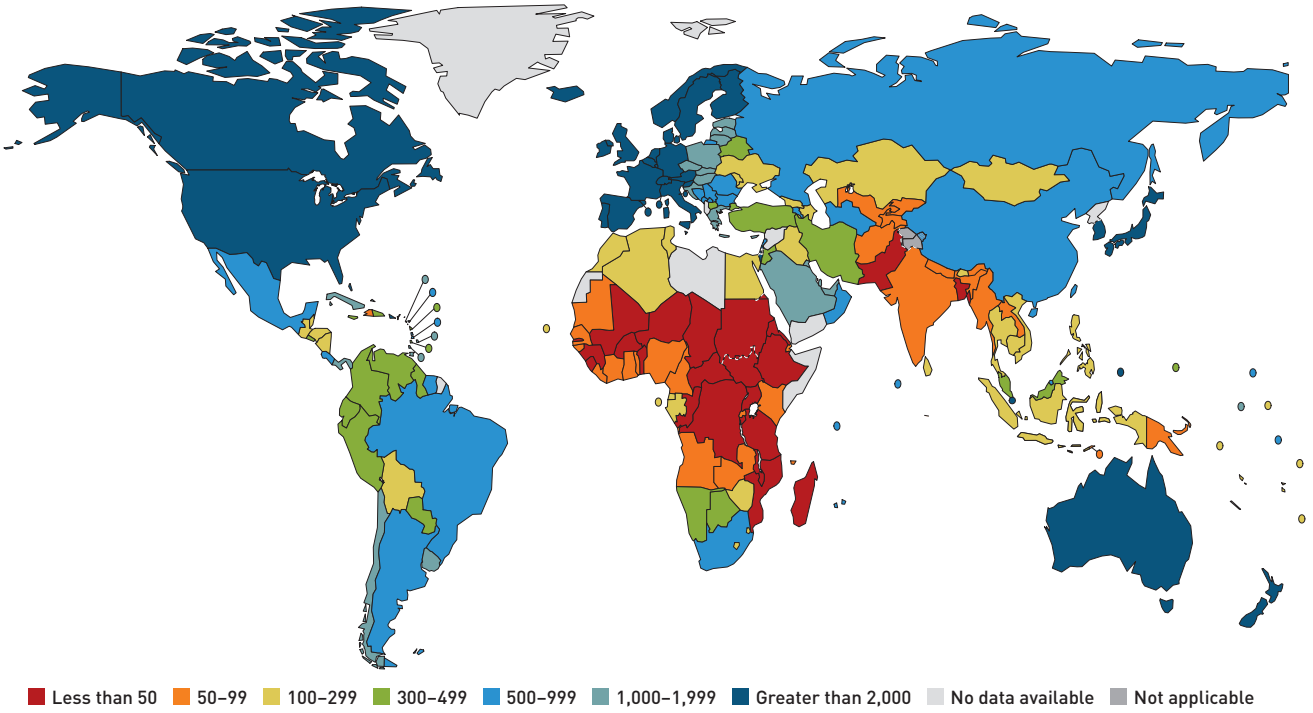
Health spending relative to the size of the overall economy varied across income groups. As a share of GDP, health spending in 2019 ranged from 4.9% on average in lower-middle income countries to 8.2% in high income countries (Figure 1.4). It may seem counterintuitive that low income countries spent a greater share of GDP on health than lower-middle income countries and sometimes even upper-middle income countries. But this is due in part to the large role of external aid for health in many low income countries. All income groups have increased the share of health spending as a proportion of GDP since 2000; however, in recent years there has been a downward trend in low and lower-middle income countries.

Health spending in low income countries relied heavily on external aid and out-of-pocket spending, whereas health spending in high income countries relied on government sources

The structure of funding sources of health spending changed between 2000 and 2019, with OOPS declining for all income groups (Figure 1.5). In 2019, nearly three-quarters of health spending in low income countries was financed by a combination of OOPS and external aid (Figure 1.6). In these countries, the share of external aid rose from 16% in 2000 to 29% in 2019, while the share of government transfers declined from 28% to 21%.

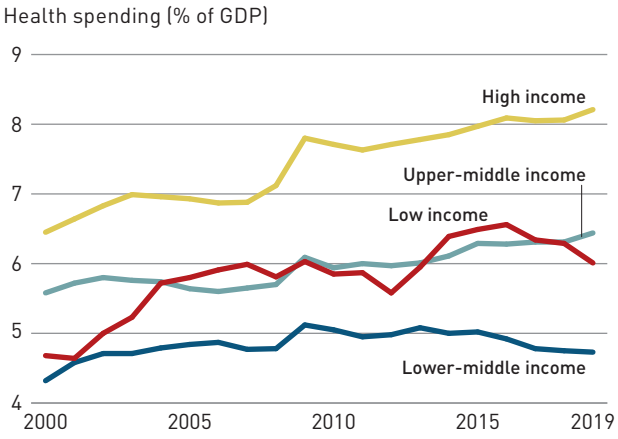
FIGURE 1.3 **Vast disparity in health spending per capita across countries**

Health spending per capita, 2019 (US$)



Note: The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.
Data source: WHO Global Health Expenditure Database, 2021.

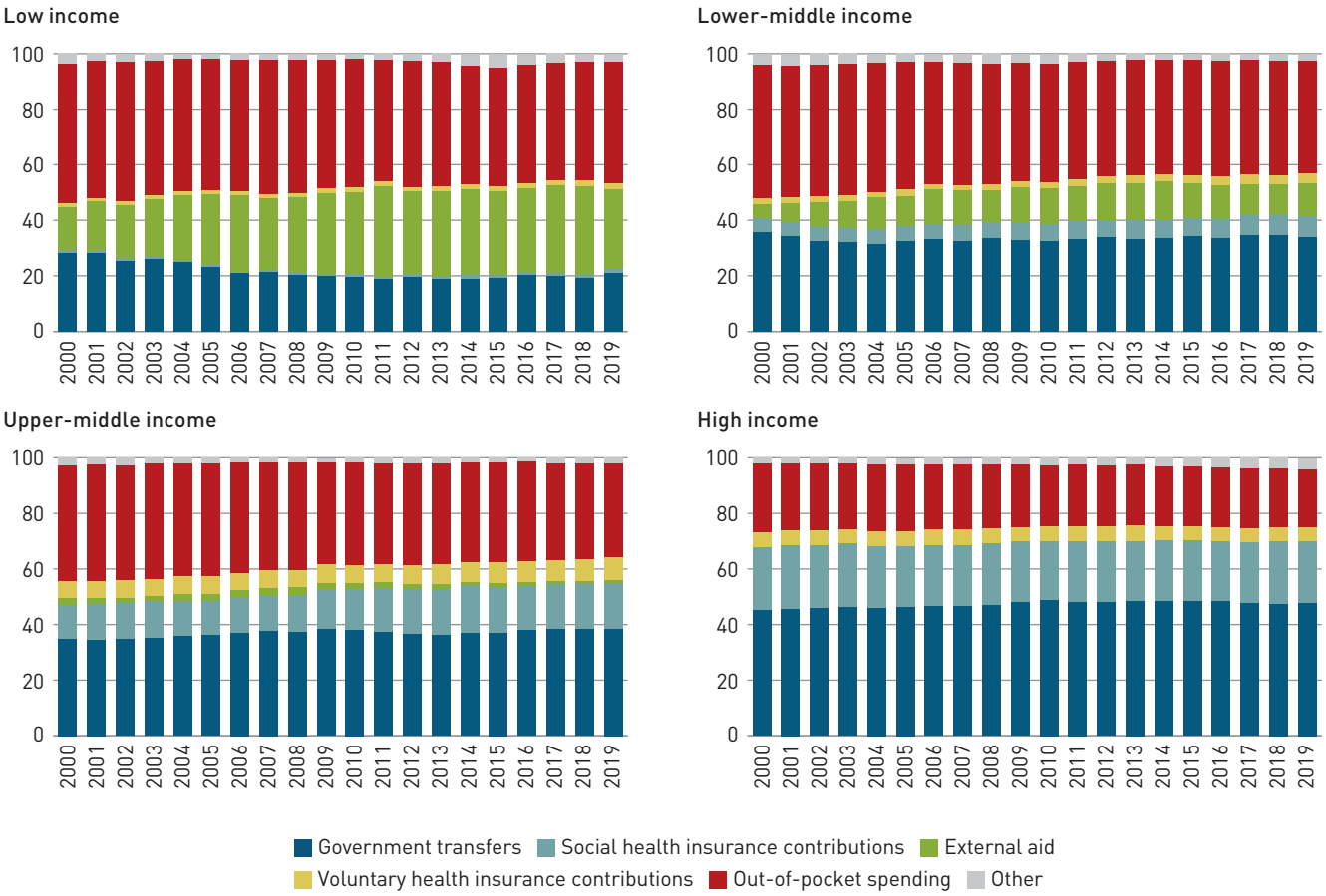
FIGURE 1.4 High income countries spent a larger share of GDP on health than countries in other income groups



Data source: WHO Global Health Expenditure Database, 2021.

Lower-middle income countries relied less on external aid and more on government transfers and social health insurance contributions, though OOPS still accounted for 40% of total health spending. In these countries, social health insurance contributions rose slowly but remained a very small share of total health spending. In upper-middle income countries, more than half of health spending was financed by government transfers and social health insurance contributions, and 9% was financed by voluntary health insurance contributions. These countries experienced large increases in the share of government transfers and social health insurance contributions over the 20-year period analysed, and these sources of funding grew faster than OOPS, which accounted for 42% of spending in 2000 and 34% in 2019. High income countries had the lowest share of OOPS (21%) and the

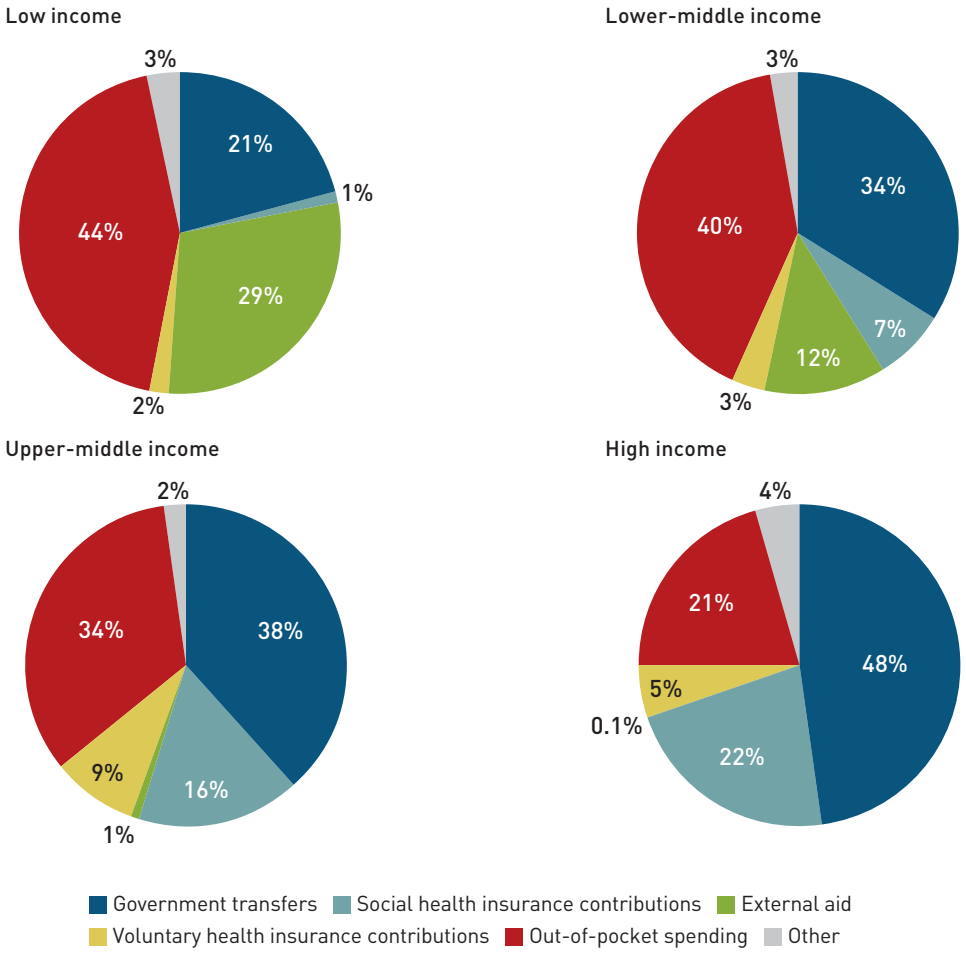
FIGURE 1.5 Out-of-pocket spending has declined across all income groups



Note: Other sources are compulsory prepayments to private insurance, domestic nongovernmental organization contributions and health services operated by enterprises for their employees. The Netherlands and Switzerland organize health financing mainly through compulsory insurance but with funding based on mandatory fixed premiums or a combination of payroll tax and fixed premiums. For these countries, all mandatory contributions are included in estimates of social health insurance contributions.
Data source: WHO Global Health Expenditure Database, 2021.

FIGURE 1.6 **Low and middle income countries relied heavily on out-of-pocket spending**

Composition of health spending by funding source, 2019



Note: Other sources are compulsory prepayments to private insurance, domestic nongovernmental organization contributions and health services operated by enterprises for their employees. The Netherlands and Switzerland organize health financing mainly through compulsory insurance but with funding based on mandatory fixed premiums or a combination of payroll tax and fixed premiums. For these countries, all mandatory contributions are included in estimates of social health insurance contributions.
Data source: WHO Global Health Expenditure Database, 2021.

largest shares of spending from government transfers (48%) and social health insurance contributions (22%). Expenditure patterns by source have been stable in these countries, except for a slight increase in the share of spending from government transfers and a similar decrease in OOPS.

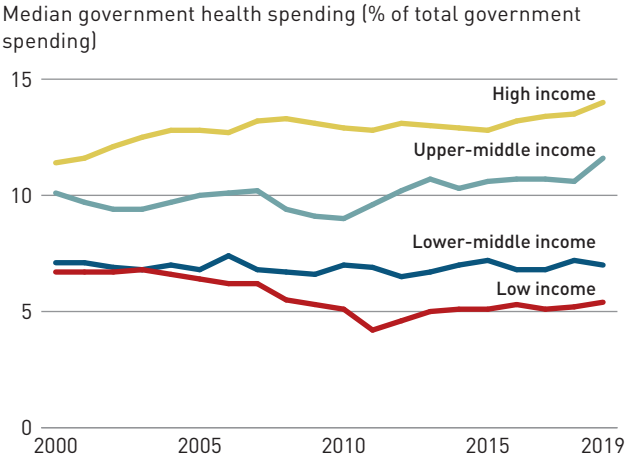
Health priority in government spending has increased in upper-middle and high income countries, stagnated in lower-middle income countries and declined in low income countries between 2000 and 2011, before partially rebounding and stabilizing in recent years

Health spending as a share of total government spending reflects health priority in public spending. In 2019, the share was 2.5 times larger in high income countries (14%) than in low income countries (5.4%; Figure 1.7). In upper-middle and high income countries the share of government health spending grew steadily from 2000 to 2019. But health priority remained largely unchanged in lower-middle income countries, at 6%–7% of government spending, and even fell in low income countries to a low of 4.2% in 2011 before recovering to 5.4% in 2019.

LARGER FISCAL CAPACITY DOES NOT NECESSARILY LEAD TO HIGHER GOVERNMENT HEALTH SPENDING PER CAPITA; PRIORITY MATTERS

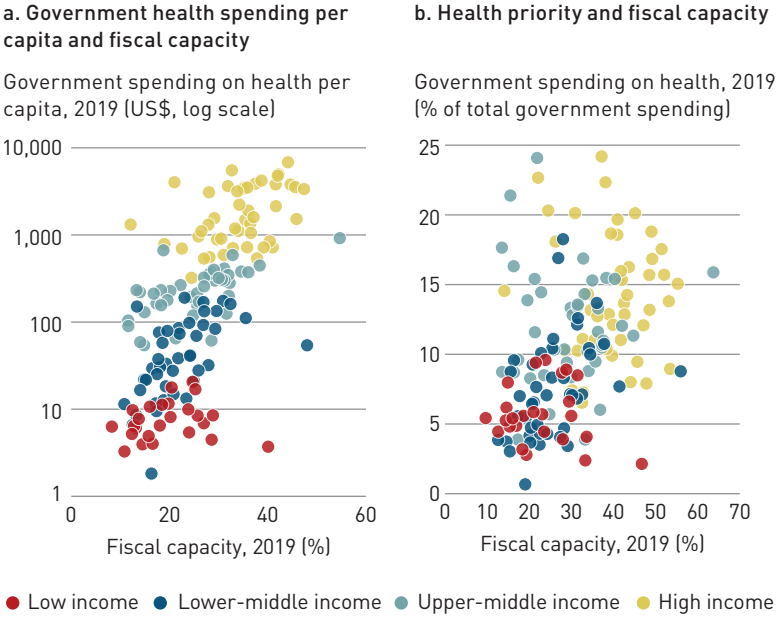
Richer countries have larger fiscal capacity and spent more on health per capita in general, but within each income group, there were large variations in health spending

FIGURE 1.7 The trends in health priority in government spending in the past 20 years varied across income groups



Note: Median values are presented to minimize the influence of extreme values.
Data source: WHO Global Health Expenditure Database, 2021.

FIGURE 1.8 Prioritizing health spending is more of a policy choice than a result of government fiscal capacity



Note: Excludes Timor-Leste, whose general government expenditure as a share of GDP in 2019 was 83%. Fiscal capacity is measured by a proxy of general government expenditure as a share of GDP.
Data source: WHO Global Health Expenditure Database, 2021.

(Figure 1.8). Prioritizing health spending is thus largely a choice at every income level.

In most countries, the roles of government schemes and compulsory health insurance are path dependent and related to historical pathways and contexts. Government health spending is channeled through two main types of arrangements linked to the basis for entitlement: noncontributory (for example, entitlement derives from being a citizen, resident, below the poverty line, for public health, Ministry of Health administration and the like) and contributory (entitlement derives from a specific contribution made by or on behalf of the covered person, as with social health insurance). In health accounts terminology, a noncontributory publicly funded arrangement is referred to as a "government scheme" (even though it is a not a "scheme" in the institutional sense), while an arrangement using mandatory contributory-based entitlement is referred to as a "compulsory insurance scheme" (or more simply as "social health insurance," noting that in any one country, however, the expenditure figures are an aggregate of all such "schemes" should there be more than one). This report uses the terms "government schemes" and "compulsory health insurance" to distinguish these two categories of health financing arrangements.

Empirically, there is no inherent difference in service coverage or financial protection between the two categories *[2]*. Countries have different systems because of preferences and choices made at various points during their history. High income countries made these choices decades ago, many before World War II. France, Japan and the Netherlands rely largely on social health insurance (though supported with significant levels of funding from government budget transfers), whereas Denmark, New Zealand and the United Kingdom channel their public funding for health mainly through government scheme arrangements (Figure 1.9).

Over time, however, some of the distinctions between these broad categories of health financing arrangements have diminished. For example, the 2020 Global Health Expenditure Report report observed increasing government budget subsidies for compulsory social insurance schemes *[3]*. But other distinctions are meaningful and justify their being grouped separately in the System of Health Accounts.

For many low and middle income countries, the choice remains whether most public funding for health should flow through compulsory insurance, government schemes or a mix of the two. Using contributory-based entitlement in contexts marked by high levels of informal employment is clearly limited as a path to universal health care unless government makes the active decision to fund coverage for the poor and informally employed from general budget revenues. In any case, however, the aggregate level of funding

flowing through these two arrangements in low and lower-middle income countries still made up a much lower share of current health spending. Many countries still found themselves within the triangle below the 50% line in Figure 1.9 and relied more on OOPS to pay for health services. The challenge for these countries is to expand reliance on compulsory sources—government budgets and social insurance contributions—in the hope that this will drive down reliance on OOPS.

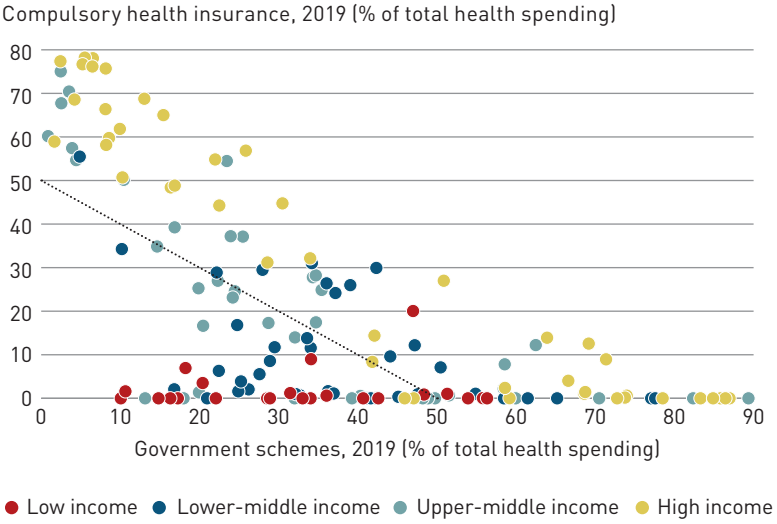
OUT-OF-POCKET SPENDING HAS BEEN GROWING IN PER CAPITA TERMS IN MOST COUNTRIES BUT HAS DECLINED AS A SHARE OF HEALTH SPENDING FOR ALL INCOME GROUPS

Since 2000, the share of OOPS in total health spending has been decreasing on average for all income groups (see Figure 1.5). However, OOPS per capita (in constant values) has been growing since 2000—except in a few, mostly middle income, countries. On average, OOPS per capita grew 2.3% a year between 2000 and 2019, with similar rates across all income groups. In almost one-third of countries, OOPS per capita rose in absolute terms and as a share of total health spending (Figure 1.10, upper-right quadrant).

MORE GOVERNMENT HEALTH SPENDING IS ASSOCIATED WITH A SMALLER SHARE OF OUT-OF-POCKET SPENDING IN TOTAL HEALTH SPENDING

When government health spending was higher as a share of GDP, the share of OOPS in total health spending was lower. OOPS as a share of health spending tended to be lower in higher income countries but nevertheless varied within income groups (Figure 1.11). This might reflect different policy choices among countries. The variability in OOPS as a share of current health spending was particularly large in low and lower-middle income countries, where government spending as a share of GDP was generally less than 2%. The large share of external aid in health spending in low and lower-middle income countries might partially explain these large variations.

FIGURE 1.9 The roles of government schemes and compulsory health insurance are based in historical contexts for some countries and remain a choice to be made for others



Data source: WHO Global Health Expenditure Database, 2021.

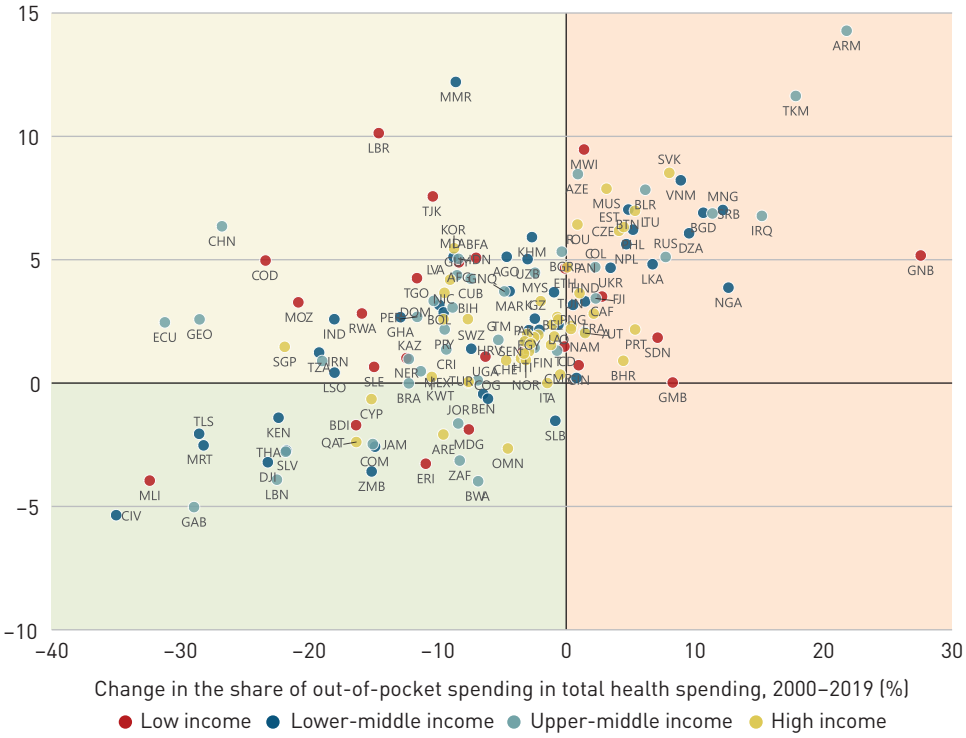
OUT-OF-POCKET SPENDING AS A SHARE OF HOUSEHOLD TOTAL CONSUMPTION INCREASED IN HALF THE COUNTRIES ANALYSED

Between 2000 and 2019, household OOPS increased faster on average than household total consumption[4] in half the countries analysed, resulting in a higher share of OOPS in household total consumption. The share rose from 3.1% in 2000 to 3.5% in 2019 in low income countries and from 2.5% to 2.8% in high income countries. But it fell from 2.8% to 2.6% in lower-middle income countries and from 3.4% to 3.3% in upper-middle income countries. This macro-level result might imply higher catastrophic spending due to health spending at the household level, depending on the distribution of OOPS and income among each country's population. In the other half of countries analysed, OOPS as a share of household total consumption decreased either because OOPS fell (Figure 1.12, lower-right quadrant) or because OOPS increased but did so more slowly than household total consumption (Figure 1.12).

4. Household total consumption is measured here through the national accounts aggregate of private final consumption, which is the monetary value (in market prices) of the consumption of households and nonprofit institutions serving households, including auto-consumption.

FIGURE 1.10 **Out-of-pocket spending per capita rose in real terms but fell as a share of total health spending in most countries**

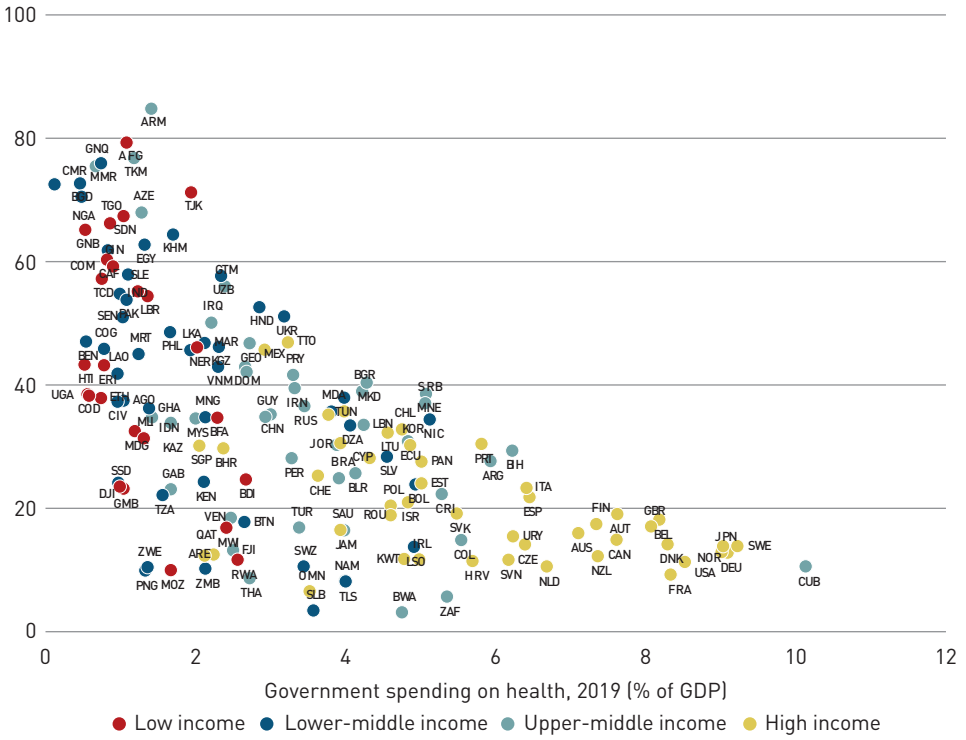
Annual growth in out-of-pocket spending, 2000–2019 (%)



Note: Annual growth rates of out-of-pocket spending are based on per capita values in constant (2019) national currency units. Changes are calculated as the difference between the averages for 2000–2002 and 2017–2019.
Data source: WHO Global Health Expenditure Database, 2021.

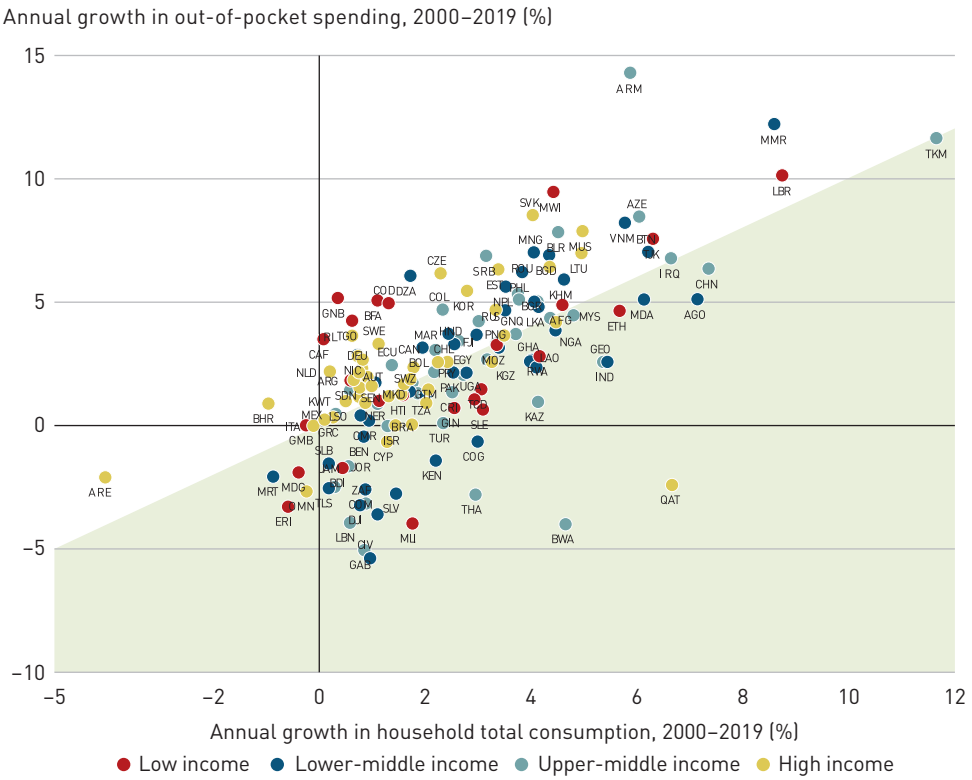
FIGURE 1.11 **More government health spending is associated with a smaller share of out-of-pocket spending in total health spending**

Out-of-pocket spending, 2019 (% of total health spending)



Data source: WHO Global Health Expenditure Database, 2021.

FIGURE 1.12 Out-of-pocket spending per capita increased in relation to household total consumption in half the countries analysed and decreased in the other half



Note: Annual growth rates are based on per capita values in constant (2019) national currency units.
Data source: WHO Global Health Expenditure Database, 2021.

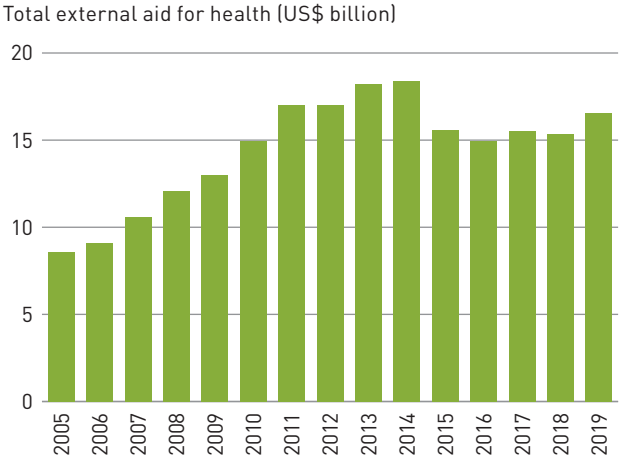
External aid for health rose considerably between 2000 and 2019, and in countries that are highly dependent on external aid, governments' share of spending on health from domestic public sources fell in line with the increased aid

External aid for health has risen considerably since 2005 (Figure 1.13). Global aid for health peaked at US$19 billion in 2014 then fell to US$ 16 billion in 2015, where it stagnated before rising again to US$ 17 billion in 2019.

The top five recipients of external health aid in 2019 were Nigeria, Ethiopia, the United Republic of Tanzania, Kenya and Mozambique (Figure 1.14a), three of which are middle income countries. Nigeria was the largest recipient, with health aid totalling US$ 1.1 billion, or 6.5% of global external health aid spending in 2019. On a per capita basis, the top five low or middle income country recipients of health aid were Eswatini, Lesotho, Zimbabwe, Zambia and Botswana. Eswatini, with the highest HIV prevalence of all UN member states *[4]*, spent the most in health aid per capita (US$ 69).

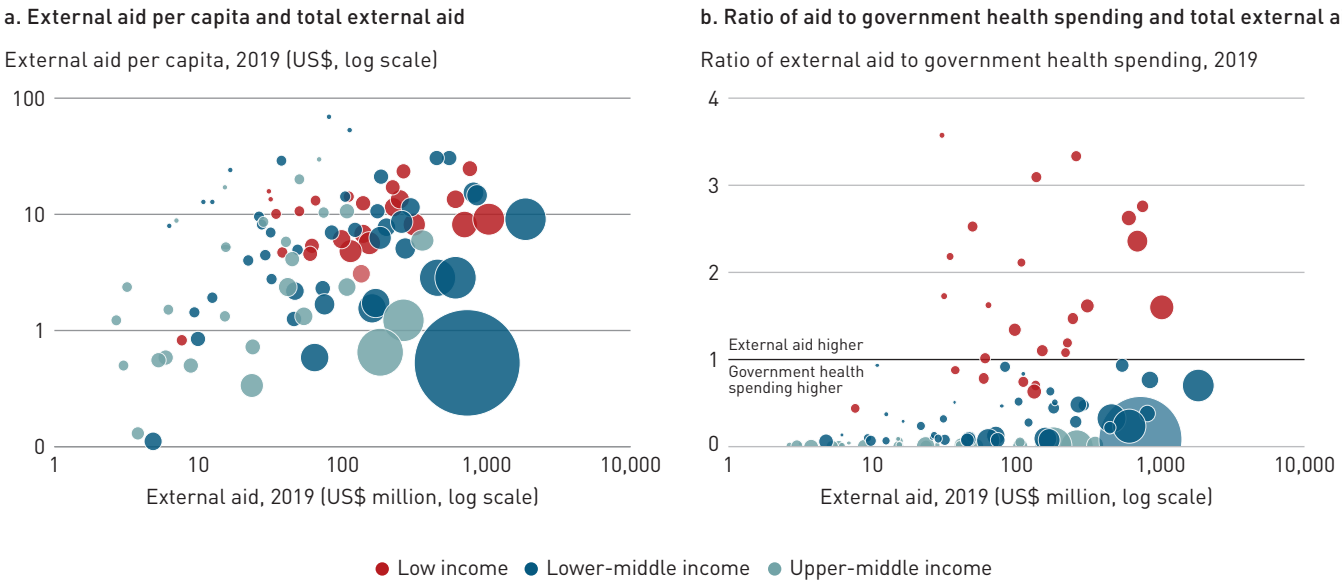
Surprisingly, upper-middle income countries accounted for more than 10% of external aid spent on health in 2019, and several are among the largest recipients of external aid for health, in total or on a per capita basis. Brazil spent a considerable amount of external aid on health, though external aid spending on health on a per capita basis was low (US$ 1.24) because of its large population.

FIGURE 1.13 External aid for health has risen considerably over time



Data source: WHO Global Health Expenditure Database, 2021.

FIGURE 1.14 Many upper-middle income countries received substantial external aid for health, yet aid was very small relative to domestic spending



Note: Bubble size is relative to population size in 2019. Includes only countries with at least US$ 0.10 in external aid per capita.
Data source: WHO Global Health Expenditure Database, 2021.

IN MORE THAN HALF OF LOW INCOME COUNTRIES, AID ACCOUNTED FOR A GREATER SHARE OF SPENDING ON HEALTH THAN GOVERNMENT SOURCES

In more than half of low income countries, aid was a larger source of spending on health than government resources (Figure 1.14b). However, in lower-middle income countries, the ratio of external aid for health to government spending was much smaller. In upper-middle income countries, external aid was trivial compared with government spending, raising the question of why aid is oriented towards relatively wealthy countries. The data cannot answer this question, but some possibilities come to mind. For example, are donors to upper-middle income countries seeking to influence country priorities? Are they supporting services that have externalities beyond the country context? Financing global public goods or common goods could be a sound rationale for these investments. Getting at and explaining these motivations require deeper and perhaps country-specific research. Raising research questions such as this is part of the value-added of the Global Health Expenditure Database.

EXTERNAL AID HAS BEEN OFFSET BY DECLINES IN GOVERNMENT PRIORITIZATION OF HEALTH IN AID-DEPENDENT COUNTRIES

In countries that relied heavily on external aid for health, higher aid amounts were generally accompanied by a lower share of domestic financing sources in government health spending (Figure 1.15).

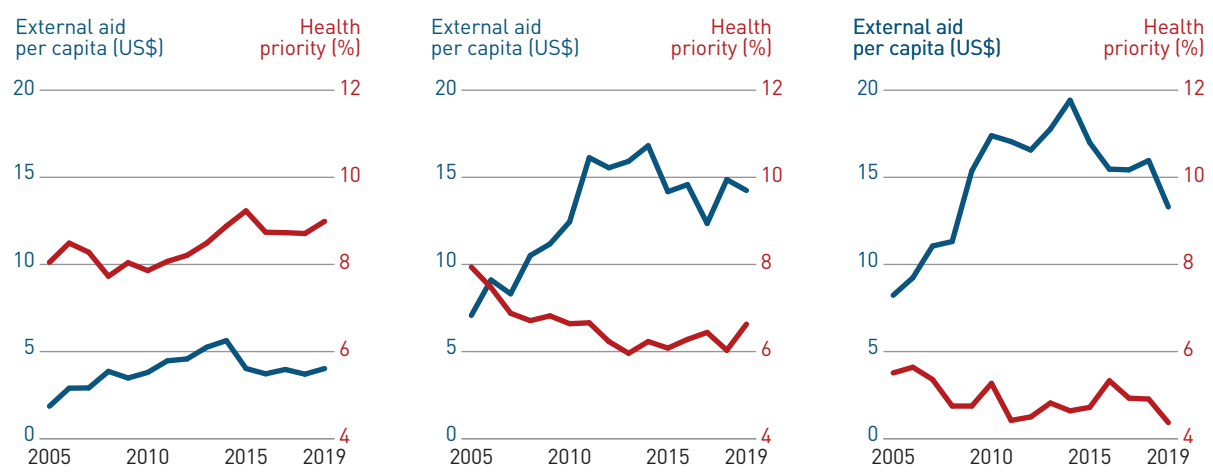
Further analysis suggests that there might be a threshold of aid above which the magnitude of fungibility becomes much larger. In countries where the ratio of aid to government health spending was between 0.25 and 1, the offsetting decline in government spending on health was larger than in either aid-dominant (>1) or government spending–dominant countries (<0.25; see Figure 1.15). When aid took a larger share than government spending (ratio >1), it was less clear whether higher aid per capita was linked to lower government health prioritization (Figure 1.15, right panel). A similar pattern emerged when government spending was significantly higher than aid (Figure 1.15, left panel). The clearest offsetting pattern was observed when both government and aid played important roles in financing health spending (Figure 1.15, centre panel). However, government and donor decisions on health spending are complex and depend on many factors. More in-depth analysis could help pinpoint the reasons behind the amounts of health spending by both governments and donors.

THE SHARE OF GLOBAL AID FOR HEALTH GOING TO LOW INCOME COUNTRIES WAS SMALLER THAN THE SHARE OF THE EXTREME POOR POPULATION LIVING IN THOSE COUNTRIES

A majority of the world's extreme poor (people living below the international poverty line of $1.90 a day) resided in low income countries, until India moved from the low income group to the lower-middle income group in 2007. Even

FIGURE 1.15 **External aid has been offset by declines in government prioritization of health in some aid-dependent countries**

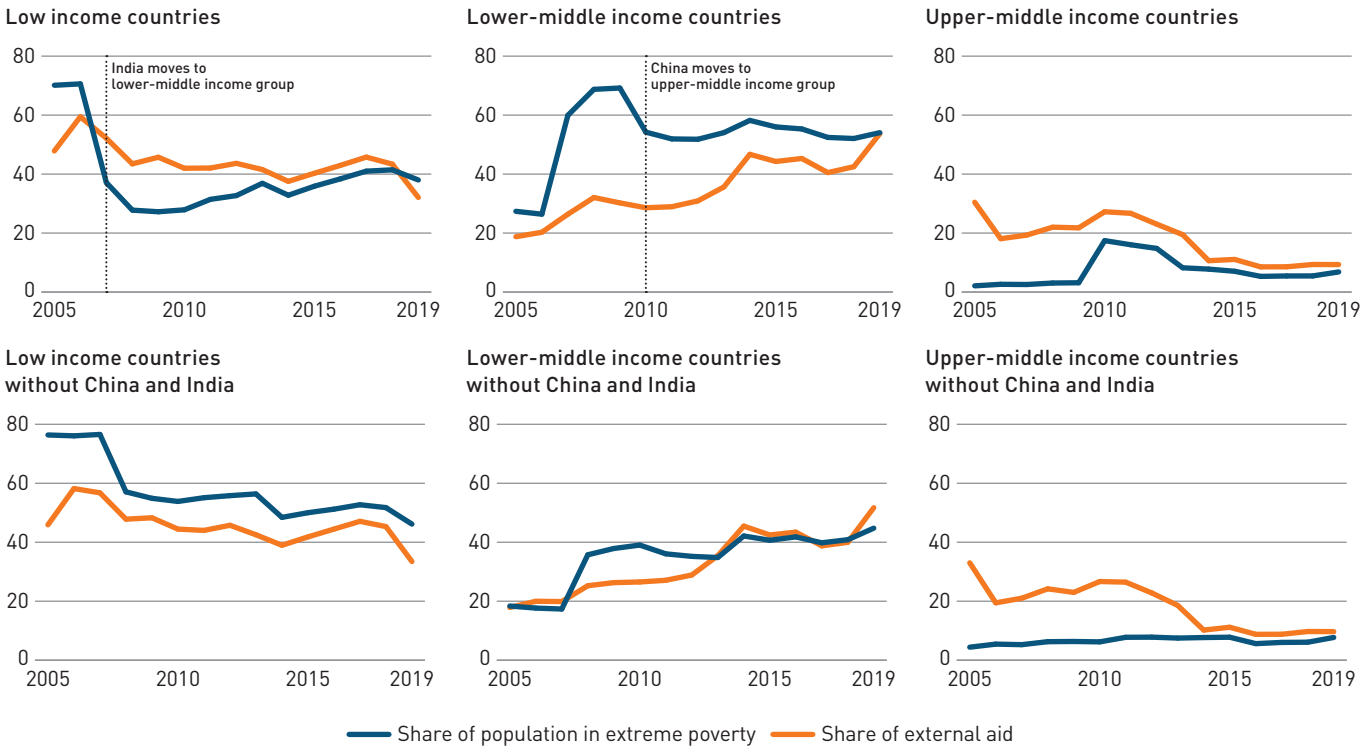
Ratio of external health aid to government health spending in low and lower-middle income countries



Note: Country groups were determined independently for each year depending on each country's ratio for a given year. A ratio of external aid for health to government health spending greater than 1 means that external funding for health was higher than government funding. Health priority uses domestic general government health expenditure as a share of general government expenditure as a proxy.
Data source: WHO Global Health Expenditure Database, 2021.

FIGURE 1.16 **Reducing extreme poverty is one of the main criteria for external aid, but other factors have also affected aid distribution**

Share of the world's population in extreme poverty and share of external aid for health and population (%)



Note: The income groups in this figure are dynamic—that is, each country is placed in the group it belongs to for each year. So, a country can move from one group to another from year to year. Extreme poverty is defined using the international poverty line of $1.90 a day. For India, missing data for 2018 and 2019 were filled using the trend for 2014–2017.
Data sources: World Bank PovcalNet (http://iresearch.worldbank.org/PovcalNet/introduction.aspx); WHO Global Health Expenditure Database, 2021.

when China moved from the lower-middle income group to the upper-middle income group in 2010, the lower-middle income group still hosted the largest share of the world's extreme poor population (Figure 1.16, upper panels).

China and India, due to their population size and economic development, have had an enormous influence on global patterns of poverty and health aid. Both patterns would differ greatly without these two countries (Figure 1.16, lower panels). The share of aid received by low income countries has consistently been much lower than their share of the world's extreme poor population. For lower-middle income countries, their share of aid received is similar to their share of the world's extreme poor population, but their share of aid received has been increasing. Upper-middle income countries received 19%–27% of global aid from 2007–2013, compared with approximately 10% after 2014.

BOX 1.1

Classification of diseases and health conditions

Spending is disaggregated into five main categories of diseases or conditions, and infectious and parasitic diseases are further disaggregated into major disease categories.

List of diseases and conditions by category and subcategory

Code	Disease/condition name
DIS.1	**Infectious and parasitic diseases**
DIS.1.1	HIV/AIDS and other sexually transmitted diseases
DIS.1.2	Tuberculosis
DIS.1.3	Malaria
DIS.1.4	Respiratory infections
DIS.1.5	Diarrhoeal diseases
DIS.1.6	Neglected tropical diseases
DIS.1.7	Vaccine preventable diseases
DIS.1.8	Hepatitis
DIS.1.9	Public health emergencies of international concern
DIS.1.nec	Other and unspecified infectious and parasitic diseases (not elsewhere classified)
DIS.2	**Reproductive health**
DIS.3	**Nutritional deficiencies**
DIS.4	**Noncommunicable diseases**
DIS.5	**Injuries**
DIS.nec	**Other and unspecified diseases and conditions (not elsewhere classified)**

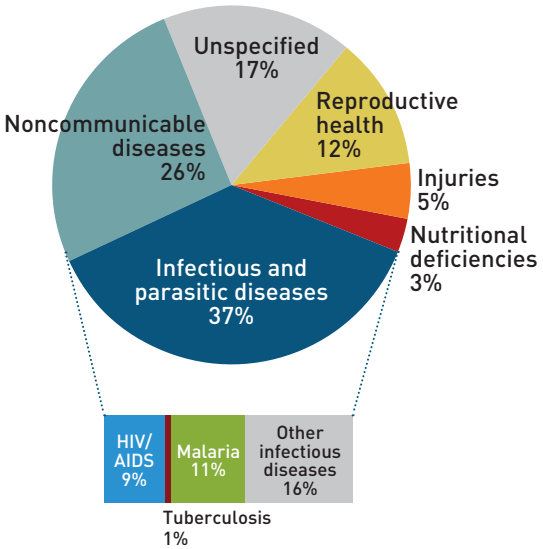
Infectious and parasitic diseases received the largest share of health spending, followed by noncommunicable diseases

The analysis in this section is based on data from 51 countries that reported health spending by disease and condition (Box 1.1). They are mainly aid-recipient low and middle income countries, and 63% of them are in the WHO African region (Annex 1).

Across the 51 countries analysed, an average of 37% of health spending went to infectious and parasitic diseases. About 21% of total health spending went to three major infectious diseases—HIV/AIDS (9%), tuberculosis (1%) and malaria (11%; Figure 1.17)—and 16% went to other infectious and parasitic diseases. Noncommunicable diseases accounted for the next largest share of total health spending (26%). Smaller shares were spent on reproductive health (12%), injuries (5%) and nutritional deficiencies (3%). The rest (17%) was unspecified—principally for treatment of general symptoms that cannot be linked to a specific disease (fever, cough and so on).[5]

FIGURE 1.17 Infectious and parasitic diseases accounted for the largest share of health spending, followed by noncommunicable diseases

Composition of health spending by disease group, in 51 low and middle income countries, latest year available



Note: The figure shows averages across the 51 countries indicated in Annex 1.
Data source: WHO Global Health Expenditure Database, 2021.

5. This unspecified part can be large in countries where the routine health information system does not easily allow for proper disaggregation by disease. Countries where this share is greater than 35% of health spending were excluded from the analysis.

Low and middle income countries spent an average of two-thirds of external health aid on infectious diseases, whereas public domestic sources were more evenly split between infectious and noncommunicable diseases

On average, 70% of external aid for health went to infectious and parasitic diseases, and less than 10% went to noncommunicable diseases in the 51 low and middle income countries analysed (Figure 1.18c). Government sources were split more evenly between infectious diseases (36%) and noncommunicable diseases (29%; Figure 1.18a). Reproductive health received similar shares of spending from government sources (13%) and external aid (11%). Spending from private domestic sources was split evenly between infectious and parasitic diseases (30%) and noncommunicable diseases (28%; Figure 1.18b). However, 23% of private domestic spending could not be attached to a specific disease or condition. This high share of nonspecified disease spending reflects the challenges of reporting data on private spending by disease, particularly in settings where health records are paper based, not at an individual patient level and from nongovernment sources *[5,6]*.

Spending on HIV/AIDS was highly dependent on external aid, whereas spending on noncommunicable diseases and injuries was financed primarily by private sources

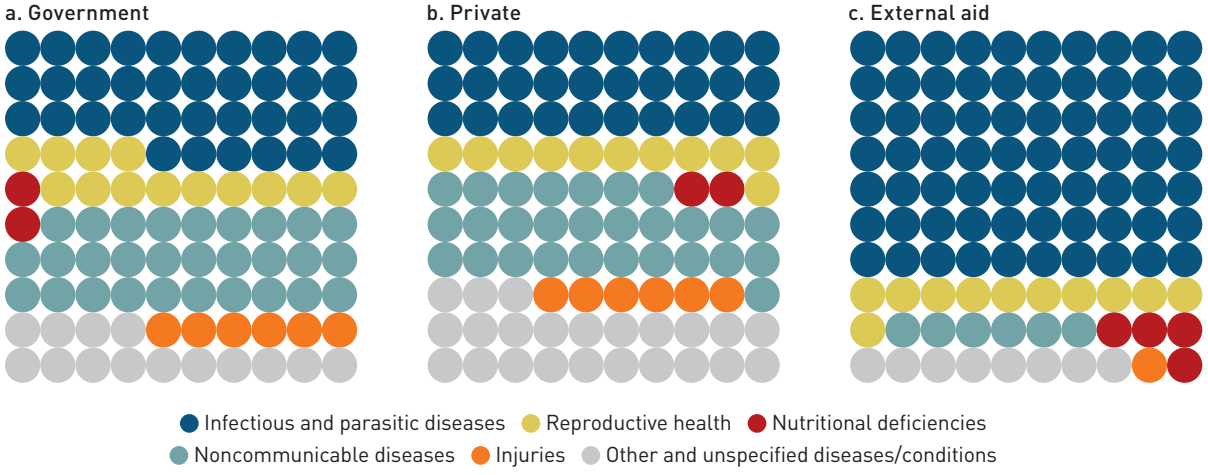
Health spending by funding source reveals clear patterns by disease and condition. A large share of spending on infectious diseases and nutritional deficiencies came from external aid, and most spending on noncommunicable diseases, injuries and reproductive health came from domestic sources, evenly split between public and private spending.

Spending on HIV/AIDS and tuberculosis was mostly from external aid (51% of spending on HIV/AIDS and 42% of spending on tuberculosis; Figure 1.19). Government sources accounted for more than one-third of the spending on these two diseases—36% on HIV/AIDS and 42% on tuberculosis. Less than a quarter of spending on these two diseases was from private sources.

External aid accounted for 31% of spending on malaria—considerably less than its share in spending on HIV/AIDS—government sources accounted for 35% and private sources accounted for 34%. For spending on neglected tropical diseases, 36% was from external aid, 39% was from government sources and 25% was from private sources.

FIGURE 1.18 Two-thirds of external health aid went to infectious diseases, whereas about one-third of health spending from government sources went to infectious diseases and one-third went to noncommunicable diseases

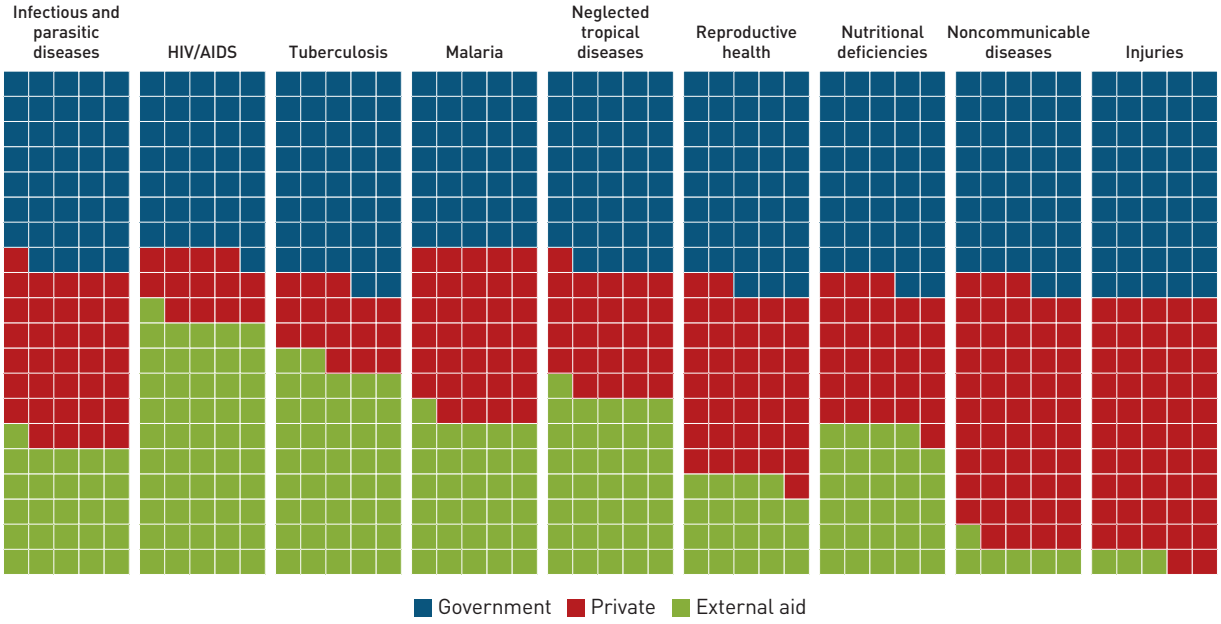
Composition of spending on main categories of diseases by funding source, latest year available



Note: The figure shows averages across the 51 countries indicated in Annex 1.
Data source: WHO Global Health Expenditure Database, 2021.

FIGURE 1.19 External aid was more dominant for HIV/AIDS and tuberculosis spending whereas the funding pattern was more evenly split for the other infectious diseases; spending for noncommunicable diseases, injuries and reproductive health was less reliant on external aid

Sources of health spending, by main categories of diseases and conditions, latest year available



Note: The figure shows averages across the 51 countries indicated in Annex 1.
Data source: WHO Global Health Expenditure Database, 2021.

For spending on noncommunicable diseases and injuries, external aid accounted for a smaller share of spending (less than 10%). The largest share of spending on noncommunicable diseases was from private sources (52%), followed by government sources (42%). The proportions were similar for spending on injuries, with external aid accounting for 3%, private sources accounting for 52% and government sources accounting for 45%. For spending on reproductive health, government sources accounted for the largest share of total health spending (43%), followed by 38% from private sources and 19% from external aid.

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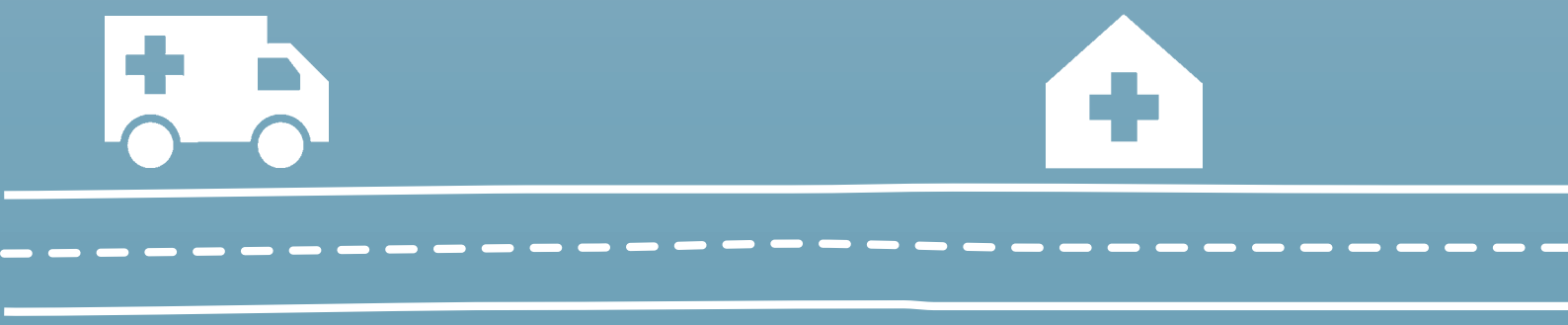


2

Primary health care spending

Key messages

- Primary health care (PHC) spending accounted for more than half of total health spending in 2019 and amounted to 3.1% of GDP on average. While higher-income countries spent more per capita on PHC, lower-income countries devoted a larger share of total health spending to PHC.
- Nearly half of both PHC and non-PHC spending in low and middle income countries was funded by private sources. In low income countries, the rest was funded by external aid (one-third of total PHC spending and one-fifth of total non-PHC spending) and government sources (one-fifth of total PHC spending and one-third of total non-PHC spending).
- There was little difference in the share of PHC spending from public sources or in PHC spending per capita between countries where most public spending flowed through compulsory health insurance and countries where most public spending was made by budget allocation. Even in systems where most health spending flowed through compulsory insurance schemes, some PHC components were funded by government direct budget allocation.
- In a set of low and middle income countries, the share of PHC spending in total spending for infectious diseases was significantly higher than the share of PHC spending in total spending for noncommunicable diseases and injuries.
- In the same set of countries, more than two-thirds of PHC spending for HIV/AIDS and tuberculosis was from external aid, mainly for preventive care, whereas most PHC spending for malaria was from domestic sources, with the largest share spent for medicines.

Achieving universal health coverage and the health-related Sustainable Development Goals requires a stronger emphasis on PHC *[1]*. PHC is a whole-of-society approach to health that aims to maximize the level and distribution of health and well-being through three components: primary care and essential public health functions as the core of integrated health services, multisectoral policy and action, and empowered people and communities. Due to the nature of the categories in the System of Health Accounts, current PHC spending includes primary health care and essential public health functions as the core of integrated health services (Box 2.1). Models for funding and organizing PHC services differ across countries, as do the relative proportions of PHC spending on disease-specific interventions. Measuring PHC spending is an important step in understanding PHC performance. PHC spending patterns also provide an insight for developing a suitable financing system to achieve universal health coverage and other health-related Sustainable Development Goals.

BOX 2.1

Measuring primary health care spending based on the System of Health Accounts 2011 for cross-country comparisons

The System of Health Accounts 2011 does not include a ready-made classification for mapping primary health care (PHC) spending, which can be defined differently depending on the objective. The global definition of PHC spending, based on the type of services (health care function classification), aims to provide a benchmark for cross-country comparison, with full recognition that countries organize their systems differently. But the standard global definition is not equally relevant to all countries *[2]*. The following spending categories from the health care function classification are considered part of PHC spending *[3]*:

- General outpatient curative care.
- Dental outpatient curative care.
- Curative outpatient care not elsewhere classified (excluding specialized outpatient care).
- Home-based curative care.
- Outpatient and home-based long-term health care.
- Preventive care *[4, 5]*.
- Part of medical goods provided outside health care service packages (80%).
- Part of health system administration and governance expenditure (80%).

More countries are reporting data that can be used to estimate primary health care spending; 101 countries have at least one year of data on primary health care spending

WHO began publishing PHC spending data in the 2018 Global Health Expenditure Database *[6]*, which included 2016 data for 50 countries. Since then, the number of countries submitting information used to measure PHC spending has increased, and the level of disaggregation and general quality of the data have improved every year.

Today, the Global Health Expenditure Database includes PHC spending for 101 countries—more than half of WHO Member States—calculated based on reported data for 2019 or the most recent year available (Table 2.1). For 69 countries, spending data by health care function are available by funding source. Of these countries, 16 are low income (55% of all low income countries), 29 are lower-middle income (59%), 17 are upper-middle income (31%) and 6 are high income (10%). The analysis here of PHC spending by source of funding and income group does not include high income countries because of the small number of countries for which data are available.

Primary health care spending accounted for more than half of total health spending and amounted to 3.1% of GDP on average

The 91[1] countries analysed in this chapter spent an average of 3.1% of GDP on PHC, with the share ranging from 0.8% to 7%. On average, the highest share was in low income countries (3.9%), the lowest in lower-middle income countries (2.6%; Table 2.2).

Average PHC spending per capita was US$ 460 in the most recent year available, with large differences across countries, ranging from US$ 12 in the Democratic Republic of the Congo to more than US$ 3,800 in Switzerland. PHC per capita spending was higher in higher-income countries, as expected given that income is a major driver of health spending and therefore of PHC spending, and lower in lower-income countries, reflecting a lack of investment in health as a whole. On average, low income countries spent US$ 26 per capita on PHC,

1. The chapter analysis includes 91 countries with PHC spending data and a population larger than 600,000.

TABLE 2.1 Number of countries with available data for calculating primary health care spending, by country income group, most recent year available

Country income group	Spending data		Spending data by funding source		Spending data by disease group	
	Number of countries	Share of countries by income group (%)	Number of countries	Share of countries by income group (%)	Number of countries	Share of countries by income group (%)
Total	101	52	69	36	33	17
Low	17	59	16	55	12	44
Lower-middle	30	61	29	59	15	34
Upper-middle	22	41	17	31	5	12
High	32	52	6	10	1	2

Data source: WHO Global Health Expenditure Database, 2021.

TABLE 2.2 Primary health care spending per capita and as a share of total health spending, by country income group, most recent year available

Country income group	Share of GDP (%)			Spending per capita (US$)			Share of total health spending (%)		
	Average	25th percentile	75th percentile	Average	25th percentile	75th percentile	Average	25th percentile	75th percentile
Total	3.1	2.4	3.8	460	35	451	53	41	62
Low	3.9	2.9	5.0	26	21	32	65	59	75
Lower-middle	2.6	1.9	3.2	61	38	66	58	51	67
Upper-middle	2.8	2.2	3.8	193	154	247	48	40	57
High	3.4	2.8	4.0	1,333	620	1,974	42	38	46

Data source: WHO Global Health Expenditure Database, 2021.

lower-middle income countries US$ 61, upper-middle income countries US$ 193 and high income countries US$ 1,333—more than 50 times what low income countries spent (Table 2.2).

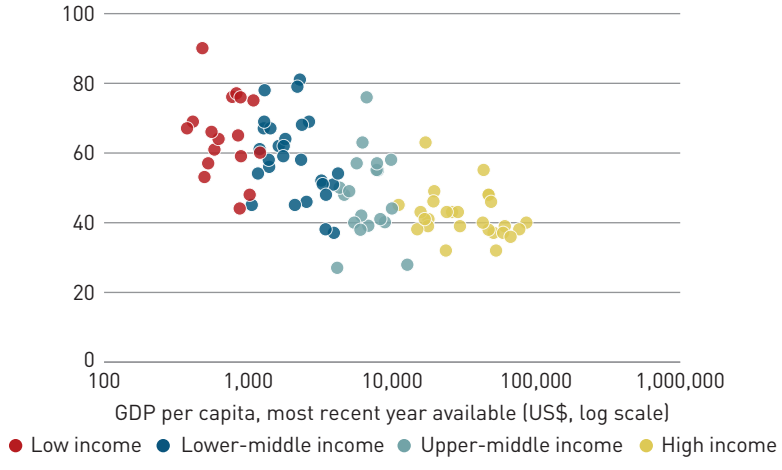
Higher-income countries spent more per capita on primary health care, whereas lower-income countries devoted a larger share of total health spending to primary health care

The share of total health spending on PHC was inversely related to a country's GDP per capita (Figure 2.1). Explaining why requires deeper analysis, but the finding is consistent with lower-income countries having less developed hospital services, fewer complex medical devices and lower relative prices for specialists than higher-income countries.

On average, PHC spending accounted for 53% of total health spending, but there were large variations both across and within income groups. Lower-income countries devoted more than the global average share to PHC: 65% in low income countries and 58% in lower-middle income countries, compared with 48% in upper-middle income countries and 42% in high income countries (Figure 2.1; see also Table 2.2).

FIGURE 2.1 The share of primary health care spending in total health spending decreases as income rises

Primary health care spending, most recent year available (% of total health spending)



Data source: WHO Global Health Expenditure Database, 2021.

Nearly half of both PHC and non-PHC spending in low and middle income countries was funded by private sources; in low income countries, the rest was funded by external aid (one-third of total PHC spending and one-fifth of total non-PHC spending) and government sources (one-fifth of total PHC spending and one-third of total non-PHC spending)

Government sources[2] played a larger role in funding non-PHC spending than in funding PHC spending in all three income groups (Figure 2.2). On average, the government funded 30% of non-PHC spending in low income countries, 36% in lower-middle income countries and 61% in upper-middle income countries. The higher shares of government funding on non-PHC spending were accompanied by lower shares of external aid across the three income groups (16% in low income countries, 6% in lower-middle income countries and almost 0% in upper-middle income countries). External aid is an essential source of PHC spending in some countries, especially low income countries.

Nevertheless, private sources[3] remained the largest funding source for both PHC and non-PHC spending in low and lower-middle income countries and the second largest in upper-middle income countries. Private sources funded almost half of both PHC and non-PHC spending in low, lower-middle and upper-middle income countries (Figure 2.2). In low income countries, private sources funded 49% of PHC spending and 54% of non-PHC spending, on average. The shares were similar in lower-middle income countries (49% of both PHC and non-PHC spending). But in upper-middle income countries, private sources funded 46% of PHC spending and 39% of non-PHC spending.

MOST EXTERNAL AID WAS SPENT ON PRIMARY HEALTH CARE

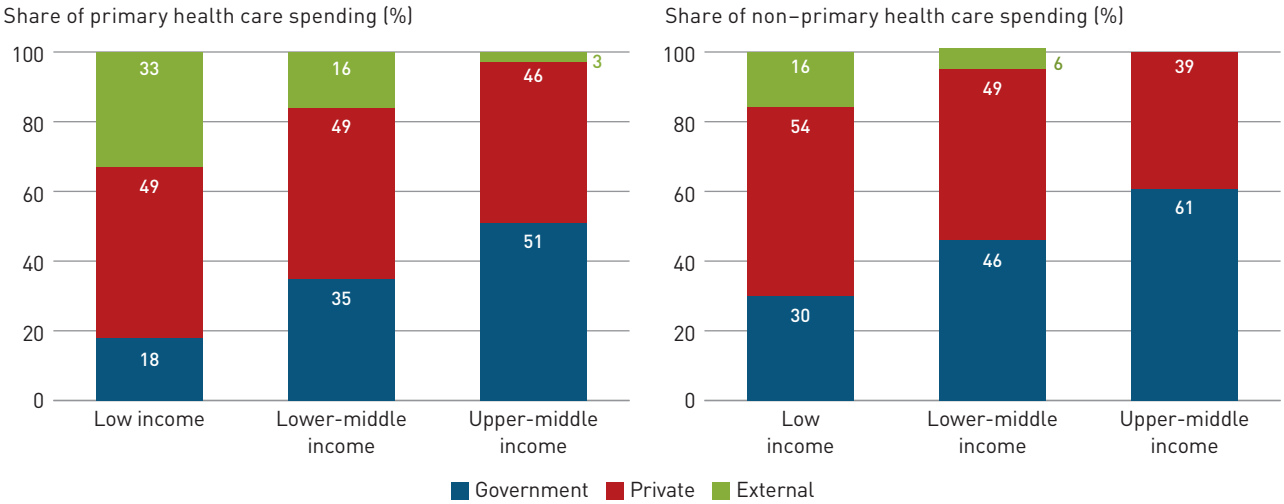
On average, the share of external aid spent on PHC was 80% in low income countries, 85% in upper-middle income countries and 75% in lower-middle income countries, though the share varied considerably across countries. More than half of funding from government sources was spent on PHC in low and lower-middle income countries (56% and 53%, respectively), compared with 44% in upper-middle income countries (Figure 2.3). On average, the share of funding from private sources that went to PHC was 63% in low income countries, 60% in lower-middle income countries and 49% in upper-middle income countries.

PRIMARY HEALTH CARE SPENDING THAT WAS FUNDED BY EXTERNAL AID WENT MOSTLY TO PREVENTIVE CARE

The share of PHC spending funded by external aid that went to preventive care was higher in low and lower-middle income countries (20% and 10%, respectively; Figure 2.4). For

FIGURE 2.2 The composition of funding sources differed between primary health care and non–primary health care spending and across income groups

Primary health care and non–primary health care spending, by funding source and income group, most recent year available (%)

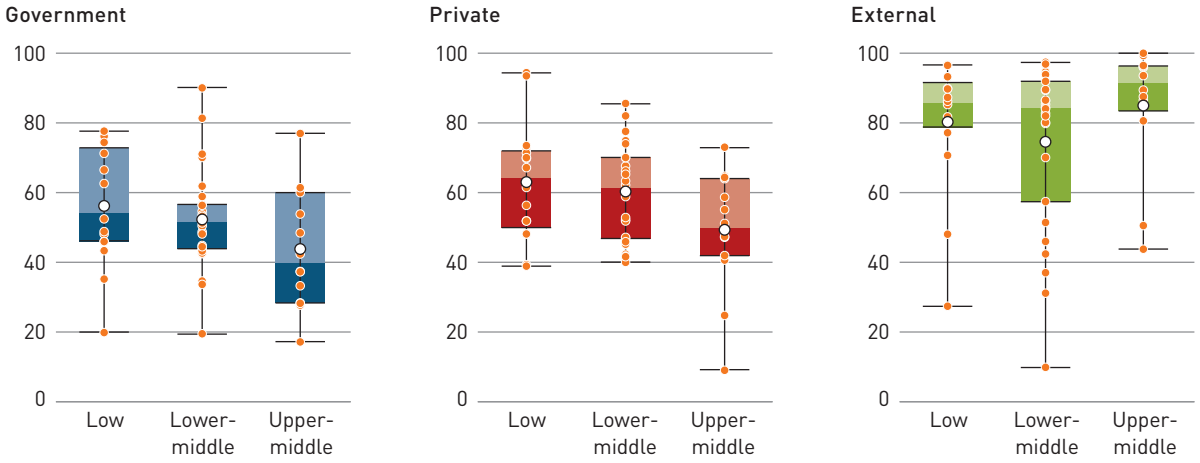


Data source: WHO Global Health Expenditure Database, 2021.

2. Internal transfers by domestic government and social insurance contributions.
3. Revenue from households, corporations and nonprofit institutions serving households and compulsory and voluntary prepayment.

FIGURE 2.3 **In low and middle income countries, a larger share of external aid than of government and private sources was spent on primary health care**

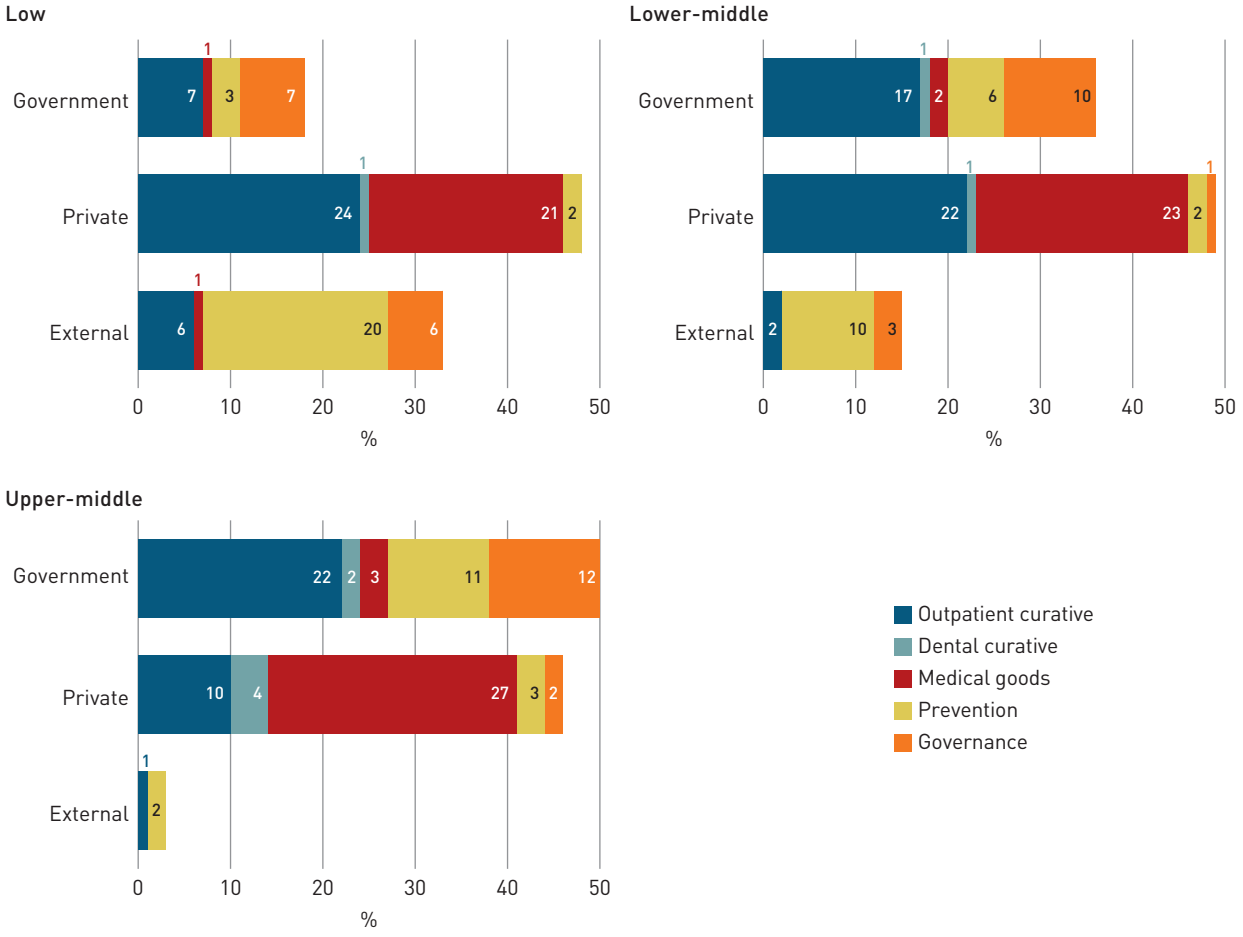
Share of primary health care spending, by funding source, most recent year available (%)



Note: Boxplots show the interquartile range (25th–75th percentile) of values. The median is marked where the darkness of the bar changes. 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
Data source: WHO Global Health Expenditure Database, 2021.

FIGURE 2.4 **Outpatient curative care and medical goods are the main drivers of primary health care spending in low and middle income countries**

Components of primary health care spending, by income group and funding source, most recent year available (%)



Note: Outpatient care includes general and unclassified outpatient curative care. "Other" includes outpatient long-term care and curative and long-term home-based care. The labelled values are each component's average share in total primary health care spending.
Data source: WHO Global Health Expenditure Database, 2021.

example, immunization was funded largely by external aid in most low and lower-middle income countries (Box 2.2). Most external aid was channelled through vertical programs. Achieving and sustaining universal health coverage and the health-related Sustainable Development Goal targets require moving beyond vertical programming towards integrated health systems *[1]*. In upper-middle income countries, preventive care was the third largest component of PHC spending funded by government sources (11%), after curative outpatient care and health system governance. Preventive care accounted for 3% of PHC spending funded by private sources and 2% of PHC spending funded by external aid.

THE DISTRIBUTION OF TYPES OF PRIMARY HEALTH CARE SERVICES DIFFERED BY FUNDING SOURCE

The proportion of PHC spending that went to outpatient curative care[4] varied across income groups and funding sources (see Figure 2.4). Lower-middle income countries devoted the largest share of PHC spending to outpatient curative care (41%), with 17% funded by the government, 22% by private sources and 2% by external aid. In low income countries, private sources funded the largest share of outpatient curative care (24% of PHC spending), followed by government (7%) and external aid (6%). In upper-middle income countries, government was the main funding source for outpatient curative care in PHC: 22% of PHC spending was for outpatient curative care funded by government sources (the share of outpatient curative care in total PHC spending was 33%).

Across all income groups, the share of PHC spending on dental curative care, a key contributor to health outcomes, was small and funded mostly by private sources (*[7]*; see Figure 2.4). Medical goods,[5] including medicines prescribed as a result of consultation and self-treatment, accounted for 24%–30% of PHC spending in low and middle income countries (*[4]*; see Figure 2.4). As with outpatient curative care, most spending on medical goods was funded by private sources, mainly households.

Health system governance accounted for a significant share of PHC spending funded by government sources for all income groups. The share of spending on health system governance funded by government sources in PHC spending was 7% in low income countries, 10% in lower-middle income countries and 12% in upper-middle income countries.

AMONG COUNTRIES WITH THE SAME GDP PER CAPITA, THOSE WHERE GOVERNMENT FINANCING ARRANGEMENTS DOMINATED HEALTH FINANCING SYSTEMS AND THOSE WHERE COMPULSORY INSURANCE SCHEMES DOMINATED HAD SIMILAR PRIMARY HEALTH CARE SPENDING PER CAPITA

The financing arrangements through which people obtain health services are the structural components of the health care financing system *[4]*. The key concepts for describing financial arrangements are based on rules on participation and entitlements, whether contributions are compulsory and prepaid and whether there is pooling of funding. The major arrangements covered in this report are government schemes (from general tax-revenue budget allocation and automatic entitlement), compulsory contributory insurance schemes (both social health insurance and private compulsory insurance) and household out-of-pocket payments. Whether these health financing arrangements affect PHC spending is a practical policy question in each country.

PATTERNS IN FINANCING ARRANGEMENTS TENDED TO DIFFER ACROSS INCOME GROUPS

Countries are divided into four groups based on the dominant type of health financing arrangement:[6] household out-of-pocket payment (accounted for more than 50% of total health spending), government schemes (accounted for more than 60% of total spending by government schemes and compulsory insurance schemes), compulsory insurance schemes (accounted for more than 60% of total spending by government schemes and compulsory insurance schemes) and other (countries that did not fit into the previous three groups). Of the 101 countries with PHC spending data, 54 were in the government scheme group, 20 were in the compulsory insurance group, 20 were in the household out-of-pocket group and 7 were in the other arrangements group (Table 2.3).

Low income countries were classified only into the government schemes and out-of-pocket

4. Outpatient care includes general and unclassified outpatient curative care.

5. The medical goods category includes medicines and medical supplies purchased outside a service (inpatient, outpatient and the like) setting.

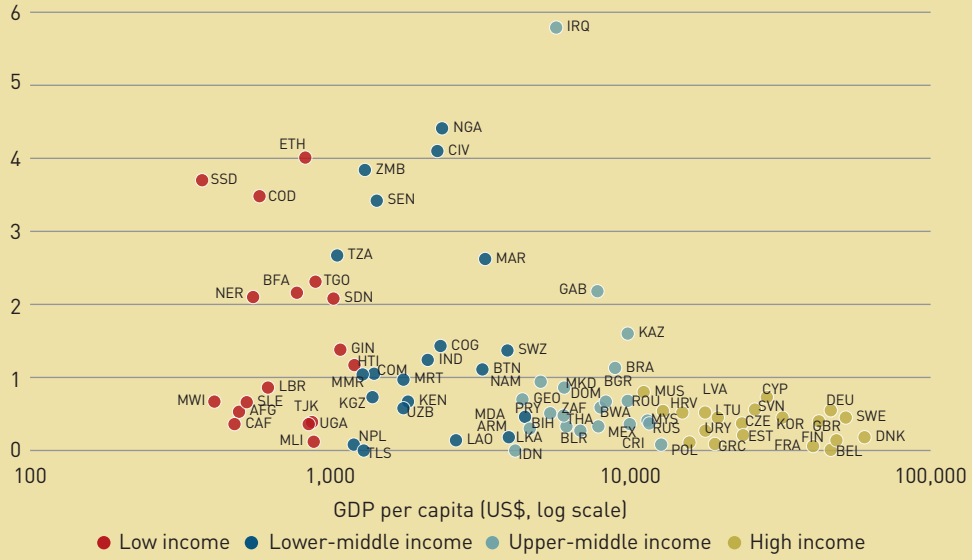
6. These are based on the classification of health care financing arrangement in the System of Health Accounts 2011.

BOX 2.2

Spending on immunization

Immunization is one category of preventive care. There was wide variation in the share of spending on immunization in total health spending in 2019 across 80 countries with data. The average share was 1.5% in both low and lower-middle income countries, 0.7% in upper-middle income countries and 0.4% in high income countries.

BOX FIGURE 1 There was wide variation in the share of spending on immunization in total health spending

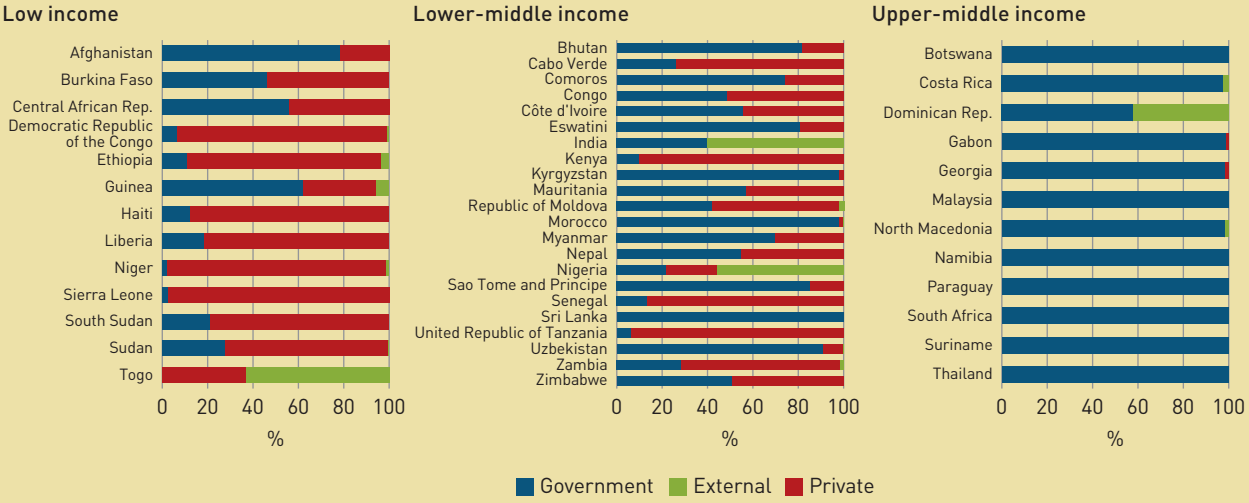


Data source: WHO Global Health Expenditure Database, 2021.

Unsurprisingly, low income countries relied more heavily on external aid to fund spending on immunization (Box Figure 2). Lower-middle income countries varied widely on how immunization was funded. Nigeria and India were outliers among countries with data: over half their spending on immunization was funded by private sources.

BOX FIGURE 2 Low income countries relied more heavily on external aid to fund spending on immunization

Share of spending on immunization by funding source in low and middle income countries, 2019 (%)



Data source: WHO Global Health Expenditure Database, 2021.

TABLE 2.3 **Number of countries in each health financing arrangement group, by income group, most recent year available**

Income group	Government schemes dominant	Compulsory insurance[a] schemes dominant	Household out-of-pocket payments dominant	Other	Total
Total	54	20	20	7	101
Low	9	0	8	0	17
Lower-middle	16	2	10	2	30
Upper-middle	12	4	2	4	22
High	17	14	0	1	32

a. Includes both social health insurance and compulsory private health insurance schemes.
Data source: WHO Global Health Expenditure Database, 2021.

payment groups, middle income countries were classified into all four groups and high income countries were mostly classified into the government schemes and compulsory insurance groups.

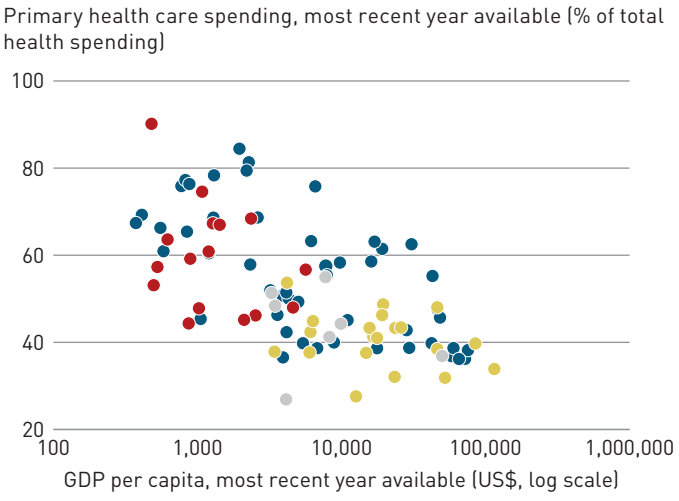
PHC spending as a share of total health spending showed more variation within each financing arrangement group than between groups for a given level of GDP per capita (Figure 2.5a). Richer countries tended to spend more on PHC per capita and less as a share of total health spending, regardless of the dominant arrangement. Among countries with the same GDP per capita, those where government schemes dominated and those where compulsory insurance dominated had similar PHC spending per capita, with small variations (Figure 2.5b).

There was little difference in the share of primary health care spending from public sources between high income countries where most public spending flowed through compulsory health insurance and countries where most public spending was made directly by budget allocation

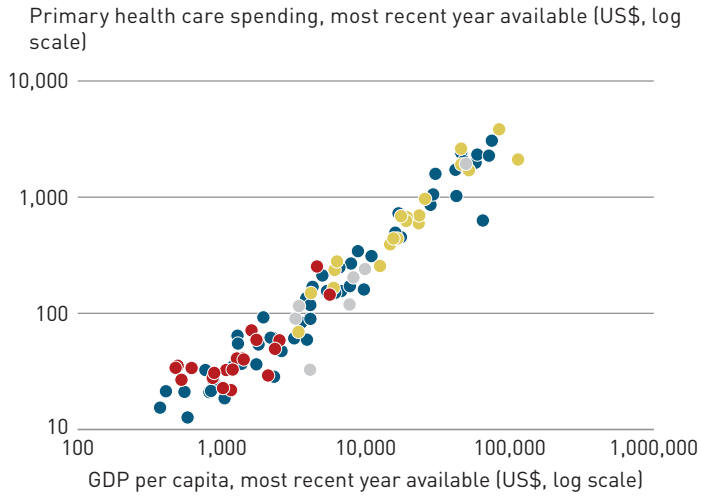
Of the 20 high income countries that reported detailed health spending data by health function and financing arrangement, 8 were in the government scheme group, 11 were in the compulsory insurance group and 1 was in the "other" group. Regardless of the dominant financing arrangement, PHC spending by government and compulsory insurance schemes together averaged 35% of public spending on

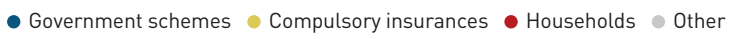
FIGURE 2.5 **Patterns in health financing arrangements tended to differ across income groups**

a. Primary health care spending as share of total health spending and GDP per capita



b. Primary health care spending per capita and GDP per capita





Data source: WHO Global Health Expenditure Database, 2021.

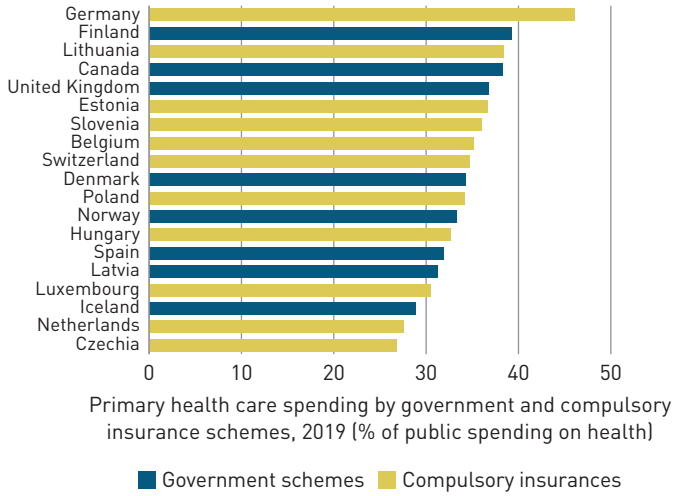
health in high income countries (Figure 2.6). There was little difference between countries where compulsory health insurance dominated and countries where government financing arrangements dominated. Each financing arrangement has its particular role, size and package of financed services. However, the two schemes together form the core of the health financing system and complement each other in financing PHC and other health services.

Even in countries where most health spending flowed through compulsory insurance schemes, some components of primary health care were financed by government sources

In the eight high income countries where government schemes dominated health financing, those schemes accounted for an average of 73% of total health spending. In these countries, PHC spending funded by government financing arrangements accounted for 24% of total health spending, whereas non-PHC spending funded by government accounted for 49% of total health spending (Figure 2.7). The main PHC categories that government schemes financed were outpatient curative care (8% of total health spending), long-term care (about 7%) and medical goods (5%), followed by preventive care (3%) and dental curative care (1%). In the high income countries where government schemes dominated, compulsory insurance schemes financed only a small amount of health spending, mostly PHC spending on medical goods.

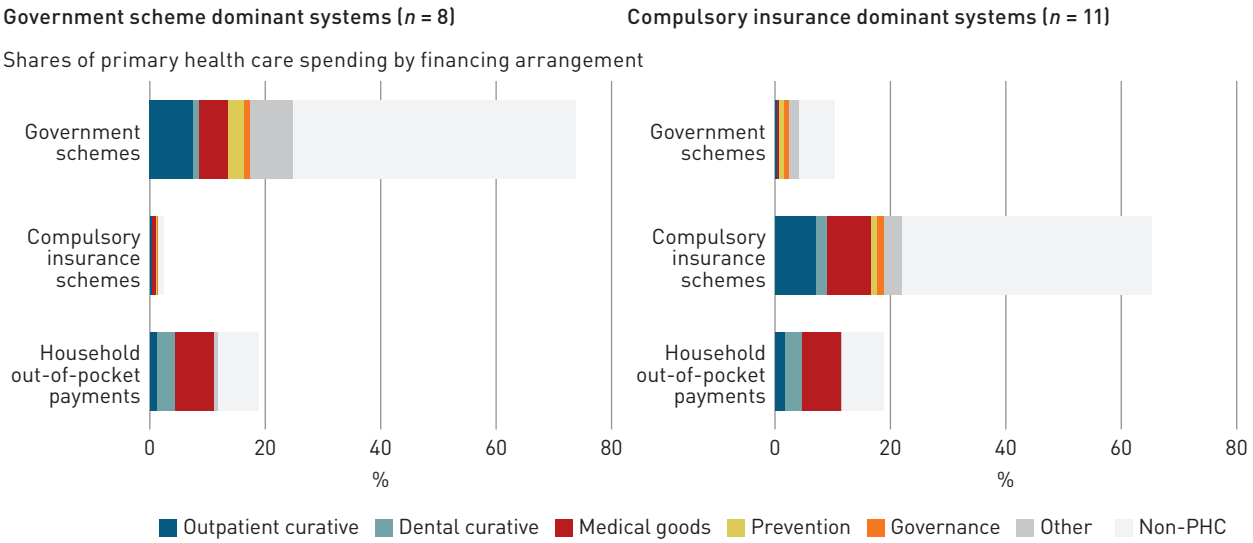
In the 11 high income countries where compulsory insurance schemes dominated health financing, those schemes accounted for 64% of total health spending, 21% of which was spent on PHC. The main drivers of these schemes' PHC spending were medical goods (8% of total health spending) and outpatient curative care (7%), followed by long-term

FIGURE 2.6 The share of primary health care spending financed by public sources was similar across high income countries, regardless of the dominant financing arrangement



Data source: WHO Global Health Expenditure Database, 2021.

FIGURE 2.7 Government schemes had an important role in financing preventive care in high income countries, regardless of what health financing arrangement dominated



Note: Outpatient curative care includes general and unclassified outpatient curative care. "Other" includes outpatient long-term care and curative and long-term home-based care. The labelled values are each component's share in total health spending.
Data source: OECD Health Statistics 2021.

BOX 2.3

Primary health care spending funded by government schemes and compulsory insurance schemes in high income countries

Primary health care (PHC) spending was financed mainly by countries' dominant financing arrangement. However, regardless of the dominant arrangement, government schemes and compulsory insurance schemes together accounted for 50%–80% of PHC spending in almost all the high income countries analysed (Box Figure 1a).

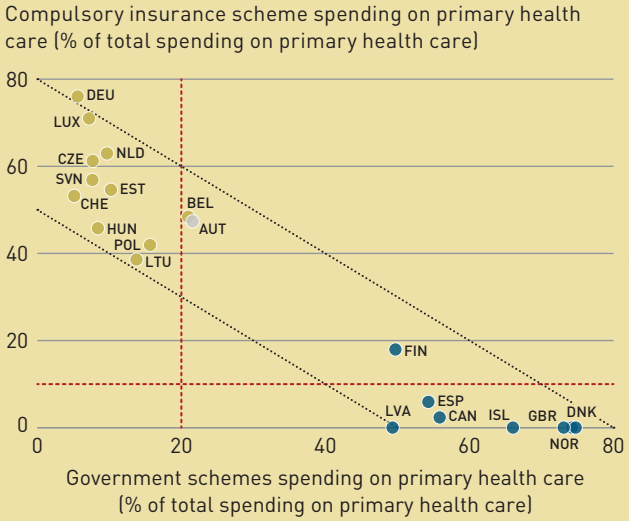
In the eight countries where government schemes dominated, those schemes financed an average of 63% of PHC spending (with a range of 50%–80%). Five of the countries did not have compulsory insurance schemes, and in the other three, compulsory insurances schemes accounted for only a small percentage of PHC spending.

In the 11 countries where compulsory insurance schemes dominated, those schemes financed 56% of PHC spending (with a range of 40%–80%). All these countries also had government schemes, at least for population-based interventions, which covered up to 20% (and an average of 10%) of PHC spending.

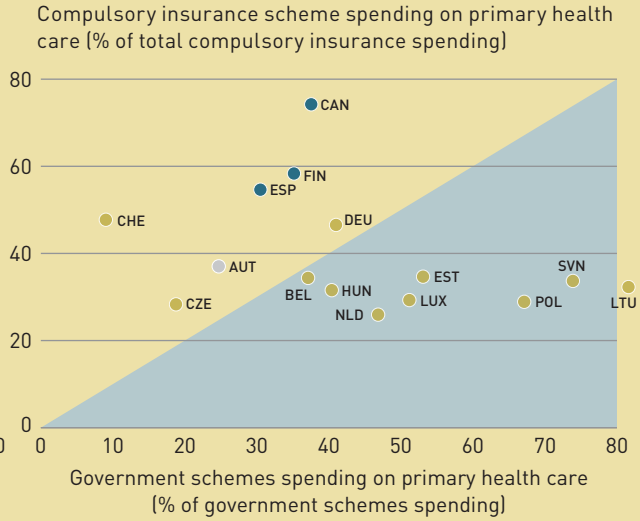
In high income countries, the nondominant financing schemes (except for out-of-pocket spending) often financed a high share of the PHC spending because those schemes were generally intended to provide a basic package of services, usually for only part of the population (Box Figure 1b). The less dominant financing schemes often worked as a backup or social welfare network to guarantee basic health services in case residents did not have access to adequate care through the dominant schemes.

BOX FIGURE 1 **Compulsory insurance schemes were always accompanied by government schemes in funding primary health care spending in high income countries**

a. Compulsory insurance scheme funding as share of total primary health care spending and government scheme funding as share of total primary health care spending, 2019



b. Compulsory insurance scheme spending on primary health care as share of total compulsory insurance scheme spending and government scheme spending on primary health care as share of total government scheme spending, 2019



Compulsory insurance ● Government schemes ● Other

Note: The diagonal lines represent the boundaries of share of primary health care spending financed by government schemes and compulsory insurance schemes combined within which most of the 20 high income countries fall. The red dashed lines represent the upper limit of the less dominant financing arrangement's contribution to primary health care spending, which was 10% (excluding Finland) for compulsory insurance schemes' contribution in countries where government schemes dominated and 20% for government schemes' contribution in countries where compulsory insurance schemes dominated.
Data source: OECD Health Statistics 2021.

care (about 3%) and dental curative care (2%). In these countries, government schemes played a larger role in financing PHC—particularly long-term care (nearly 2% of total health spending) and preventive care (1%)—than compulsory insurance schemes did in countries where government schemes dominated.

Regardless of which health financing arrangement dominated in a country, government schemes played an essential role in financing preventive care and long-term care in high income countries (Box 2.3; see also see Figure 2.7). Among high income countries, those where government schemes dominated and those where compulsory insurance schemes dominated had similar patterns of household out-of-pocket payments by health function. For both groups of countries, out-of-pocket payments accounted for more than 18% of total health spending, and 11% of total health spending was PHC spending financed by out-of-pocket payments. The main PHC categories that out-of-pocket payments financed were medical goods (7% of total health spending for both groups) and dental curative care (3%).

Most spending on infectious diseases, nutritional deficiencies and reproductive health went to primary health care services

PHC spending was further disaggregated by five disease and condition categories and by funding source for 33 countries that met quality control criteria (Box 2.4). This is the first-time that PHC spending has been examined by disease categories across multiple countries. The analysis builds on work published in the 2020 Global Health Expenditure Report *[8]*, which included such analysis for Burkina Faso.

The main disease categories with the largest shares of PHC spending in total spending on the category were infectious diseases (70%) and nutritional deficiencies (69%), followed by reproductive health (57%; Figure 2.8). The categories with the smallest shares were noncommunicable diseases (51%) and injuries (43%). These two categories often require specialized services, such as surgery for injuries or high-end procedures for cardiovascular diseases or cancer, that are not part of the definition of PHC *[3]*. Situations involving these categories are often worsened in lower-middle

BOX 2.4

Country inclusion criteria for the analysis of primary health care spending by disease and funding source

Analysing primary health care spending by disease and funding source requires a "triple cross" of information. Spending amounts must be simultaneously disaggregated across three classifications of the System of Health Accounts framework: funding source (domestic public sources, external aid and domestic private sources), health care function (outpatient curative care, preventive care, administration and governance, among others) and disease and condition (infectious and parasitic diseases, reproductive health, nutrition deficiencies, noncommunicable diseases and injuries; see Box 1.1 in chapter 1). Examples of the data needed are government funds spent on preventive care for noncommunicable diseases and spending by development partners on reproductive health that was delivered or consumed as outpatient care services. Countries that did not report disaggregated disease data or that did not report such data together with health care function categories by source—a majority of upper-middle and high income countries—could not be included in the analysis. Thus, 32 of the 33 countries analysed in this section are low and middle income, and 79% are from the WHO African region.

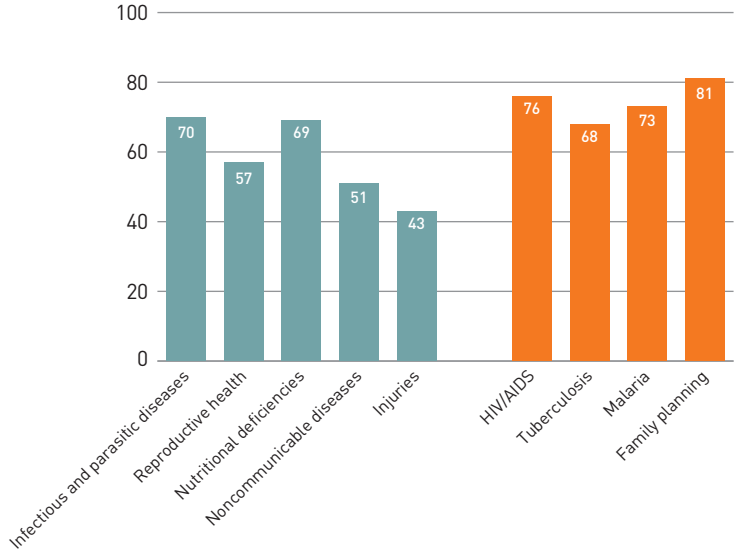
In addition to the data availability requirement, a quality control verification was applied to ensure a solid interpretation of the results. To be included, countries needed to meet two criteria:

1. The share of the spending not allocated to a specific disease or condition (DIS.nec) was less than 35%.
2. Data were available on spending by domestic public sources on each disease or condition group. This was applied to the five main categories of the System of Health Accounts disease/condition classification (DIS.1, DIS.2, DIS.3, DIS.4 and DIS.5), plus HIV/AIDS (DIS 1.1), tuberculosis (DIS 1.2), malaria (DIS.1.3) and family planning (DIS.2.3).

The two criteria were applied to the 69 countries with health care function by source reported in their health accounts, leaving 33 countries to be included in the analysis of PHC spending by source and disease.

FIGURE 2.8 In low and middle income countries, the share of primary health care spending in total spending on infectious diseases was significantly higher than the share of primary health care spending in total spending on noncommunicable diseases and injuries

Primary health care spending, 2019 (% of disease/condition spending)



Note: HIV/AIDS, tuberculosis and malaria are subcategories of infectious and parasitic diseases; family planning is a subcategory of reproductive health.
Data source: WHO Global Health Expenditure Database, 2021.

income countries when patients present themselves very late in the disease progression, leaving no choice other than complex interventions, such as those for advanced-stage cancer *[9, 10]*. For the subdisease categories,[7] the share of PHC spending in total spending on the category was higher than the average across all disease and subdisease categories (59%): family planning (81%), HIV/AIDS (76%), malaria (73%) and tuberculosis (68%).

Most primary health care spending for infectious diseases, reproductive health, noncommunicable diseases and injuries was funded by private sources, and most primary health care spending for nutritional deficiencies was funded by external aid

Private sources funded the largest share of PHC spending for infectious diseases, reproductive health, noncommunicable diseases and injuries (Figure 2.9). More than two-thirds of PHC spending for noncommunicable diseases and for injuries was from private sources, most of it for curative outpatient care services.

For several disease categories, a quarter to around half of PHC spending from private sources went to curative outpatient services: infectious diseases (28% of total PHC spending on the category), reproductive health (29%), injuries (44%) and noncommunicable diseases (55%; see Figure 2.9). After outpatient services, the next largest component of PHC spending for major diseases and conditions funded by private sources was medical goods,[8] which accounted for 30% of total PHC spending for injuries, 21% of total PHC spending for noncommunicable diseases, 15% of total PHC spending for infectious diseases and 12% of total PHC spending for reproductive health. Spending on preventive care by private sources accounted for 2% of total PHC spending for reproductive health.

In contrast to the funding of PHC spending for infectious diseases, reproductive health, noncommunicable diseases and injuries, funding of PHC spending for nutritional deficiencies was mainly from external aid (48%; see Figure 2.9). Of that, 56% went to preventive care (27% of the 48%). Private sources were the second largest funding source (36%), followed by government funding (16%).

More than two-thirds of primary health care spending on HIV/AIDS and tuberculosis was from external aid, mainly for prevention, whereas primary health care spending on malaria was mainly from domestic sources, with the largest share spent for medicines

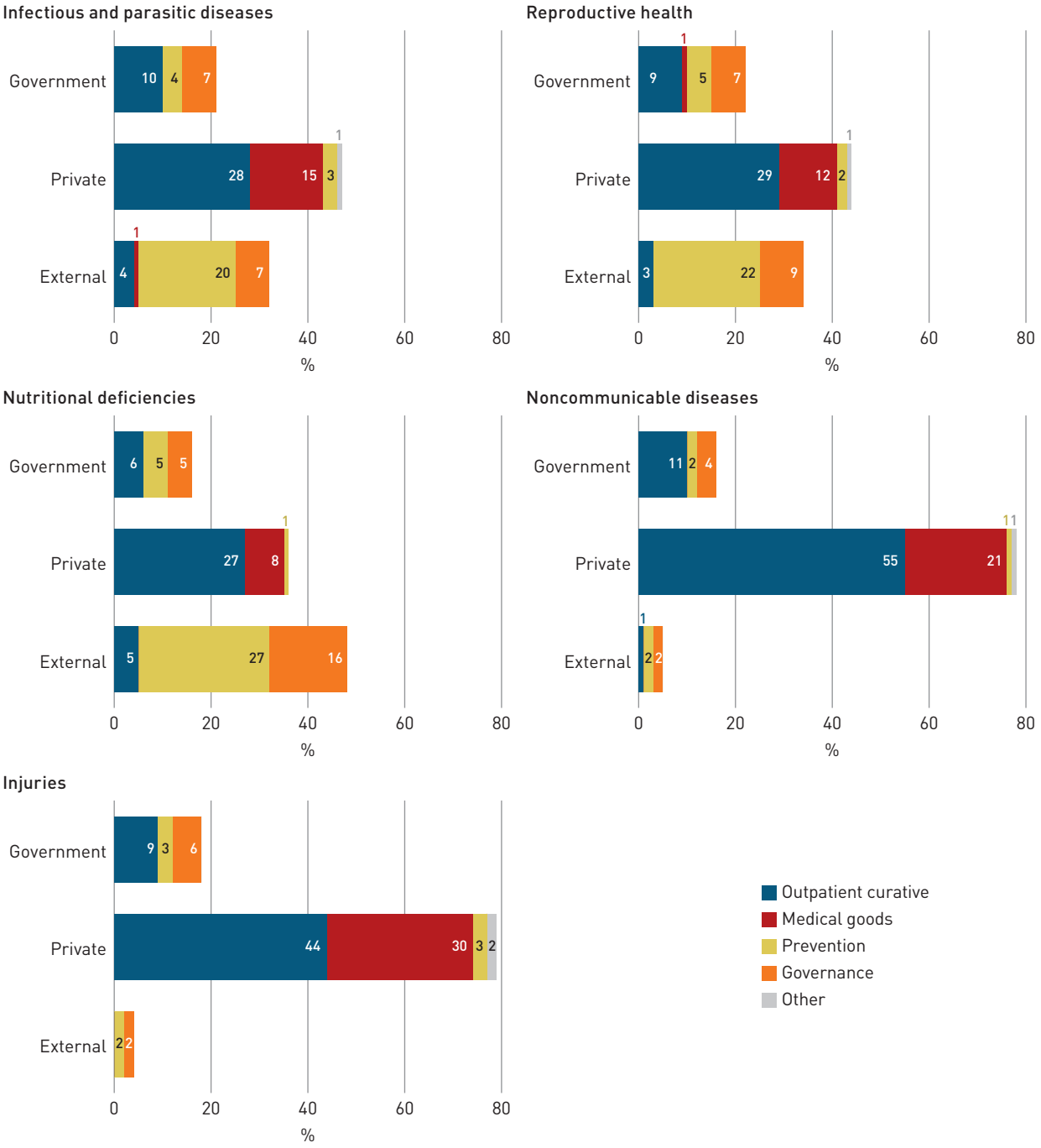
In the 33 countries analysed, 67% of PHC spending on HIV/AIDS was from external aid, and more than half of it went to preventive care (Figure 2.10). The shares of PHC spending on HIV/AIDS that were funded by government sources (21%) and private sources (12%) were considerably smaller. Outpatient care, preventive care and governance each accounted for a third of PHC spending on HIV/AIDS from government sources (7% each of total PHC spending on HIV). For PHC spending on HIV/AIDS from private sources, 4% went to medicines, 3% went to outpatient care and 4% went to preventive care.

7. For this section, subdisease categories are HIV/AIDS, tuberculosis, malaria (in the infectious and parasitic diseases category) and family planning (in the reproductive health category).

8. As Box 2.1 on measuring PHC spending shows, 80% of total spending on medical goods is considered PHC spending. The numbers discussed here are part of the total spending on medicines purchased outside the health facility delivering the services.

FIGURE 2.9 Private sources were the main funding source for primary health care spending for four of five disease or condition categories, whereas external aid was the main funding source for primary health care spending for nutritional deficiencies

Share of primary health care spending for each main disease or condition category, by funding source and health care function, 2019 (%)

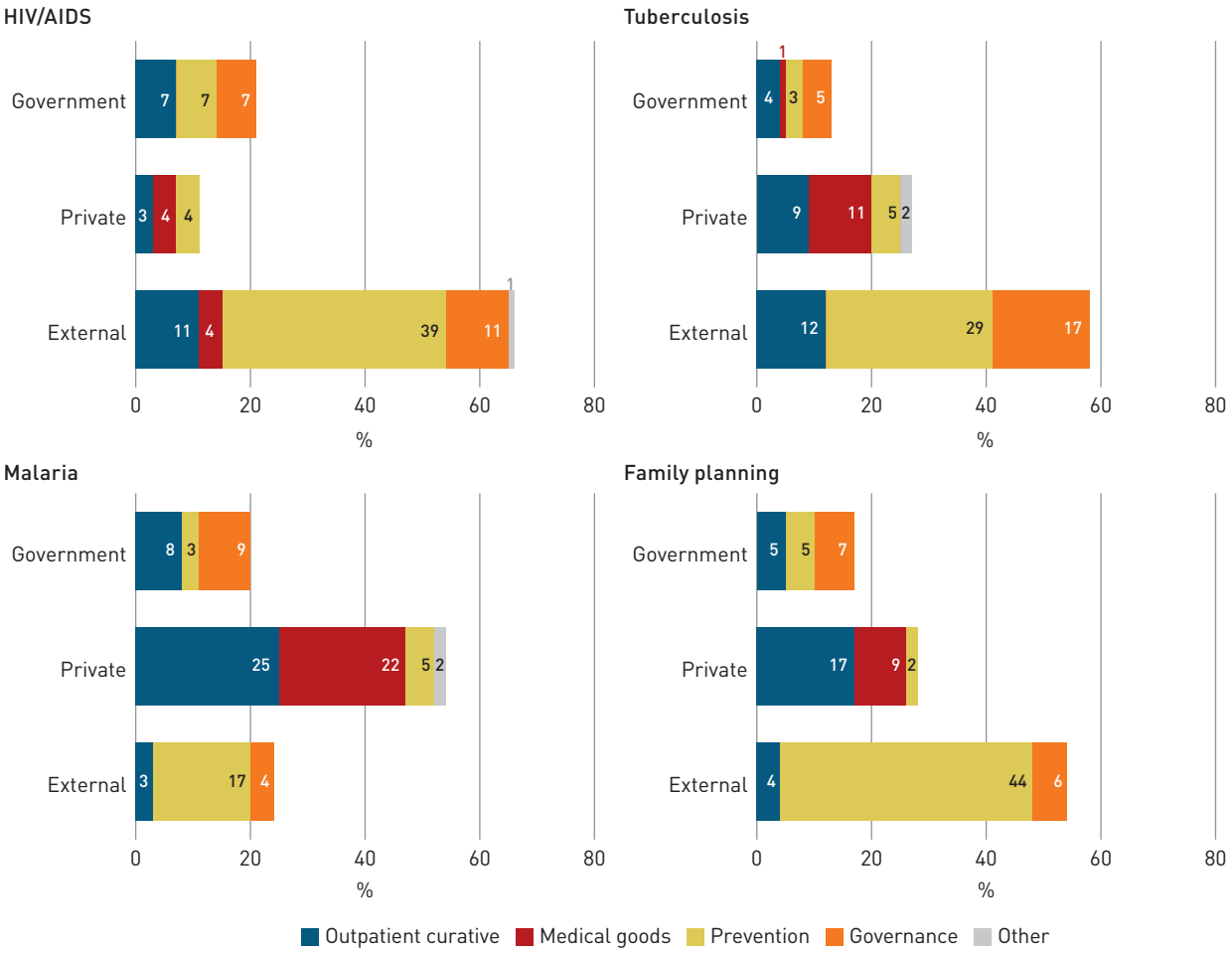


Note: Outpatient care includes general outpatient curative care, dental outpatient curative care and unclassified outpatient curative care. Other includes home-based curative care, outpatient long-term care and home-based long-term care.
Data source: WHO Global Health Expenditure Database, 2021.

The patterns were similar for tuberculosis and family planning, with most PHC spending coming from external aid (58% and 54%, respectively; see Figure 2.10). Preventive care funded by external aid accounted for 29% of PHC spending on tuberculosis and 44% of PHC spending on family planning. By contrast, 55% of PHC spending on malaria was funded by private sources, with 21% funded by government sources and 24% funded by external

FIGURE 2.10 Most primary health care spending on HIV/AIDS, tuberculosis and family planning was funded by external aid, while most primary health care spending on malaria was funded by private sources

Share of primary health care spending for each main disease or condition category, by funding source and health care function, 2019 (%)



Note: Outpatient care includes general outpatient curative care, dental outpatient curative care and unclassified outpatient curative care. Other includes home-based curative care, outpatient long-term care and home-based long-term care.
Data source: WHO Global Health Expenditure Database, 2021.

aid. Nearly half of PHC spending on malaria funded by private sources went to medical goods, which accounted for 22% of total PHC spending on malaria. This reflects a high propensity for self-medication for malaria and high over-the-counter purchases of malaria drugs in the analysed countries *[11]*. External aid accounted for a smaller share of PHC spending on malaria, and more than two-thirds of that funding (and 17% of total PHC spending on malaria) went to preventive care. However, policy matters. Some governments have policies that provide free malaria preventive care for specific population groups (such as pregnant women or children under age 5; *[12]*). And although government funding as a share PHC spending on malaria was less than 20%, the underlying policies played a central role in reducing the morbimortality associated with the disease.

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3

Health spending in high income countries

Key messages

- Among a group of 29 countries that have been classified as high income since 2000, health spending per capita averaged US$ 4,491 and accounted for 9% of GDP in 2019, up from US$ 2,923 in real terms and 7% in 2000.
- The composition of health spending in the 29 high income countries has been stable, with public funding sources accounting for the largest share. Over the past two decades, out-of-pocket spending has gradually declined as a share of health spending, despite growing as a share of household total consumption.
- Most of the 29 high income countries maintained the level of government health spending during the global financial crisis and its aftermath (2008–2013), which was characterized by a sharp drop in output and then fiscal consolidation in many countries.
- The dominant health financing arrangement in a country was not associated with higher or lower health spending. However, since the global financial crisis, there has been a distinct shift towards greater reliance on government budget allocation mechanisms.
- Government health financing mechanisms are becoming increasingly important to health financing in high income countries, both during normal times and in response to crises. Looking forward, countries will need to ensure that health resources are used carefully to meet equity and efficiency goals.

The health spending of high income countries provides insight into the configuration of the most developed health systems in the world today. These countries have undergone their own versions of the "health financing transition." During this transition, rising incomes tend to be accompanied by higher health spending, a larger share of government spending in total health spending and a lower share of out-of-pocket spending. In addition, high income countries stand apart because of their greater state capacity, larger budgets and different demographic and epidemiological demands and costs.

This chapter reviews the health spending of 29 large high income countries (HIC-29) from 2000 to 2019 (see box 3.1 for the inclusion criteria). This subset of countries was chosen to avoid year-to-year volatility around the high income threshold. The analysis documents overall spending trends, including levels and composition, and the link between health spending and the macro-fiscal contexts.

The period under analysis includes the global financial crisis and its aftermath (2008–2013). This shock, which began in the banking system in 2008 and quickly spread to the broader real economy, centred on advanced economies. The effects of the shock—and governments' responses—present a useful opportunity to review how such downturns affect health spending and previews what might be occurring in high income countries' health systems during the COVID-19 pandemic.

Average health spending in the 29 high income countries was 9% of GDP in 2019, up from 7% in 2000

The HIC-29 represent the top end of both the global income distribution and the global distribution of health spending (Figure 3.1a). There is a strong correlation between income level and health spending, so focusing on high income countries also means focusing on the countries that spend the most on health. Each of the HIC-29 had health spending per capita of at least US$ 1,500 in 2019 and GDP per capita of at least US$ 19,000. The HIC-29 together accounted for 75.8% of global health spending in 2019, substantially more than their share of global GDP (57.2%).

Average health spending as a share of GDP in the HIC-29 (9.0%) exceeded the global average in 2019 (6.4%), though there was much variation across countries (Figure 3.1b). Health spending as a share of GDP ranged from 2.9% in Qatar to 16.8% in the United States of America and was below the global average in five countries: Kuwait, Luxembourg, Qatar, Singapore and the United Arab Emirates.

BOX 3.1

Country inclusion criteria

The countries included in the analysis had to meet three criteria:

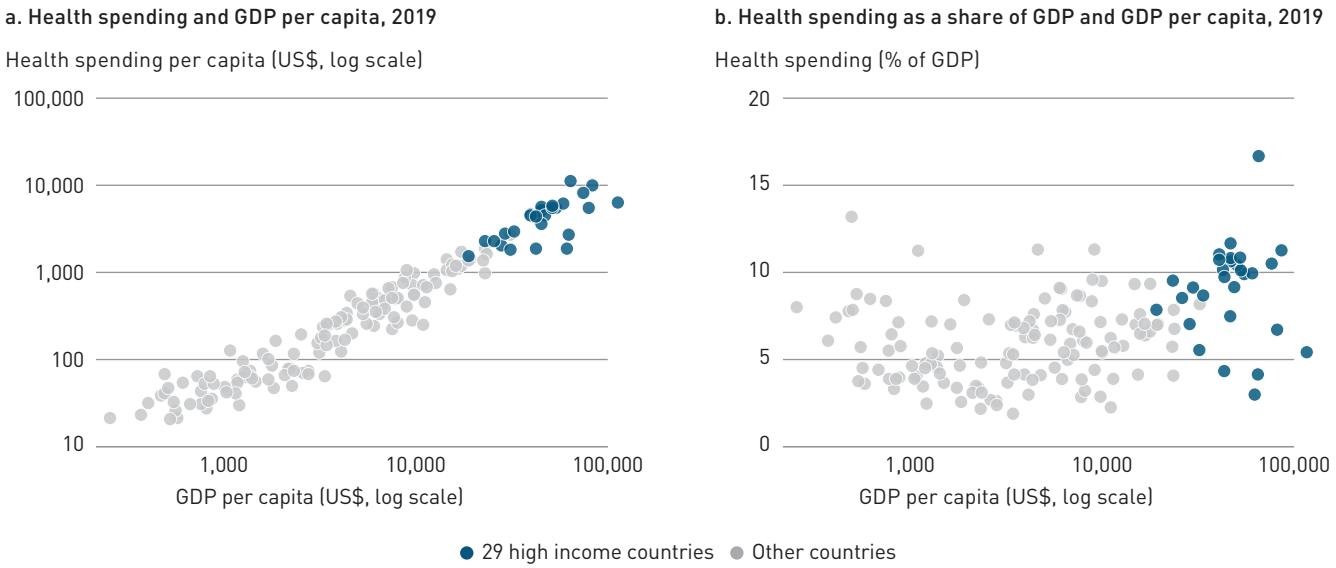
- Categorized as high income by the World Bank in 2019.
- Unchanged income classification since 2000.
- Population of at least 600,000 in 2019.

The World Bank country income classifications are based on gross national income (GNI) per capita, calculated using the World Bank Atlas method, which accounts for both price differentials between countries and exchange rates. The thresholds for the income classifications are recalculated annually *[1]*. To be included in the analysis, a country must have had a GNI per capita above US$ 9,265 in 2000 and grown at least as fast as the high income threshold to a GNI per capita of US$ 12,535 in 2019.

The 29 countries that met the selection criteria are Australia, Austria, Belgium, Canada, Cyprus, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Japan, Kuwait, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Qatar, Singapore, Slovenia, Spain, Sweden, Switzerland, the United Arab Emirates, the United Kingdom and the United States of America.

The selection criteria exclude from the analysis several countries that are currently classified as high income. Some are fast-growing countries that moved from the middle income category to the high income category during the period of analysis (such as Chile, Czechia, Poland, the Republic of Korea, Saudi Arabia and Slovakia). Others have experienced economic volatility, moving from the high income category to a lower category and back during the period of analysis (Argentina, Croatia, Hungary and the Russian Federation). And still others have consistently been in the high income category but have a small population (Andorra, the Bahamas, Brunei Darussalam, Iceland, Monaco and San Marino).

FIGURE 3.1 The 29 high income countries represent the top end of the global distribution of health spending in per capita terms but not as a share of GDP

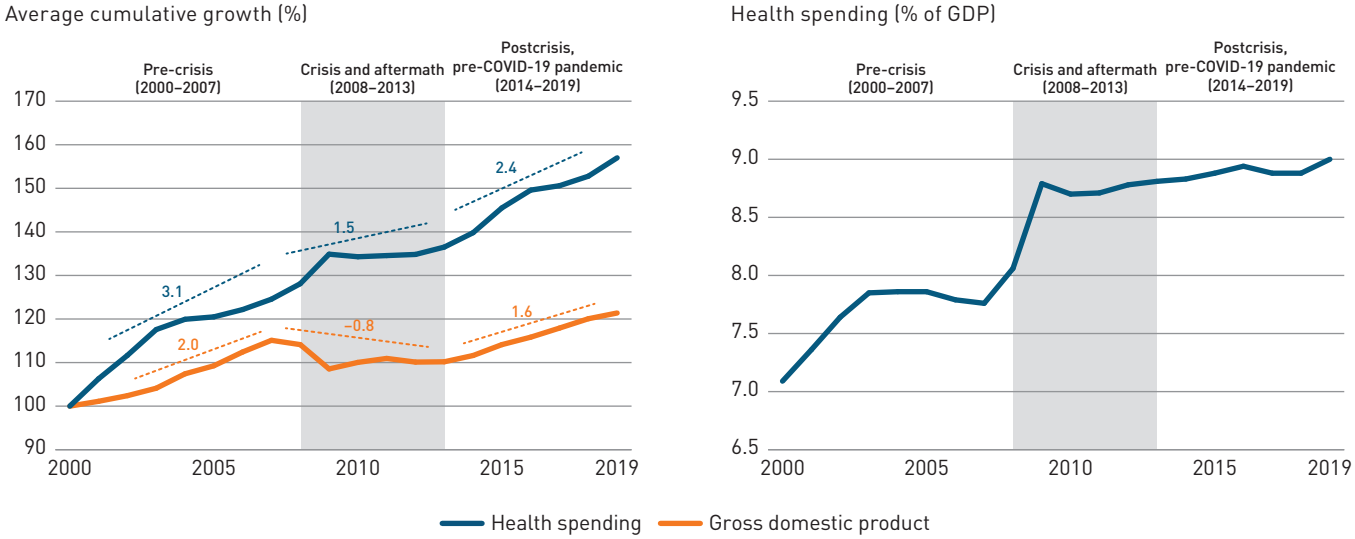


Data source: WHO Global Health Expenditure Database, 2021.

Between 2000 and 2019, average health spending per capita in the HIC-29 rose 57%, much faster than the 21% average GDP growth in these countries (Figure 3.2a). Accordingly, average health spending as a share of GDP trended upwards, from 7.1% to 9.0%. A particularly sharp jump in health spending as a share of GDP was observed during the global financial crisis and its aftermath, when the average growth rates of health spending and GDP diverged (Figure 3.2b).

In 13 of the HIC-29, annual growth[1] in health spending was two to three times the growth in GDP (Figure 3.3). In 4 countries, growth in health spending was more than triple the speed of economic growth. Singapore

FIGURE 3.2 Between 2000 and 2019, health spending grew faster than GDP in the 29 high income countries, which led to a higher share of health spending in GDP



Note: The cumulative growth rate for each country was calculated using health spending and gross domestic product per capita in constant (2019) national currency units. The conversion from current values to constant values was made using the GDP deflator. Base year 2000 = 100. The values over the trend lines in panel A are the annual growth rates for the highlighted periods: pre-crisis (2000–2007), crisis and aftermath (2008–2013) and post-crisis (2014–2019).
Data source: WHO Global Health Expenditure Database, 2021.

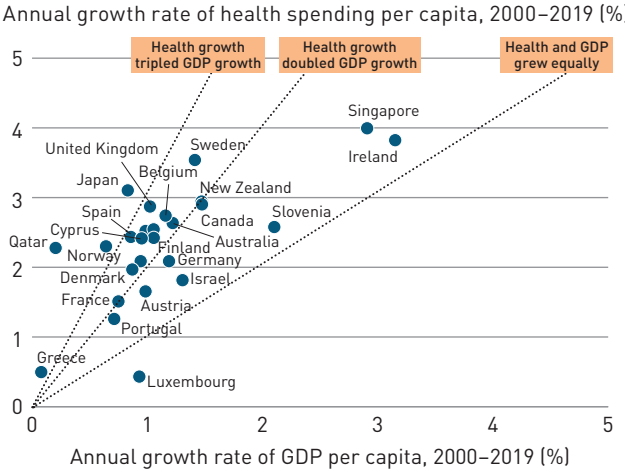
1. In this chapter annualized growth from 2000 to 2019 was calculated as the compound annual growth rate of the analysed variable (X) per capita in constant (2019) national currency units using the following formula: $(x_{2019} / x_{2000})^{1/19} - 1$.

and Ireland had the fastest growth in both health spending and GDP per capita, though in each case health spending did not considerably outstrip economic growth, which was also rapid.

Public was the primary source for health spending in the 29 high income countries

The sources of health financing revenue and how those revenues are pooled offer insights into the sustainability, stability and equity of financing, among other health system objectives. For instance, they indicate whether health care costs are prepaid, reveal the burden placed on users at the point of service and identify the roles of different types of health financing arrangements and how those roles change over time. They also show the source of each financing arrangement.

FIGURE 3.3 Health spending outstripped economic growth in the 29 high income countries



Note: Countries with a negative compound annual growth rate of gross domestic product per capita (Italy, Kuwait and the United Arab Emirates) were excluded. The lines provide a reference for comparing growth in health spending (y) and GDP (x) using different slopes. The equation for the line labelled "Health growth tripled GDP growth" is $y = 3x$, the equation for the line labelled "Health growth doubled GDP growth" is $y = 2x$ and the equation for the line labelled "Health and GDP grew equally" is ($y = x$).
Data source: WHO Global Health Expenditure Database, 2021.

PUBLIC SPENDING HAS CONSISTENTLY ACCOUNTED FOR MORE THAN TWO-THIRDS OF TOTAL HEALTH SPENDING OVER THE PAST 20 YEARS

The broad structure of health spending by funding source in the HIC-29 remained stable from 2000 to 2019. Government health spending[2] has been the primary source of health spending, consistently accounting for more than two-thirds of total health spending (Figure 3.4). Households' out-of-pocket spending has accounted for about one-fifth of spending, and the remaining share was about 13%.

THE SHARE OF GOVERNMENT BUDGET ALLOCATIONS IN TOTAL HEALTH SPENDING HAS INCREASED, WHILE THE SHARE OF SOCIAL INSURANCE CONTRIBUTIONS HAS DECLINED SLIGHTLY

At the margins, there has been a modest recalibration of funding sources across the HIC-29. Average government health spending per capita grew 65% in real terms from 2000 to 2019, outpacing growth in private health spending. As a result, public spending on health as share of total health spending rose 1.5 percentage points, from 68.7% in 2000 to 70.2% in 2019. This rise is attributable to strong growth in government budget allocations as a share of health spending, which increased 2.4 percentage points, from 51.3% in 2000 to 53.7% in 2019 (Figure 3.5a). In contrast, social insurance contributions,[3] which feature in most of the HIC-29, declined as a share of health spending, from 17.4% to 16.5%, despite continuing to rise in per capita terms (Figure 3.5b).[4]

The average values mask considerable variation across countries. From 2000 to 2019, social insurance contributions as a share of health spending dropped more than 5 percentage points in Austria, Belgium, Finland, France, Greece and the Netherlands.

HEALTH PRIORITY IN GOVERNMENT SPENDING INCREASED EVEN WHEN FISCAL CAPACITY FELL

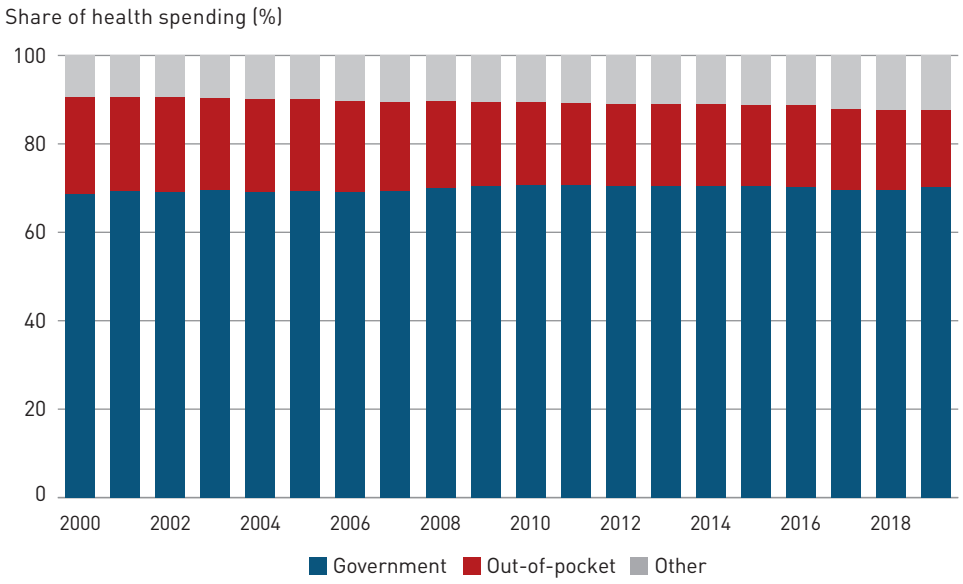
The strong growth in government health spending is also reflected in its rising priority in the total government spending envelope.

2. The term "government health spending" is used synonymously with "domestic general government health expenditure (GGHED)" and includes two categories of revenue of health financing arrangements: government transfers (also referred to as "government budget allocations") and social insurance contributions. Government transfers include direct budget allocations for health by central and local governments, budget transfers to social health insurance funds (except government social contributions as an employer) and subsidies to the private sector, such as insurance companies and nonprofit institutions. Social health insurance contributions, which are usually linked in some way to employment, include the compulsory social contributions for health from employees, employers (including the government), self-employed individuals and, marginally, other types of institutional units (such as students or retirees).

3. Most of the HIC-29—except Australia, Demark, Kuwait, Norway, Qatar, Sweden, the United Arab Emirates and the United Kingdom—rely somewhat on social insurance contributions.

4. When countries without social insurance contributions were excluded, government transfers as a share of health spending increased from 42.4% in 2000 to 44.8% in 2019, and social insurance contributions as a share of health spending fell from 25.3% to 22.8%.

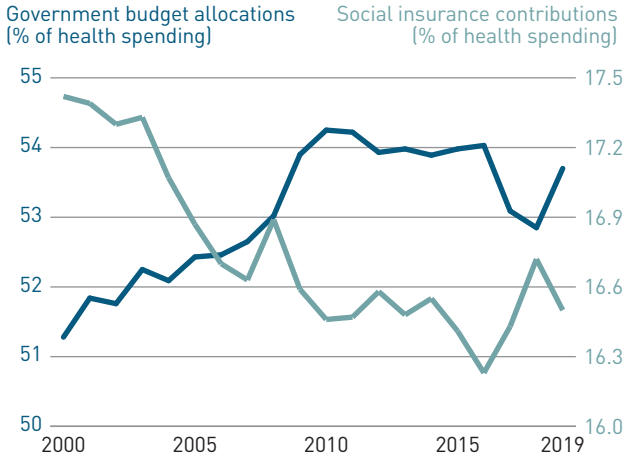
FIGURE 3.4 Health spending in the 29 high income countries has been financed primarily by governments



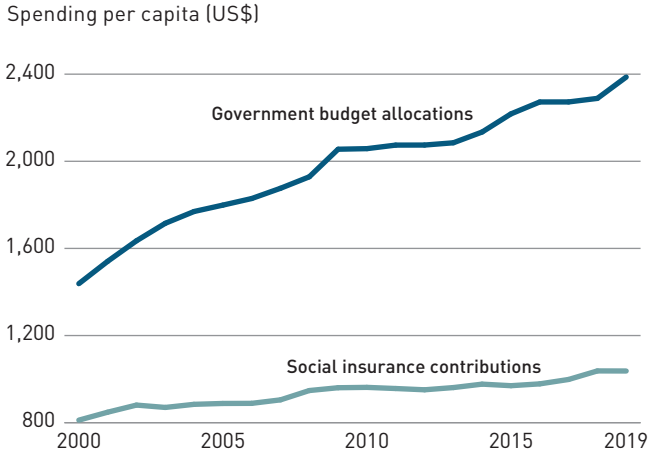
Note: Other includes voluntary prepayment, compulsory private prepayment, other domestic private sources and external sources.
Data source: WHO Global Health Expenditure Database, 2021.

FIGURE 3.5 Government budget allocation increased faster than social insurance contributions as a share of health spending in the 29 high income countries

a. Government budget allocations and social insurance contributions as a share of health spending, average of HIC-29 countries



b. Government budget allocations and social insurance contributions per capita, average of HIC-29 countries



Data source: WHO Global Health Expenditure Database, 2021.

The change in government health spending over time is directly linked to three main parameters: economic growth (change in GDP), growth in fiscal capacity (change in total general government spending as a share of GDP) and growth in health priority (change in government health spending as a share of total general government spending; *[2,3]*).[5]

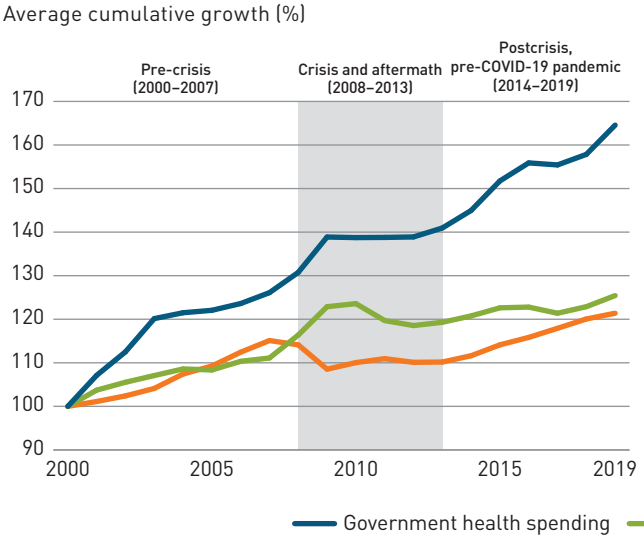
From 2000 to 2019, the economies of the HIC-29 grew an average of 1.0% a year in real terms per capita (Figure 3.6a).[6] The expansion in economic activity increased the base from which to collect government revenue and social health insurance contributions. Over the same period, total general government spending per capita grew an average of 1.2%

5. Barroy and Gupta *[3]* build further on this concept by including the rules and practices for budget use, known as public financial management, and calling it "budgetary space for health." Public financial management systems are beyond the scope of this chapter.

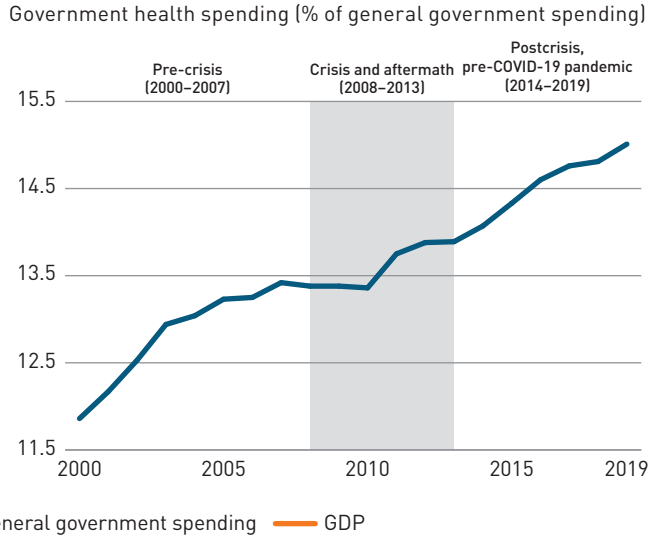
6. Only Italy, Kuwait and the United Arab Emirates did not grow over the period.

FIGURE 3.6 Growth in health priority outstripped growth in GDP and general government spending in the 29 high income countries

a. Average cumulative growth in government health spending, general government spending and GDP, per capita



b. Government health spending as a share of general government spending

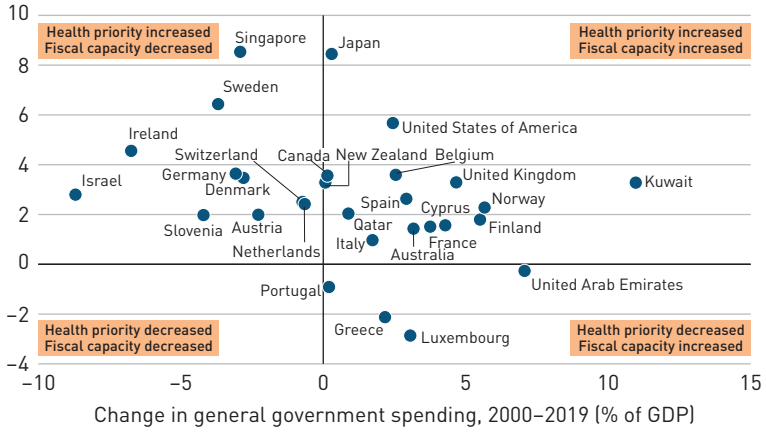


Note: The cumulative growth rate for each country was calculated using government health spending, general government spending and GDP per capita in constant (2019) national currency units. The conversion from current values to constant values was made with a GDP deflator. Base year 2000 = 100.
Data source: WHO Global Health Expenditure Database, 2021.

a year, indicating rising fiscal capacity (see Figures 3.7 and 3.9 later in the chapter for more on fiscal capacity). The fact that growth in government health spending generally outstripped growth in both GDP and total government spending is evident in the upward trend of health priority, with average government health spending rising from 11.9% of general government spending in 2000 to 15.0% in 2019 (Figure 3.6b).

FIGURE 3.7 Health priority increased in most of the 29 high income countries, even when fiscal capacity fell

Change in government health spending, 2000–2019 (% of general government spending)



Note: Change in health priority (government health spending as a share of general government spending) and change in fiscal capacity (general government spending as a share of gross domestic product) were calculated as the difference between the averages for 2000–2002 and 2017–2019.
Data source: WHO Global Health Expenditure Database, 2021.

The influence of economic growth, growth in fiscal capacity and growth in health priority has varied across the HIC-29. The countries can be categorized into three groups:

- The 15 countries that capitalized on the rising economic tide over the past 20 years through greater fiscal capacity and higher health priority (the top right quadrant of Figure 3.7).
- The 10 countries where fiscal capacity fell but health priority rose (the top left quadrant of Figure 3.7).
- The 4 countries where fiscal capacity rose but health priority fell (the bottom right quadrant of Figure 3.7).

On average, countries where health priority increased from 2000 to 2019 had higher government health spending per capita over the period. Countries where both fiscal capacity and health priority rose had marginally stronger growth in government health spending per capita (2.9% a year on average) than countries where fiscal capacity fell but health priority rose (2.8% a year on average). The average increase in health priority was higher in countries where fiscal capacity fell than in countries where fiscal capacity rose—perhaps reflecting the need to compensate for a declining resource envelope. The importance of health priority is underscored by the countries that reduced health priority, despite generally rising GDP and fiscal capacity,

where average government health spending per capita fell (0.1% a year).

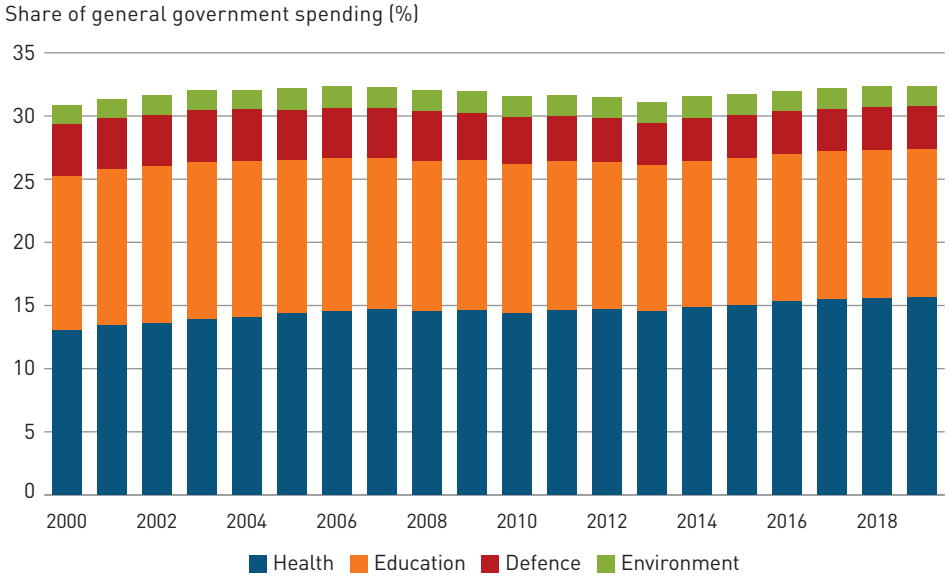
Growth in health spending also outpaced growth in other public spending priorities, such as education, defence and the environment. While health spending's share in general government spending consistently trended upward from 2000 to 2019, education spending's share remained stable, at around 12%, while defence spending's share decreased slightly (from 4.1% to 3.4%) (Figure 3.8). The extent to which the upward trajectory of health's share in total spending reflects policy shifts in health priority or some combination of quantity and price effects that are specific to health is unclear. But health service utilization is more uncertain and open-ended than school enrolment rates, which are more consistent from year to year.[7] Rising incomes, shifting demographics and climate change also likely pushed utilization towards more expensive interventions and better health care services.

However, the rise in government health spending has been faster than what might be expected from changes in demographic structure, morbidity and income *[4,5]*. Accordingly, some of the rise in government health spending might also reflect excessive cost growth —in particular, from advancement in medical technologies. New technologies can increase health costs by updating existing treatment methods and by expanding the set of treatable illnesses.[8] Most high income countries have a formal health technology assessment process to inform decisionmaking—such as planning, budgeting, and price setting for benefit packages and reimbursement—to increase value for money *[6]*.

Most of the high income countries maintained the level of government health spending during the global financial crisis and its aftermath

The global financial crisis created a period of considerable volatility in the economies and government finances of the HIC-29. At the height of the global financial crisis (2008 and 2009), economic activity in the HIC-29 declined sharply. In response, most governments implemented countercyclical fiscal policies to stimulate weakening economies. This, along with

FIGURE 3.8 Growth in health spending outpaced growth in other public spending priorities, such as education, defence and the environment, in the 29 high income countries



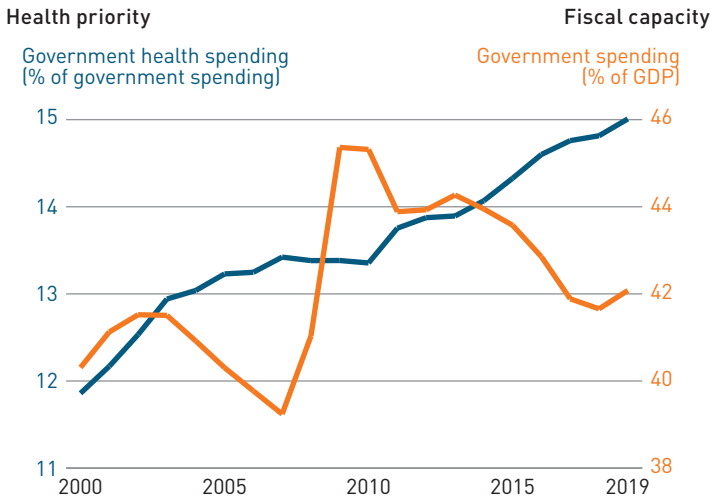
Note: Excludes Canada and New Zealand and five non-OECD countries (Cyprus, Kuwait, Qatar, Singapore and the United Arab Emirates).
Data source: OECD *[7]*.

7. Other possible drivers are discrepancies in the measurement and reporting of general government spending on health and education. Whereas domestic general government health spending is limited to current spending, general government spending on education includes capital spending. This could affect the differences, though it would bias education upwards relative to health, further emphasizing the trend observed. Additionally, domestic general government health spending excludes aid channeled through government, while education spending includes transfers from international sources to government. Given the trivial share of external support in the HIC-29, the inclusion of aid flows in education spending is likely immaterial.

8. On the flipside, new treatments can also improve patient outcomes and be more cost effective in the long term, thus eventually placing downward pressure on costs.

automatic budget stabilizers, led to a sharp increase in total government spending as a share of GDP (Figure 3.9).[9] For several years thereafter, government spending as a share of GDP declined as governments withdrew fiscal stimulus to return the budget to a sustainable footing *[8]*. Economic growth across the HIC-29 generally remained moribund in this aftermath of the crisis, until around 2014.

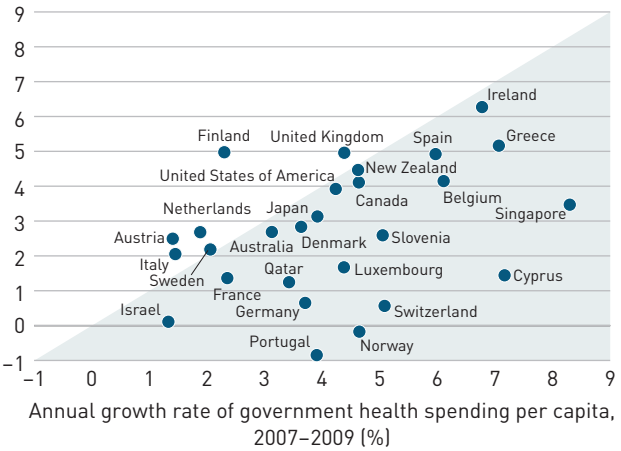
FIGURE 3.9 During the global financial crisis, government health spending in the 29 high income countries was maintained through countercyclical fiscal policy and efforts to keep health a priority



Data source: WHO Global Health Expenditure Database, 2021.

FIGURE 3.10 Government health spending in the 29 high income countries grew faster during the height of the global financial crisis than during the pre-crisis period

Annual growth rate of government health spending per capita, 2002–2007 (%)



Annual growth rate of government health spending per capita, 2007–2009 (%)

Note: Excludes countries where government health spending per capita fell more than 3% a year on average from 2002 to 2007 (Kuwait and United Arab Emirates).
Data source: WHO Global Health Expenditure Database, 2021.

Despite the large fluctuations in government spending during the global financial crisis and its aftermath, the HIC-29 were generally able to protect government health spending throughout, with government spending running countercyclically (coincident with the pattern of general government spending) as economic activity declined, and then to quarantine it from the rapid fiscal consolidation in subsequent years that resulted in spending cuts elsewhere.[10]

During shocks when spending is volatile, as with the global financial crisis, domestic general government health spending per capita is arguably a more important measure of health priority in government spending than proportional allocations (Box 3.2). Government health spending per capita continued rising in all the HIC-29 each year from 2007 to 2009, with growth in 23 countries exceeding the trend during the five years before the crisis (Figure 3.10). Across the broader period of the crisis and its aftermath (2008–2013), which includes the period of fiscal consolidation, all but 5 countries had higher government health spending per capita, and 12 countries still had higher growth in government health spending than their pre-crisis trend.

These findings do not apply to all countries. From 2008 to 2013, government health spending per capita fell sharply in real terms[11] in several European countries (by nearly 30% in Greece and by 6% each in Italy and Portugal).

There is no apparent difference in health spending, priority, coverage or life expectancy between systems that channel funding mainly through compulsory health insurance and systems that do so directly through the government budget

The use of government and compulsory insurance financing arrangements, including government financing arrangements and compulsory health insurance, is widespread in high income countries, including the

9. General government spending as a share of GDP increased in all the HIC-29 from 2007 to 2009, when it peaked. The average increase was 19 percentage points, with some variation at the extremes. Many countries did not record a peak until after 2009; though by 2013, peaks had occurred in 23 of the HIC-29.

10. The only exception was in 2012, when there was a marginal decline (0.1%) in average spending per capita across the HIC-29.

11. This refers to the growth rate calculated using government health spending per capita in constant (2019) national currency units between 2008 and 2013 (reference year = 2007). The conversion from current values to constant values was made with a GDP deflator.

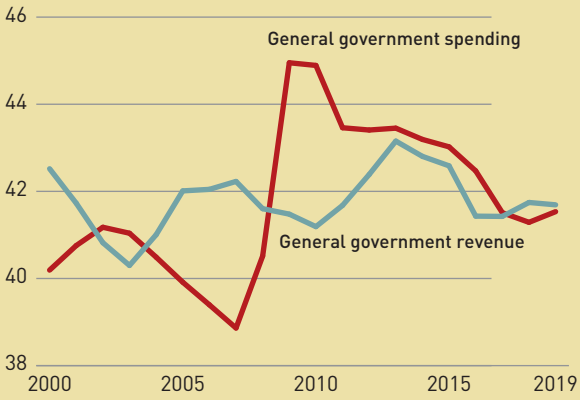
BOX 3.2

Measuring health priority during economic shocks

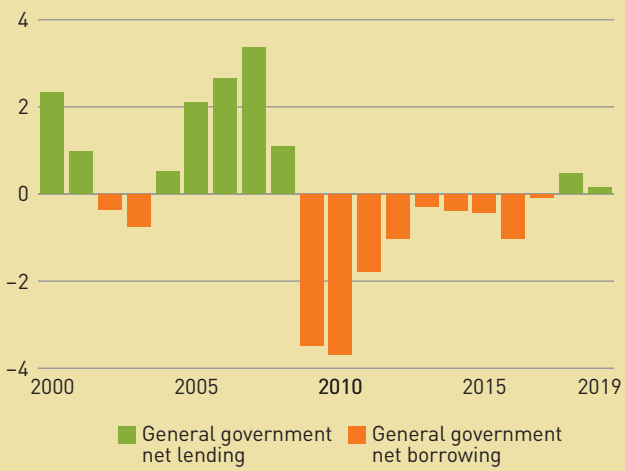
In normal times and over the medium term, government health spending as a share of total government spending is a reasonable measure of the priority of government health spending. Throughout the economic cycle, government spending should broadly equal revenue (as part of a sustainable balanced budget strategy), and the share of health spending should broadly approximate its priority in the resource envelope. However, during extraordinary episodes, such as economic crises, the links among health spending, revenue and spending can become temporarily disconnected. Government revenue might fall due to the shrinking revenue base, while spending might increase as automatic stabilizers kick in and governments implement temporary countercyclical fiscal stimulus measures to support their weakening economies. In such instances, budget balances might become negative, with deficits of revenue vis-a-vis expenditure financed by higher public debt. For instance, in the HIC-29, general government net borrowing as a share of GDP rose substantially after 2008 to help fund the sharp rise in government spending. This was markedly different from the pre-crisis period (2000–2007) in which governments generally funded spending from revenue collection (and in fact ran surpluses in most years; Box Figure 1).

BOX FIGURE 1 **The link between government revenue and spending in the 29 high income countries was temporarily disconnected during economic shocks as deficits were funded by higher public debt**

a. General government revenue and spending as a share of GDP (%)



b. General government net lending/borrowing as a share of GDP (%)



Data source: International Monetary Fund *[9]*.

During major economic shocks, government health spending as a share of general government spending might present a misleading sense of health priority. The sharp rise in the denominator (general government spending) might suggest a drop in priority, even when the numerator (government health spending) has meaningfully increased.[1] Similarly, government health spending as a share of government revenue might also present a misleading rise in priority.

In such volatile periods, it might be more prudent to gauge health priority by government health spending in both absolute terms and relative to historical trends. This helps abstract from instability in macro-fiscal variables and provides a better sense of whether health priority has increased or declined relative to what might have been expected before the shock.

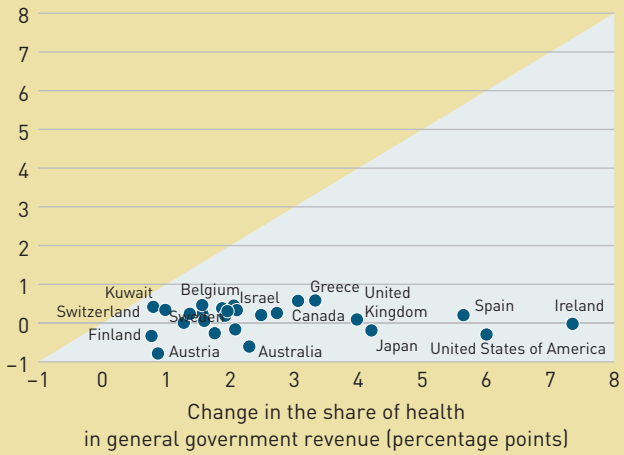
In 2008 and 2009—the height of the 2008 global financial crisis—average GDP per capita fell 3% a year, general government spending per capita rose 5.6% and general government revenue per capita declined 4%. Accordingly, government health spending as a share of general government spending fell in 10 countries, while government health spending as a share of government revenue rose in all the HIC-29 countries except Qatar (Box Figure 2a). Government health spending per capita rose in all 29 countries through this period, and 23 out of 29 recorded a rise relative to pre-crisis trends (Box Figure 2b).

(continued)

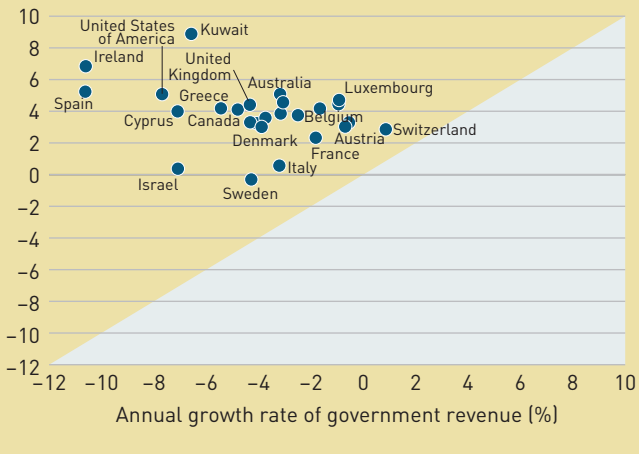
BOX 3.2 (continued)

BOX FIGURE 2 Bias measuring priority during economic shocks

a. Change in the share of health in general government spending and revenue, 2008–2009 (percentage points)



b. Growth in general government spending and revenue, 2008–2009 (%)



Note: Outliers (Qatar, Singapore and United Arab Emirates) were excluded for visualization purposes. Reference year = 2007.
Data source: International Monetary Fund *[9]*.

Box note

1. Because these are ratios, what ultimately matters is the movement of government health spending relative to general government spending. If general government spending rises faster than government health spending, health priority will fall; conversely, if government health spending rises faster than general government spending, health priority will fall.

HIC-29. Consistent with the subtle shifts in the composition of government health spending by type of funding source mentioned in Figure 3.5, though there has been a commensurate shift in how health financing is pooled. The share of funds flowing though compulsory health insurance schemes fell, whereas the share flowing through government financing arrangements rose.[12]

This shift can be seen most clearly in countries with compulsory health insurance schemes. From 2000 to 2019, per capita spending through government financing arrangements rose 64.3%, while spending through compulsory insurance schemes rose a much more modest 21.1% (Figure 3.11a). As a result, government financing arrangements increased as a share of health spending, from 36.3% in 2000 to 38.0% in 2019, and the funds channelled through compulsory health insurance schemes declined from 38.7% to 34.7% (Figure 3.11b).

The HIC-29 can be categorized into three groups based on their dominant health financing scheme in 2019 (Annex 2):[13]

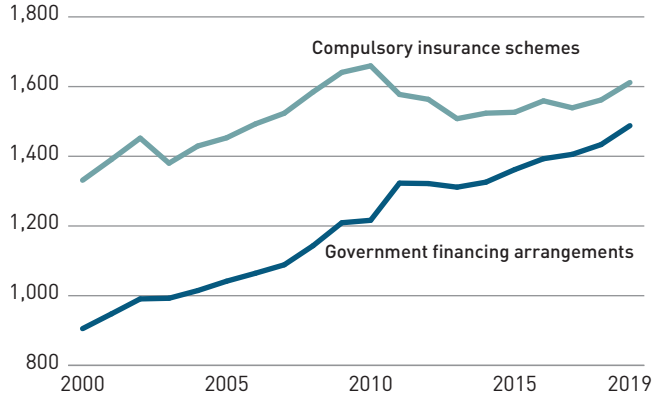
- 17 countries where health spending is financed predominantly by government budget schemes.
- 10 countries where health spending is financed predominantly by compulsory insurance (social health insurance and compulsory private insurance).
- 2 countries that sit somewhere in between.

12. In the System of Health Accounts 2011 framework, financing schemes (HF) are the main types of financing arrangements through which health services are paid for and obtained by the population. Government schemes (HF.1.1) include central, federal, regional and local government spending, financed with noncontributory revenue (government budget transfers). Compulsory contributory health insurance schemes (HF.1.2) include social health insurance schemes, financed through social health insurance contributions and government budget transfers, and compulsory private insurance schemes, financed through compulsory prepayments and government subsidies.

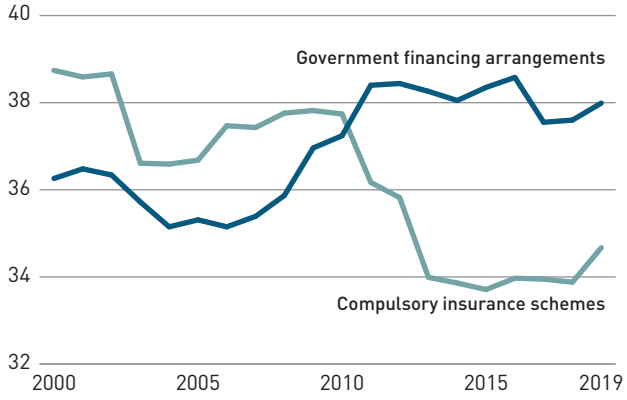
13. Countries were grouped into four types of health financing systems, based on their dominant health financing arrangement in 2019: household out-of-pocket payment (accounted for more than 50% of total health spending, which was not the case in any of the HIC-29 in 2019), government schemes (accounted for more than 60% of spending by government schemes and compulsory insurance schemes in total), compulsory insurance (accounted for more than 60% of spending by government schemes and compulsory insurance schemes in total) and other schemes (countries that did not fit into the other three groups, where government schemes and compulsory insurance schemes account for 40%–60% of total health spending financed through government and compulsory financing arrangements).

FIGURE 3.11 Funds channelled through government financing arrangements are increasingly being used to finance health systems

a. Spending through government financing arrangements and compulsory insurance schemes per capita



b. Spending through government financing arrangements and compulsory insurance schemes as a share of health spending



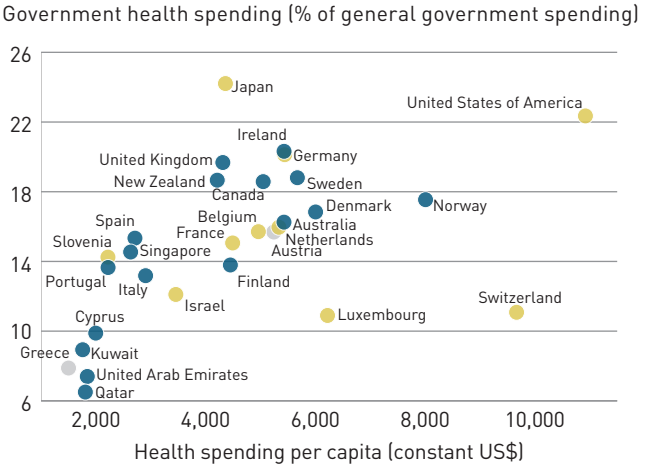
Note: Excludes countries with no compulsory health insurance scheme (Denmark, Kuwait, Norway, Qatar, Sweden and the United Kingdom). The United States of America is not included due to changes in accounting practices and classification of financing schemes from 2014, following the implementation of the Affordable Care Act.
Data source: WHO Global Health Expenditure Database, 2021.

The dominant health financing scheme does not appear to have a systematic relationship with either health spending per capita or health priority in the government resource envelope (Figure 3.12a). And there is no obvious link to the dominant health financing arrangement in the relationship between growth in health spending per capita and growth in GDP per capita (Figure 3.12b).

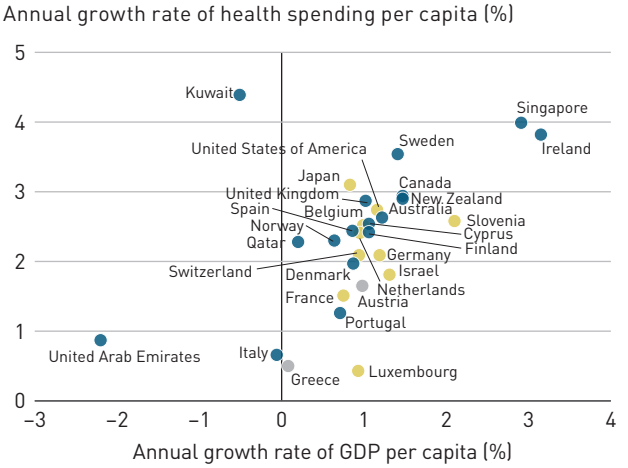
The orientation of the health financing system might influence the effect of population ageing on revenue for health. The shrinking of labour markets expected as populations age and retire could be an issue for countries that rely on wage-related contributions to social health insurance to financing health spending *[10]*. However, any declines in social health insurance contributions might be offset to some degree by reduced utilization if membership is linked to employment. Ageing might also affect countries that rely on income taxation to finance government health

FIGURE 3.12 Health financing arrangement was not related to either health spending or health priority in the government resource envelope in the 29 high income countries

a. Government health spending as a share of general government spending and health spending per capita, 2019



b. Annual growth rate of health spending and GDP, 2000–2019 (per capita)



Government financing arrangements Compulsory insurance schemes Other

Data source: WHO Global Health Expenditure Database, 2021.

spending, albeit to a lesser extent (as income is a broader base than wages), declines in general government revenue will affect the entire budget and decreases in one tax handle could be offset by rises in others (such as taxes on consumption and profits). But greater longevity, healthier ageing and rising pension ages, among other factors, could help offset some of these issues by encouraging workers to remain in the workforce for longer.

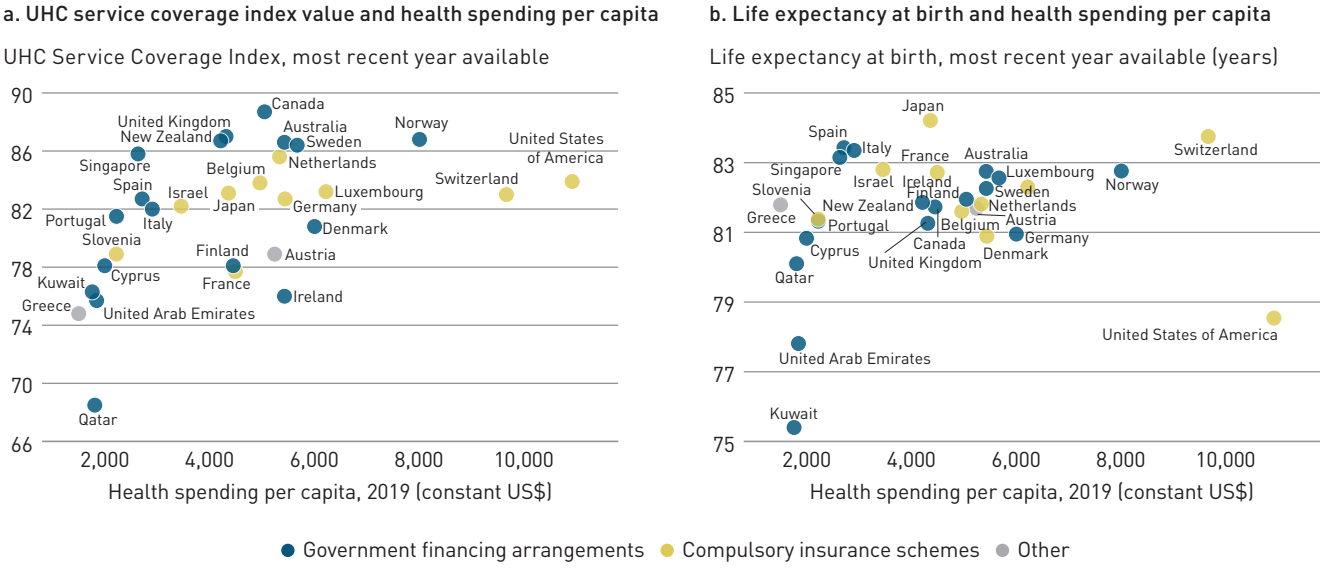
The dominant health financing arrangement is less important than health spending in determining coverage and health outcomes. Consistent with global trends, as health spending per capita rises in the HIC-29, so too do the UHC service coverage index value[14] (Figure 3.13a) and health outcomes (proxied by life expectancy; Figure 3.13b). The wide variation in life expectancy at the lower and upper ends of health spending per capita shows that spending alone is not enough to improve health outcomes. The United States of America is an outlier in this regard, with a much lower life expectancy than most of the HIC-29 despite its much larger spending envelope. In this context, the dominant financing arrangement is not related to either coverage or outcomes.

Out-of-pocket spending has declined as a share of health spending in the 29 high income countries, despite growing as a share of household total consumption

Reliance on out-of-pocket spending is decreasing in most of the HIC-29. Out-of-pocket spending as a share of health spending fell from 21.9% in 2000 to 17.3% in 2019, its lowest value in the period (Figure 3.14). The only countries in the HIC-29 where the share of out-of-pocket spending rose were Austria, France, Germany and Portugal (though in France and Germany the share was less than 15% in 2019). Despite the generally decreasing trend, out-of-pocket spending still accounted for more than 30% of health spending in Cyprus, Greece, Portugal and Singapore. However, Cyprus and Singapore greatly reduced the out-of-pocket share from 2000 to 2019: Cyprus from 55.9% to 30.6% and Singapore from 48.2% to 31.4%. Other countries that substantially reduced the out-of-pocket share were Qatar (from 30% to 12.3%) and Kuwait (from 25.5% to 11.8%).

Out-of-pocket spending on health has become less sensitive than household total consumption to the economic cycle over time —and particularly so during the economic

FIGURE 3.13 The dominant health financing arrangement is less important than health spending per capita in determining coverage and health outcomes in the 29 high income countries



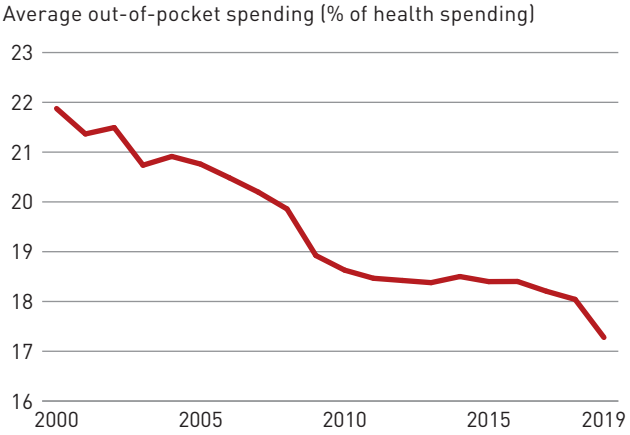
Data source: WHO Global Health Expenditure Database, 2021.
Data source: World Health Organization *[11]*, World Bank *[12]*.

14. 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.

downturn. From 2008 to 2013, during the global financial crisis and its aftermath, household total consumption per capita declined 1% a year on average, but average out-of-pocket spending on health per capita grew 0.2% a year. However, the growth in out-of-pocket spending per capita decelerated considerably in this period, relative to its pace both before the crisis (2% a year between 2000 and 2007) and after (1.5% a year between 2013 and 2019). In the period following the crisis, growth in out-of-pocket spending per capita (1.5% a year) was slower than growth in total household consumption (2.1%), whereas before the crisis, out-of-pocket spending grew faster (2% a year compared with 1.7% per year; Figure 3.15a).

Out-of-pocket spending on health as a share of household total consumption[15] continued to grow rapidly in the HIC-29, meaning that households spent more on health from their total budget than in the past. The average share of out-of-pocket spending in household total consumption was 2.9% in 2019 (ranging from 0.5% in Qatar to 5.5% in Switzerland), up from 2.7% in 2000. The out-of-pocket share of household total consumption increased in 22 countries and declined in 7 (Cyprus, Finland, Israel, Luxembourg, Qatar, Singapore and United Arab Emirates). Much of the overall increase occurred during the global financial crisis and its aftermath, when the out-of-pocket share rose from 2.8% to a peak of 3.0% in 2016, reversing the declining trend before the crisis. The share has declined since then, as growth in household total consumption has outstripped growth in out-of-pocket spending (Figure 3.15b).

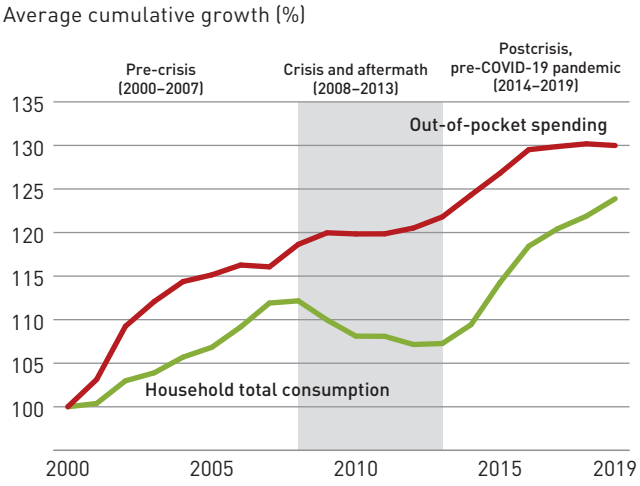
FIGURE 3.14 Out-of-pocket spending decreased as share of health spending in the 29 high income countries but increased in per capita terms



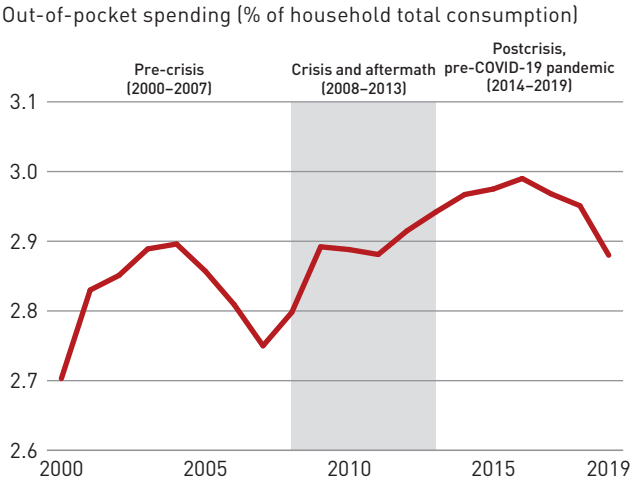
Data source: WHO Global Health Expenditure Database, 2021.

FIGURE 3.15 The share of out-of-pocket health spending in household total consumption has increased in the 29 high income countries

a. Average cumulative growth in out-of-pocket spending and total household consumption per capita



b. Average out-of-pocket spending as a share of household total consumption



Note: The cumulative growth rate for each country was calculated using out-of-pocket spending and total household consumption per capita in constant (2019) national currency units. The conversion from current values to constant values was made with a GDP deflator. Base year 2000 = 100.
Data source: WHO Global Health Expenditure Database, 2021.

15. Household total consumption is measured here through the national accounts aggregate of private final consumption, which is the monetary value of the consumption of households and nonprofit institutions serving households, including auto-consumption (in market prices).

Budget allocation mechanisms are becoming increasingly important to health in high income countries; looking forward, as demands on government budgets rise, it will be essential to ensure that health resources are used carefully to meet equity and efficiency goals

A prominent feature of the past two decades is the increased role of public spending on health, particularly through government budget allocation. In addition, government financing arrangements have been resilient in the face of the downturn in economic activity during the global financial crisis and the fiscal consolidation in its aftermath when health has been given the deserved priority. This likely reflects government's additional discretionary flexibility, through the annual budget, to increase health spending and target it as required.

This flexibility is not automatically available to compulsory insurance schemes without transfers from the government budget. Compulsory insurance schemes are, by their nature, more restricted than government budgets in what they can spend funds on (beneficiary packages) and on whose behalf (beneficiaries). Government budgets, in contrast, are more universal in nature, with spending not linked to membership. During economic crises, social health insurance schemes thus face the potential challenge of a declining revenue base without government support. Moreover, if unemployment leads to reduced membership, there might also be implications for universal health coverage if people lose coverage and financial protections. In each case, governments, via the budget, have an essential backstopping role.

The dynamics of the COVID-19 pandemic shock differ somewhat from those of the global financial crisis. Unlike the global financial crisis, the COVID-19 pandemic shock originated as a health-related shock requiring a health response. Additionally, the immensity of the economic shock has required a commensurate fiscal response in the form of wage and business support and other countercyclical social spending.

Early indications are that much of the spending response to the COVID-19 pandemic in high income countries has been financed by higher government health spending. In addition to funding necessary spending on diagnostics, therapeutics and vaccines to manage the effects of the pandemic, government spending has more than offset declines in out-of-pocket payments and voluntary arrangements. Despite the rise in government health spending, the sheer size of the fiscal response to the COVID-19 pandemic (11.8% increase per capita in the HIC-29 in 2020 alone, fuelled in part by higher public debt) will likely cause government health spending as a share of total government spending to decline. As with the global financial crisis, this decline will not necessarily indicate lower health priority. A more relevant measure of health priority will be government health spending per capita and its growth relative to pre-pandemic trends.

Looking forward, countries should resist backsliding in health investment after the immediate needs of the COVID-19 pandemic wane. Addressing backlogs and avoiding deteriorations in health outcomes are likely to be major enduring issues in high income countries' health systems *[13]*. The pandemic has shown that ongoing investment in common goods *[14]* for health—in particular, pandemic preparedness and contributions to health security—are critical in and of themselves and as part of the broader path to universal health coverage. Moreover, ongoing changes in demographic structures in high income countries plus climate-related impacts on health will only increase the need for more and better finance for health, with public financing institutions at the forefront *[15]*.

Against this backdrop of rising demands, and the central role of government in ensuring health for all, high income countries will need to ensure that health resources are used carefully to meet equity and efficiency goals. More public spending on health will be needed in the future if countries want to improve health and well-being (which is what people want)—but also in the immediate term, because of major pressures due to COVID-19 and its fallout (long COVID-19, mental health, the backlog and the like), and in the medium term, because of lack of preparedness, low investment in public health and primary health care, and climate change.

Continued growth in health spending will eventually place undue pressure on spending envelopes, which might elicit blunt policy responses. Many high income countries are already trying to slow the growth in health spending. Some are moving to limit price growth by cutting or slowing wage growth, by introducing cost-sharing (through co-payments or other market-based mechanisms) or by adopting hard budget caps or other fiscal rules.

Governments should act strategically during the budget allocation process, support ongoing reform and drive innovation without sacrificing public health goals *[15]*. Such measures can help realize public policy objectives to improve health outcomes, health security and health equity.

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4

Health spending during the COVID-19 pandemic

EARLY EVIDENCE

Key messages

- Early estimates in 22 countries, mainly high income economies, indicate that health spending rose substantially in 2020, more than in previous years. Spending patterns in most low and middle income countries remain unknown.
- Growth in health spending in 2020 was driven primarily by higher public spending that flowed through government and compulsory insurance financing arrangements, whereas out-of-pocket spending fell in almost all the countries analysed.
- The share of health spending in total general government expenditure decreased in 2020 in 15 of 22 countries with available data, as total general government expenditure grew at a higher rate than public spending on health.
- Out-of-pocket spending as a share of total household consumption rose slightly in 2020 in 17 of 19 upper-middle and high income countries with available data, because the decline in total household consumption exceeded the decline in out-of-pocket spending. The evolution of out-of-pocket spending in low and middle income countries remains uncertain.
- Government health spending on COVID-19 activities varied widely across 16 countries with available data. In 2020, most current health spending on COVID-19 went to treatment costs, followed by testing/tracing and medical goods.

The COVID-19 pandemic has triggered radical societal and economic changes around the globe. The health sector, deeply affected, now involves new actors, new priorities and interventions, and amplified socioeconomic challenges, as well as changes to fiscal and political landscapes. In this context, resilience and sustainability are key for health systems to respond to emergencies and ensure essential health services *[1].*

In 2020, the first year of the COVID-19 pandemic, nearly all countries responded with exceptional budget allocations that included a relatively small portion for the health sector *[2]*, as most additional resources were dedicated to social protection and economic stabilization. Tracking health spending enables transparency and accountability in how these allocations were actually spent. Comprehensive, comparable and timely data on health spending are essential for policy makers, ministries of health, international organizations and civil society, to understand how health systems are coping with the pandemic and how essential services are sustained and to guide future investments for universal coverage and health security.

Therefore, how much countries spend on COVID-19, and on which activities, is of great interest. Equally important are country-level changes in overall health spending patterns during the pandemic. This chapter presents early evidence on these topics using preliminary health accounts data 2020 from 30 countries and identifies the data gaps and further efforts needed in data collection and analysis.

Preliminary data and methodology

Health spending data are usually reported with a two-year lag: 2019 is the most recent year with available health spending statistics in the December 2021 version of the Global Health Expenditure Database. However, some countries have collected and estimated, on a preliminary basis,[1] two types of data on health spending for 2020, following the System of Health Accounts (SHA 2011) framework:[2]

- Estimates of overall health spending: 22 countries provided preliminary estimates of current health expenditure for 2020, without necessarily identifying whether the spending was for COVID-19 or for other diseases and conditions. These data allow for comparison of health spending in 2020 with that in previous years. Of the 22 countries, 17 are high income,[3] 3 are upper-middle income (Colombia, the Islamic Republic of Iran, Mexico), one is lower-middle income (Bhutan) and one is low income (Niger).[4] For most of these countries, preliminary health spending is reported only by health financing schemes (HF), according to the SHA 2011 framework.
- Estimates of health spending on COVID-19: 16 countries provided preliminary estimates of 2020 health spending on COVID-19 activities financed through government and compulsory insurance schemes. Of these 16 countries, 12 are high income, 1 is upper-middle income (Guatemala), 2 are lower-middle income (Ghana, Senegal) and 1 is low income (Burkina Faso). Box 4.1 details the methodology of reporting COVID-19 spending under the SHA 2011 framework.[5]

1. The data analysed in this chapter are not final and will likely be revised in 2022. Moreover, some data issues can affect comparability between countries, particularly for health spending on COVID-19. Finally, the country-level data available limit the analysis of 2020 health spending for low and middle income countries.

2. The health spending data analysed in this chapter follow the SHA 2011 framework and its boundaries for current health expenditure, excluding capital formation in the health system *[3].* Therefore, some spending on essential activities related to COVID-19 response—both spending inside the health sector (such as research and development) and spending outside the health sector (such as spending on water, sanitation and hygiene; social assistance; income assistance; law enforcement and controls; expenses for social distancing and remote working; coordination not specific to the health sector; animal health and the like—are not included.

3. The income group classification used in this chapter is the World Bank's classification for the year 2019.

4. The source of preliminary 2020 overall current health spending for Austria, Canada, Chile, Colombia, Estonia, Finland, Germany, Iceland, Ireland, Italy, the Republic of Korea, Mexico, the Netherlands, Norway, Poland, Portugal, Slovenia, Sweden and the United Kingdom is the OECD, WHO and Eurostat Joint Health Accounts Questionnaire 2021; the source for Bhutan, the Islamic Republic of Iran and Niger is preliminary health accounts studies and statistics shared by ministries of health.

5. The source of preliminary COVID-19 health spending for Canada, Chile, Croatia, Czechia, Estonia, Germany, Iceland, Ireland, Israel, the Republic of Korea, Luxembourg and Slovenia is the Organisation for Economic Co-operation and Development (OECD), WHO and Eurostat Joint Health Accounts Questionnaire 2021; the source for Guatemala is the WHO Health Accounts Questionnaire 2021; the source for Burkina Faso, Ghana and Senegal are ad hoc studies on COVID-19 spending shared by the countries' ministries of health *[4, 5, 6].*

BOX 4.1

Data collection and methodology for tracking health spending on COVID-19

Overall health spending and COVID-19 spending estimates for 2020 are preliminary estimates provided by countries' ministries of health or other national authorities and will most likely differ from final estimates in the Joint Health Accounts Questionnaire (JHAQ) and the Global Health Expenditure Database during the 2022 data collection.

The data follow the System of Health Accounts (SHA 2011) boundaries for current health expenditure: final consumption of goods and services on activities with the primary purpose of improving, maintaining and preventing the deterioration of the health status of persons and mitigating the consequences of ill-health through the application of qualified health knowledge. Capital formation in the health system is also reported under the SHA 2011 framework as a separate aggregate *[3]*. The SHA 2011 framework does not offer a complete view of all the resources and transactions involved in the response to the COVID-19 pandemic, but it nonetheless provides important information about the pandemic's impact on health system financing. Moreover, it can be adapted to allow countries to identify within its framework specific health spending items related to COVID-19.

The Organisation for Economic Co-operation and Development (OECD), Eurostat and WHO have included specific items related to health spending on COVID-19 in the 2021 version of the JHAQ, an annual data collection process in OECD and European Union countries: five items on current health expenditure on COVID-19, crossed with SHA 2011 classifications of financing schemes (HF) and health care providers (HP), and one item each on capital health spending and general health provider economic support related to COVID-19 (Box Table 1).

In 2021, 42 countries participated in the JHAQ data collection; 19 of them reported preliminary overall health spending estimates for 2020 and 12 of them reported preliminary estimates of health spending on COVID-19. Much of the data analysed in this chapter come from these countries. This chapter also includes data from other initiatives—in particular, those in West African countries that aim to rapidly assess health spending on COVID-19 using the SHA 2011 framework—in order to provide timely information to policy makers *[4, 5, 6]*

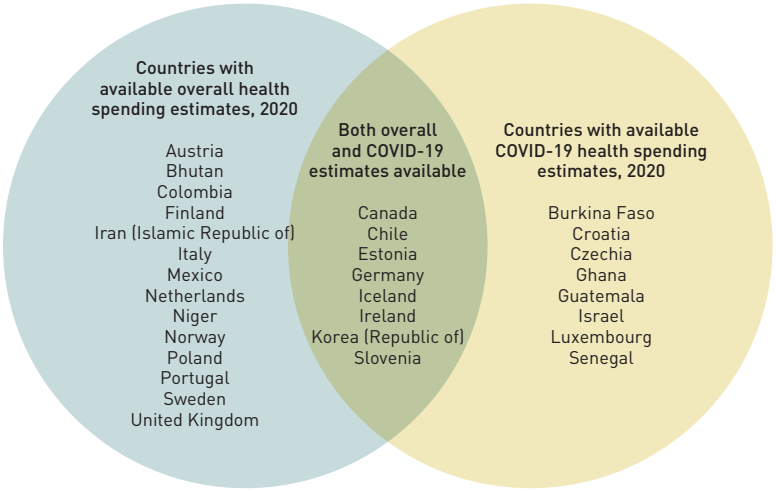
Despite all these preliminary data, countries remain uncertain of how health financing evolved in 2020 and how much has been spent on COVID-19. Moreover, most of the available data on health spending on COVID-19 is limited to spending by government and compulsory insurance arrangements (HF.1 under the SHA 2011 classification of financing schemes) and do not include voluntary arrangements or out-of-pocket payments (see Annex 4). Finally, estimates of health spending on COVID-19 were not built during a complete health accounts process, so a comprehensive collection and analysis of all the transactions in the health system might yield different results.

BOX TABLE 1 Spending reporting items related to COVID-19 on the 2021 Joint Health Accounts Questionnaire

Special reporting items to track COVID-19 spending within current health expenditure:
HC.COV.1 COVID-19 related treatment costs
HC.COV.2 COVID-19 related costs for testing and contact tracing
HC.COV.3 COVID-19 related costs for vaccination
HC.COV.4 COVID-19 related costs for medical goods
HC.COV.5 Other COVID-19 related health care costs (included in current health expenditure)
Special health care related items to track COVID-19 spending outside current health expenditure:
HCR.COV.1 COVID-19 related provider support
Special reporting items to track COVID-19 spending within capital expenditure:
HK.COV.1 COVID-19 related investment costs

Source: Joint Health Accounts Questionnaire data collection 2021.

FIGURE 4.1 The 30 countries reporting preliminary health spending estimates for 2020



Source: Joint Health Accounts Questionnaire and Global Health Expenditure Database data collection 2021.

In total, data on health spending from 30 countries[6] were analysed, with 8 countries providing both 2020 overall estimates and COVID-19 spending estimates (Canada, Chile, Estonia, Germany, Iceland, Ireland, the Republic of Korea and Slovenia; Figure 4.1; see also Annex 3).

Besides the methodological and data quality challenges for the early available evidence, the phase of the COVID-19 pandemic in 2020 differed considerably across the 30 countries analysed in this chapter (Box.4.2). The measures that countries took to control the pandemic in 2020 also varied widely. Therefore, comparisons between countries—in particular, comparisons of health spending on COVID-19—must be made with caution.

BOX 4.2

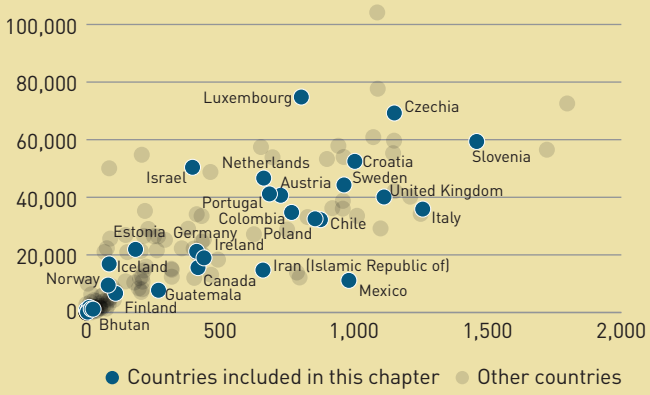
The pandemic has affected countries in different ways

From the identification of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in December 2019 until November 2021, more than 249 million confirmed cases and more than 5 million deaths due to coronavirus disease 2019 (COVID-19) have been reported *[7]*. During the first year of the pandemic (2020), 84.5 million people were infected, nearly 5 million of them were hospitalized and almost 2 million of them died due to COVID-19 *[8]*.

In the 30 countries analysed in this chapter, 50.5 million people were infected between January 2020 and November 2021, and 1.2 million died. During 2020, 17.5 million cases and more than 500,000 deaths were reported in these 30 countries, representing 21% of global reported cases and 29% of global reported deaths in 2020 *[7,8]*. Some of the countries analysed were not severely hit by COVID-19 during the first year of the pandemic (Bhutan, Burkina Faso, Ghana, Niger, the Republic of Korea and Senegal had fewer than 2,000 cases per million population), whereas others were among the most affected in the world, with more than 50,000 cases per million population in 2020 (Box Figure 1; see also Annex 3). However, the quality of the COVID-19 case and death registries varies across countries. In particular, low and middle income countries, with less testing and tracing capacities, are likely to underestimate the number of confirmed cases and deaths by COVID-19 *[7]*.

BOX FIGURE 1 Some countries were struck more severely than others during the first year of the COVID-19 pandemic

Confirmed COVID-19 cases per million population, 2020



Note: COVID-19 confirmed cases and deaths rates per million population are only for 2020 in order to present the epidemiological situation in the same year as health spending estimates. Therefore, the figure does not reflect the evolution of the pandemic in 2021 or the important variation by period within 2020. The figure does not present the data point for Peru, with more than 2,000 COVID-19 deaths per million population, for visibility purposes.
Data source: WHO *[7, 8]*.

6. Of the 189 WHO Member States that have usually reported health spending in the Global Health Expenditure Database in recent years, 30 (16%) are analysed in this chapter. The 30 countries are not a sample, as they were not randomly chosen but selected according to data availability. Therefore, they are not necessarily representative of trends in all WHO Member States.

Important changes in the structure of total health spending in 2020

HEALTH SPENDING ROSE SUBSTANTIALLY IN 2020, MORE THAN IN PREVIOUS YEARS

Analysing preliminary health spending estimates for 2020, total and by type of financing arrangement as classified under the SHA 2011 framework,[7] helps identify patterns in how health financing, from the health spending perspective, evolved in 22 countries (mainly high income economies) during the first year of the response to the COVID-19 pandemic.

On average, health spending per capita in the 22 countries with preliminary estimates increased by 4.9% in real terms in 2020, considerably more than the 2% average year-over-year growth rate between 2017 and 2019 (Figure 4.2). Health spending per capita rose in real terms in all but 3 of the countries, and in 16 of 22 countries the growth rate was higher in 2020 than in 2019. However, growth rates varied widely. The highest (more than 10%) were in Bhutan, Canada, Estonia, Ireland and the United Kingdom; rates were lower (less than 2%) in Finland, Germany, the Republic of Korea and Sweden; and health spending per capita fell in Chile, the Islamic Republic of Iran and Portugal (Figure 4.3a).

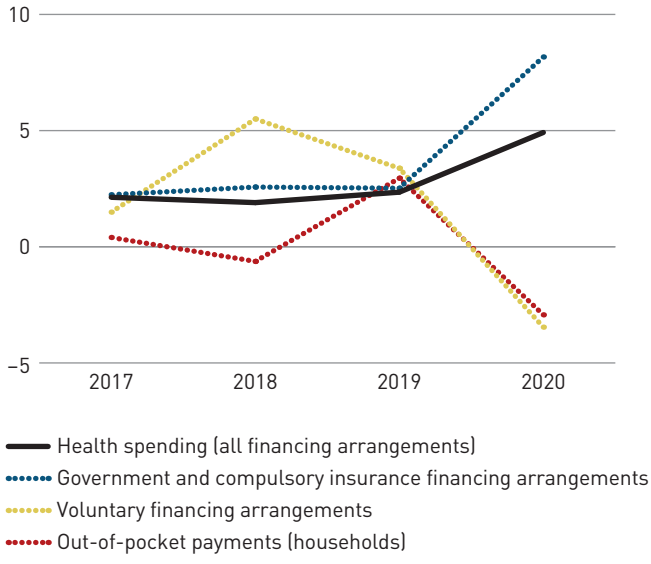
Health spending as a share of gross domestic product (GDP) increased in 2020, due to the combination of economic recession (reducing the denominator) and higher health spending growth (increasing the numerator). GDP per capita fell by 4.8% in real terms in all the countries analysed except the Islamic Republic of Iran and Ireland. At the same time, health spending rose in almost all countries (see Figure 4.3a). Consequently, health spending as a share of GDP increased from 9.2% in 2019 to 10.1% in 2020 on average in the 17 high income countries and from 5.8% to 6.3% on average in the 5 low and middle income countries. The United Kingdom had the largest decline in GDP per capita (10.3%) and the largest increase in health spending as share of GDP (from 10.2% in 2019 to 12.8% of GDP in 2020). In the Islamic Republic of Iran, the only exception among the analysed countries, health spending declined (by 5.3%) while GDP per capita grew (by 6%), reducing health spending as a share of GDP from 6.7% in 2019 to 6% in 2020 (Figure 4.3b).

GROWTH IN HEALTH SPENDING IN 2020 WAS DRIVEN PRIMARILY BY HIGHER PUBLIC SPENDING THAT FLOWED THROUGH GOVERNMENT AND COMPULSORY INSURANCE FINANCING ARRANGEMENTS, WHEREAS OUT-OF-POCKET SPENDING DECREASED

The growth in health spending—8.1% in 2020 on average across the 22 countries analysed, compared with 2.4% a year on average from 2016 to 2019—was driven primarily by the increase in spending through compulsory financing

FIGURE 4.2 The growth rate of health spending was higher in 2020 than in previous years

Year-over-year growth rate, average of 22 countries with available data (%)



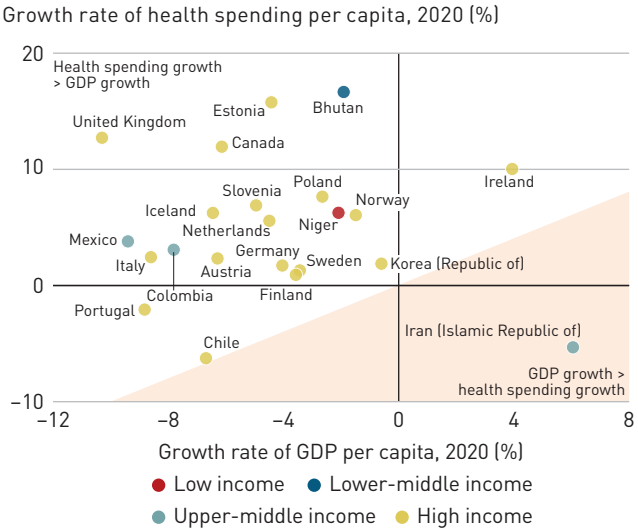
Note: Year-over-year growth rates were calculated using health spending per capita in constant national currency units. The conversion from current values to constant values was made with a GDP deflator.
Data source: Joint Health Accounts Questionnaire and Global Health Expenditure Database data collection 2021.

7. Under the SHA 2011 framework, financing schemes (HF) are the main types of financing arrangements through which health services are paid for and obtained by the population. This chapter considers three main categories of financing arrangements:
- Government and compulsory insurance spending correspond to the SHA category HF.1 (government schemes and compulsory contributory health care financing schemes). This category includes government financing arrangements (HF.1.1, including central, federal and regional, and local government spending, financed with non-contributory revenues, or government domestic revenues and external aid) and compulsory contributory health insurance schemes (HF.1.2, including HF.1.2.1 [social health insurance schemes, financed through SHI contributions and government budget transfers] and HF.1.2.2 [compulsory private insurance schemes, financed through compulsory prepayments and government subsidies]).
- Voluntary financing arrangements correspond to the SHA category HF.2 (voluntary health care payment schemes). This category includes voluntary health insurance schemes (HF.2.1), financing schemes by non-profit institutions serving households (HF.2.2) and enterprise financing schemes (HF.2.3).
- Out-of-pocket spending corresponds to the SHA category HF.3 (household out-of-pocket payments).

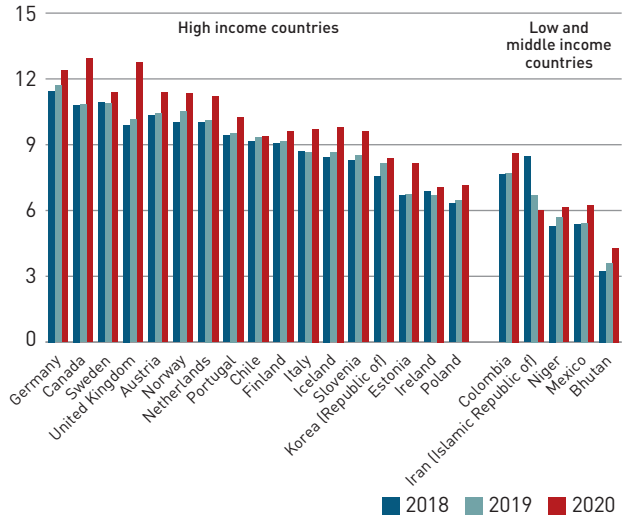
Rest of the world financing schemes (HF.4, for non-resident schemes) are not considered here (mostly not reported by countries).

FIGURE 4.3 Health spending as a share of GDP increased as a result of higher health spending and economic recession

a. Growth of health spending per capita and GDP per capita



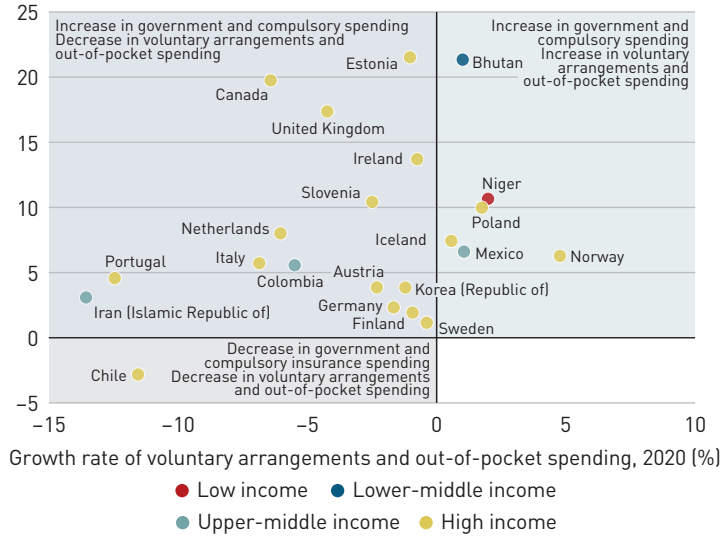
b. Health spending as share of GDP



Note: Growth rates were calculated using health spending per capita and GDP per capita in constant national currency units. The conversion from current values to constant values was made with a GDP deflator.
Data source: Joint Health Accounts Questionnaire and Global Health Expenditure Database data collection 2021; IMF *[9]* and OECD *[10]* for data on gross domestic product.

FIGURE 4.4 Health spending growth rates varied widely across countries

Growth rate of government and compulsory insurance spending, 2020 (%)



Note: Growth rates were calculated using spending per capita in constant national currency units. The conversion from current values to constant values was made with a GDP deflator.
Data source: Joint Health Accounts Questionnaire and Global Health Expenditure Database data collection 2021.

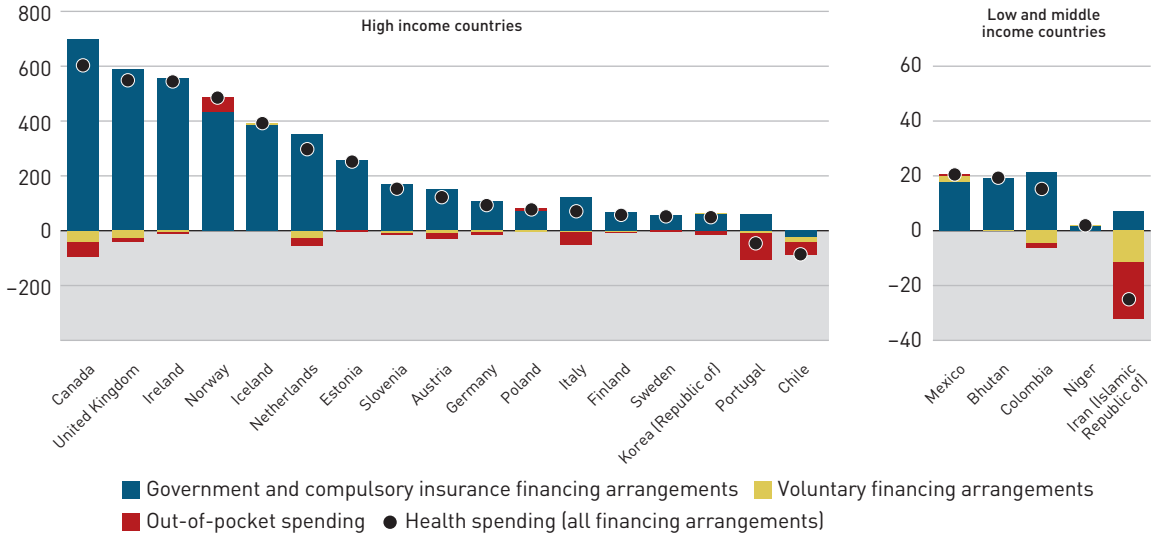
arrangements (that is, directly by government or through compulsory health insurance). By contrast, spending by voluntary financing arrangements fell 3.5%, compared with an increase of 2.6% a year from 2016 to 2019, and out-of-pocket payments fell 2.9%, compared with an increase of 0.6% a year from 2016 to 2019 (see Figure 4.2). Most of the 22 countries analysed, particularly in high income countries, followed this general pattern by financing arrangement. But growth rates varied widely. The highest growth rates in public spending through government and compulsory insurance arrangements (more than 15%) were in Bhutan, Canada, Estonia and the United Kingdom, whereas growth was more restrained in Finland, Germany and Sweden (Figure 4.4).

There was no direct relationship between the size of the increase in public spending (government and compulsory insurance) in 2020 and the size of the decrease in private spending (voluntary financing arrangements and out-of-pocket) that year. The countries where government spending increased most were not necessarily the countries where private spending decreased most (Figure 4.4, Figure 4.5).

The highest absolute increases in government and compulsory insurance spending per capita from 2019 to 2020 across the 22 analysed countries were in Canada (US$ 700), the United Kingdom (US$ 588), Ireland (US$ 555) and Norway (US$ 431). There were a few exceptions to the pattern of higher spending through government and compulsory insurance arrangements and lower voluntary financing arrangements and out-of-pocket spending. In Chile, health

FIGURE 4.5 Government and compulsory insurance arrangements were the main drivers of growth in health spending in 2020

Changes in health spending per capita, by financing arrangement category, 2020 (constant US$)



Note: The changes were calculated as the difference between 2019 and 2020 spending per capita in constant (2019) US dollars for each category of financing arrangements. Values greater than 0 represent an increase in health spending per capita for the considered category, and values below 0 represent a decrease. The conversion from current values to constant values was made with a GDP deflator.
Data source: Joint Health Accounts Questionnaire and Global Health Expenditure Database data collection 2021.

spending per capita decreased in real terms for all categories of financing arrangements. In the Islamic Republic of Iran and Portugal, health spending decreased, despite higher public spending, because spending financed through out-of-pocket payments and voluntary financing arrangements fell. And in Mexico, Norway and Poland, out-of-pocket payments rose (see Figure 4.5).

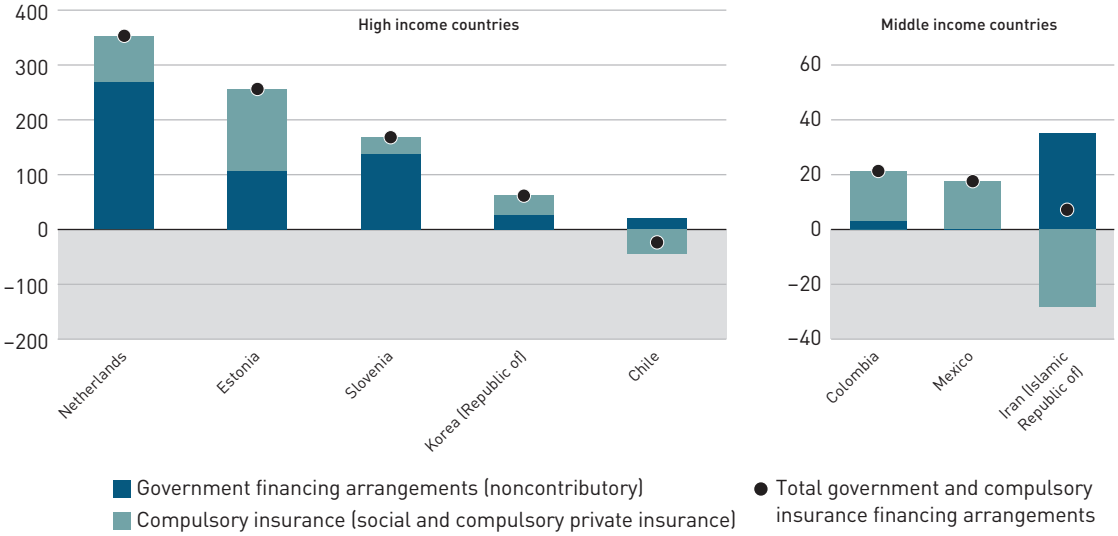
In countries where compulsory health insurance is the dominant financing arrangement, there was no clear pattern for which type of compulsory scheme drove the change in health spending, but funding through general government mechanisms (as opposed to compulsory insurance schemes) generally played a bigger role than in previous years. This expanded role was often through specific funds that financed health response to COVID-19 for the whole population (insured and non-insured). In the Netherlands and Slovenia, more than 75% of the increase in public spending was financed directly through government financing arrangements, despite historically small funding through this category (accounting for less than 10% of total health spending in previous years). In Estonia and the Republic of Korea, growth was driven by both types of funding, with compulsory insurance schemes playing a slightly bigger role, but with direct government financing arrangements accounting for a larger share of spending than in previous years. In Chile and the Islamic Republic of Iran, health spending per capita financed through government arrangements increased in real terms, whereas health spending financed through compulsory insurance decreased. In Mexico, most of the growth was through social health insurance schemes. The same was true in Colombia, despite reduced budget transfers to social health insurance (Figure 4.6).

THE SHARE OF HEALTH SPENDING IN TOTAL GENERAL GOVERNMENT EXPENDITURE DECREASED IN 2020 IN TWO-THIRDS OF THE COUNTRIES ANALYSED

Most countries around the globe applied countercyclical measures in response to the economic crisis caused by the COVID-19 pandemic and therefore increased total government expenditure. The only exceptions among the analysed countries were Colombia and the Islamic Republic of Iran, where total general government expenditure per capita decreased by 6% and 0.1%, respectively. In 15 of the 22 analysed countries, the growth in public spending on health from government and compulsory insurance schemes was less than the growth in total government expenditure, reducing government health spending as a share of total general government expenditure in 2020 (Figure 4.7). However, this

FIGURE 4.6 Government financing arrangements played a major role in health spending in 2020, even in countries where compulsory insurance schemes dominate

Changes in government and compulsory insurance health spending per capita, by subcategory of financing arrangement, 2020 (constant US$)

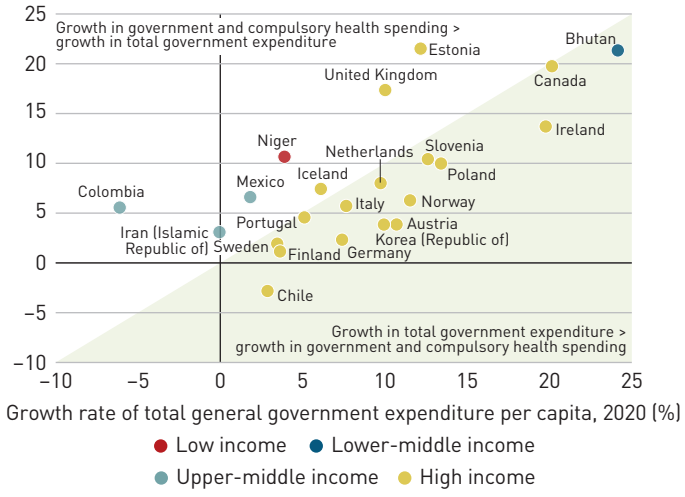


Note: The changes were calculated as the difference between 2019 and 2020 spending per capita in constant (2019) US dollars for each category of financing arrangements. Values greater than 0 represent an increase in health spending in 2020 for the considered category, and values below 0 represent a decrease. The conversion from current values to constant values was made with a GDP deflator. Austria, Germany and Poland, which also have compulsory insurance schemes, are not displayed because no 2020 estimate is available for government financing arrangements and compulsory insurance schemes separately.
Data source: Joint Health Accounts Questionnaire and Global Health Expenditure Database data collection 2021.

FIGURE 4.7 Total general government expenditure increased faster than public spending through government and compulsory insurance arrangements, and the share of health spending in total general government expenditure decreased in two-thirds of the countries analysed

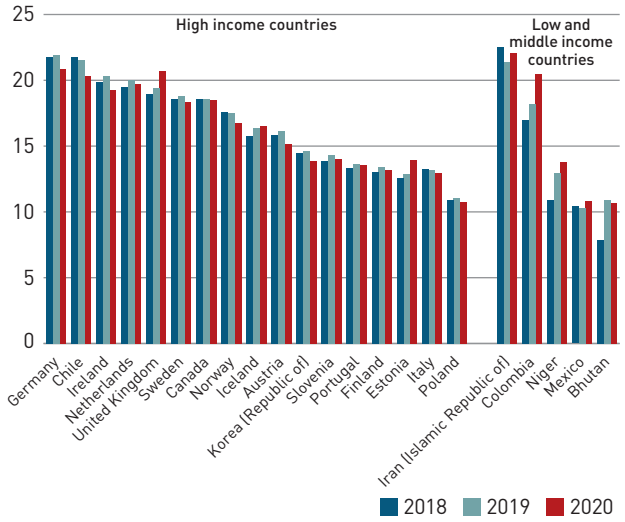
a. Growth in government and compulsory insurance health spending per capita and total general government expenditure per capita

Growth rate of government and compulsory insurance health spending per capita, 2020 (%)



b. Government and compulsory insurance health spending as share of total general government expenditure

Government and compulsory insurance health spending (% of general government expenditure)



Note: Growth rates were calculated using government and compulsory insurance health spending per capita and total general government expenditure per capita in constant national currency units. The conversion from current values to constant values was made with a GDP deflator. Government and compulsory insurance (HF.1) health spending includes compulsory prepayments to private insurance, which are not part of government spending but are included because of the lack of data by revenue for most of the countries in 2020. Therefore, compulsory schemes (HF.1) as a share of general government expenditure was higher than government spending as a share of general government expenditure in some countries: the Netherlands (where compulsory prepayments to private insurance account for 20% of government and compulsory insurance arrangements), Chile (15%), Germany (8%), Colombia (7%), the Republic of Korea (2.5%), Finland and Poland (less than 1% each).
Data sources: Joint Health Accounts Questionnaire and Global Health Expenditure Database data collection 2021; IMF *[9]* and OECD *[12]* for data on total general government expenditure.

decrease does not necessarily mean that governments did not respond to the health crisis or that they reduced the priority given to health; rather, it shows that substantial additional public resources were urgently needed for other purposes. During the pandemic, government spending on overall social protection and economic stabilization rose substantially. Furthermore, as mentioned above, the SHA 2011 framework's definition of current health spending excludes public spending in 2020 that was directly or indirectly linked to the enforcement of public health measures.

Moreover, the increased government spending in 2020 in response to the double shock (health and economic) triggered by the COVID-19 pandemic were exceptional. The additional expenditures were financed largely through public debt, and spending per capita is projected to fall across all country income groups in 2021 and 2022. This expected drop primarily reflects reduced capacity among many governments to further accumulate public debt and increase debt service *[11]*.

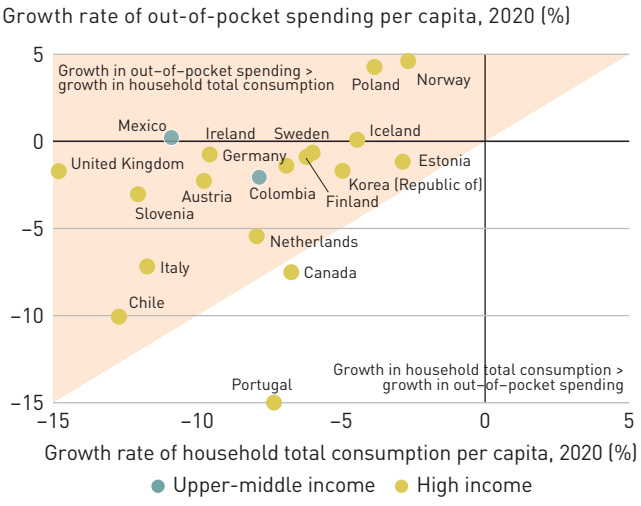
OUT-OF-POCKET SPENDING AS A SHARE OF TOTAL HOUSEHOLD CONSUMPTION ROSE SLIGHTLY IN 2020

Out-of-pocket spending fell slightly in most of the countries analysed (see Figure 4.5), but this decrease was related partially to lower utilization of health care services financed through out-of-pocket spending in 2020, resulting both from supply-side factors, such as staff availability and cancellation of elective care, and from demand-side factors, such as fear in seeking health care, travel restrictions and financial difficulties *[2, 13]*. Moreover, this decrease must be interpreted with caution because the preliminary estimates of out-of-pocket spending rely on less robust data sources than the estimates of government health spending.

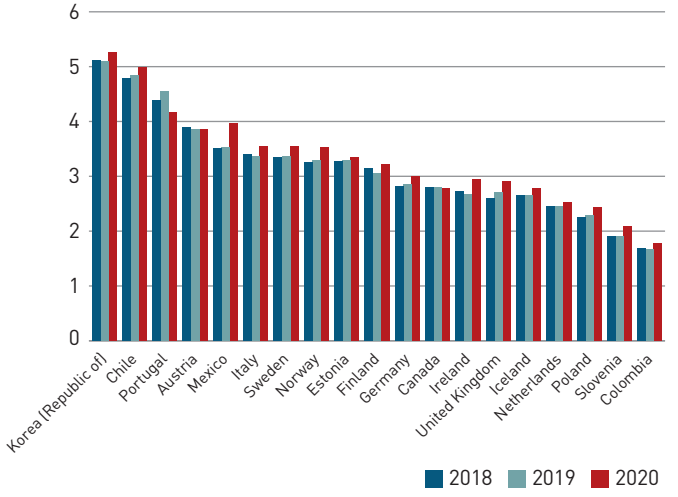
The decrease in out-of-pocket spending at the national level might, nevertheless, hide an increase in financial hardship on households due to health spending. Out-of-pocket spending decrease occurred as total household consumption fell due to the economic crisis. In the 19 OECD countries of the 22 countries analysed, for which preliminary national accounts data for 2020 were available, total household consumption[8] per capita fell 2.7%–14.8% in real terms, more than health out-of-pocket spending, except in Canada and Portugal (Figure 4.8a). Consequently, out-of-pocket spending as a share of total household consumption rose in 17 of 19 countries, possibly reflecting an increase in financial

FIGURE 4.8 Out-of-pocket spending as a share of total household consumption rose slightly in high income countries

a. Growth rate of out-of-pocket spending per capita and total household consumption per capita



b. Out-of-pocket spending as a share of total household consumption



Note: Growth rates were calculated using out-of-pocket spending per capita and private final consumption per capita in constant national currency units. The conversion from current values to constant values was made with a GDP deflator. Bhutan (where out-of-pocket spending accounted for 1.2% of private final consumption in 2019), the Islamic Republic of Iran (5.6%) and Niger (3.8%) are not displayed due to the lack of early estimates of private final consumption for 2020.
Data sources: Joint Health Accounts Questionnaire and Global Health Expenditure Database data collection 2021; OECD *[10]* for data on private final consumption.

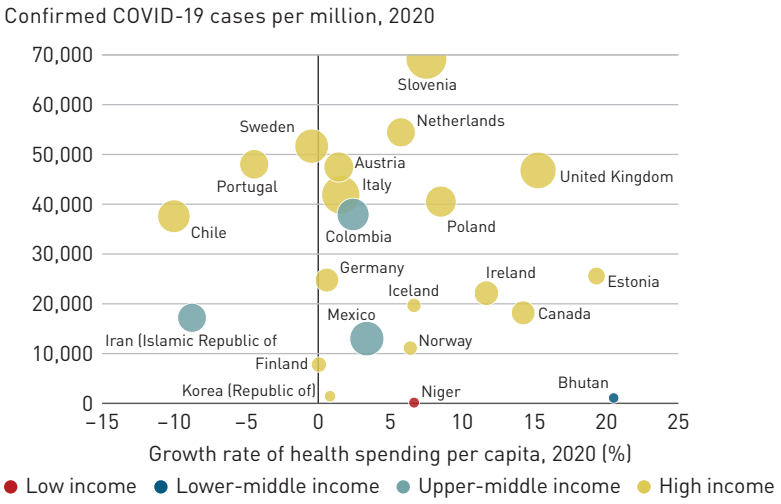
8. Household total consumption is measured here through the national accounts aggregate of private final consumption, which is the monetary value of the consumption of households and non-profit institutions serving households, including auto-consumption (valued at market prices).

hardship on households due to health spending. The latter would however need to be further investigated, as several high income countries also report higher household savings (Figure 4.8b). Moreover, the lack of low and lower-middle income countries in the set of countries analysed leaves uncertain the evolution of overall out-of-pocket spending in countries where it accounts for a high share of total health spending.

THE FACTORS BEHIND DIFFERENCES IN GROWTH OF HEALTH SPENDING REMAIN UNCLEAR

One possible factor behind the differences in growth rates of health spending is differences in how countries were affected by COVID-19. However, the available data do not reveal a clear relationship between growth in health spending and COVID-19 incidence or death rates in the 22 countries analysed (Figure 4.9). Other possible factors include what measures countries took against COVID-19 and when, as well as the health system's installed capacity; the level of preparedness for health security; the purchase mechanisms through which financing agents, such as sub-national health funds or social health insurance funds, pay health care providers for services; and other factors of interest that are related to health financing *[2, 14]*. Further analysis is still needed to better understand the relationship between the evolution of overall health spending and country responses to the pandemic.

FIGURE 4.9 There is no clear relationship between growth in health spending and number of COVID-19 cases or deaths



Note: Bubble size represents the number of confirmed deaths due to COVID-19 per million population in 2020. Growth rates were calculated using health spending per capita in constant national currency units. The conversion from current values to constant values was made with a GDP deflator.
Data sources: Joint Health Accounts Questionnaire and Global Health Expenditure Database data collection 2021; WHO *[7, 8]* for epidemiological indicators.

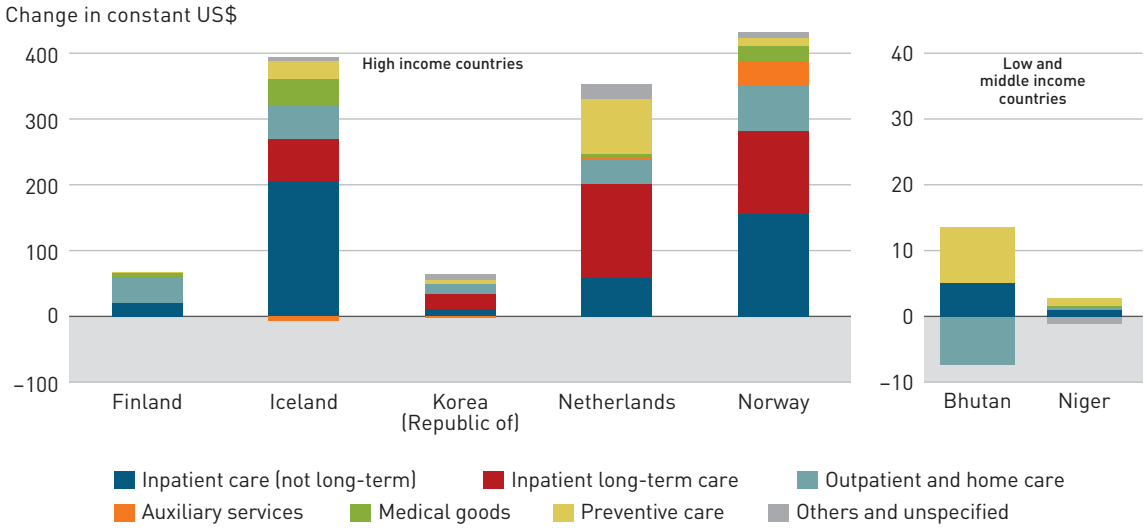
THE INCREASE IN HEALTH SPENDING HAS BEEN DRIVEN MAINLY BY HIGHER GOVERNMENT SPENDING ON INPATIENT CARE AND PREVENTIVE SERVICES

In the seven countries that provided preliminary estimates of health spending in 2020 by function (HC under the SHA 2011 framework), the increase in government and compulsory insurance spending was driven mainly by higher spending on inpatient care services in high income countries, except in Finland, where it was driven by spending on outpatient and home care. A large part of this increase in inpatient care was due to higher spending on long-term care for patients with high long-term dependency. Higher spending on preventive care services[9] was the main driver of growth in government scheme spending in Bhutan and Niger and an important factor in most of the high income countries analysed (Figure 4.10a). Long-term inpatient care, preventive care and health system governance had the highest growth rates in relative terms within government and compulsory insurance spending in 2020. Within private voluntary spending (voluntary financing arrangements and out-of-pocket payments), the decrease in health spending was driven primarily by lower spending on outpatient services. In Bhutan, Iceland and Norway, where private voluntary spending rose, growth was driven primarily by higher spending on medical goods (Figure 4.10b). However, given the preliminary nature of these data and the low number of countries that have produced estimates by function, it is not entirely clear how the COVID-19 pandemic affected overall health spending by type of service.

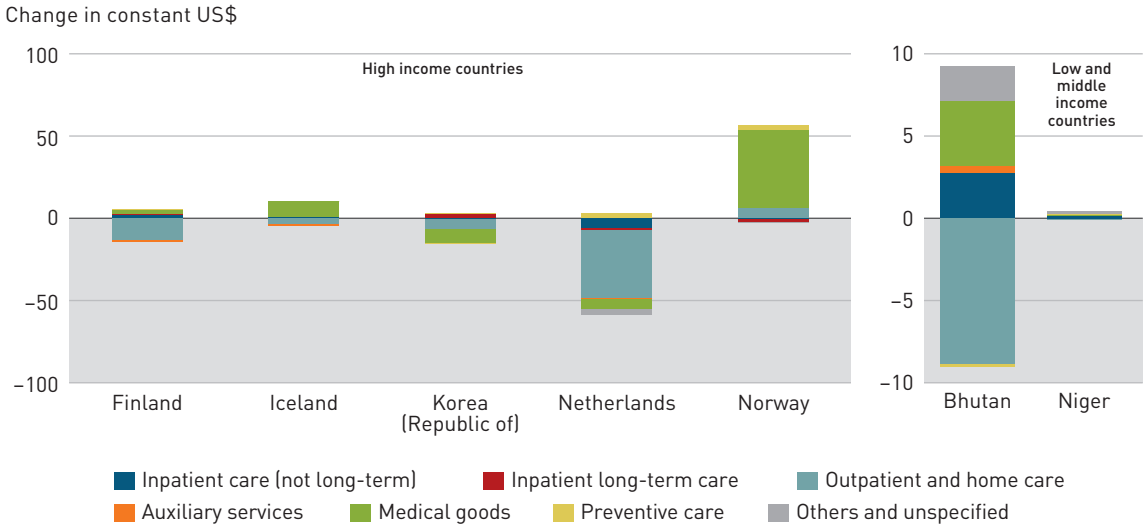
9. Health spending on preventive care (HC.6 under the SHA 2011 framework) includes information, education and counselling programmes, immunization programmes, early disease detection programmes, healthy condition monitoring programmes, epidemiological surveillance and risk and disease control programmes, and emergency preparedness and response programmes.

FIGURE 4.10 The increase in government and compulsory insurance health spending in 2020 was driven mainly by higher spending on inpatient care and preventive care

a. Changes in government and compulsory insurance health spending per capita, by function, 2020 (constant US$)



b. Changes in voluntary financing arrangements and out-of-pocket spending per capita, by function, 2020 (constant US$)



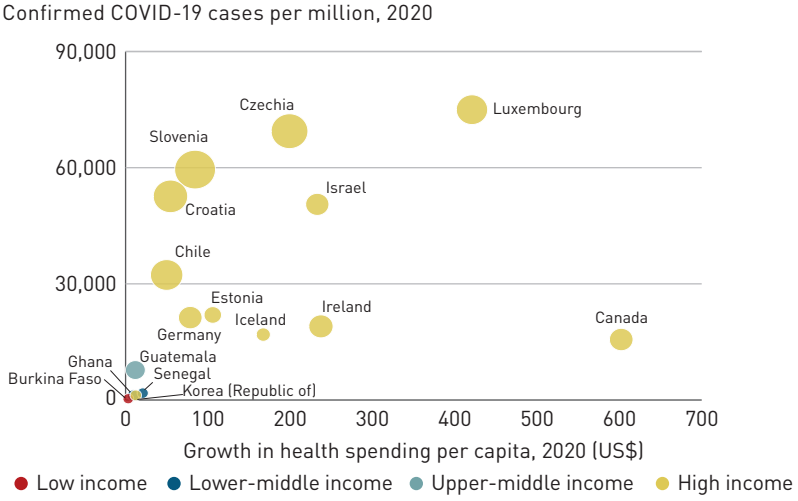
Note: The changes were calculated as the difference between 2019 and 2020 spending per capita in constant (2019) US dollars for each function and financing scheme category. Values greater than 0 represent an increase in health spending in 2020 for the considered category, and values below 0 represent a decrease. The conversion from current values to constant values was made with a GDP deflator. Inpatient services (not long-term) include the SHA 2011 categories of inpatient and day care for curative and rehabilitative services; inpatient long-term care includes the SHA 2011 categories of long-term (health) inpatient and day care services; outpatient/home care includes the SHA 2011 categories of outpatient and home care curative, rehabilitative and long-term (health) services.
Data source: Joint Health Accounts Questionnaire and Global Health Expenditure Database data collection 2021.

Preliminary estimates of health spending on COVID-19

HEALTH SPENDING ON COVID-19 VARIED WIDELY ACROSS COUNTRIES

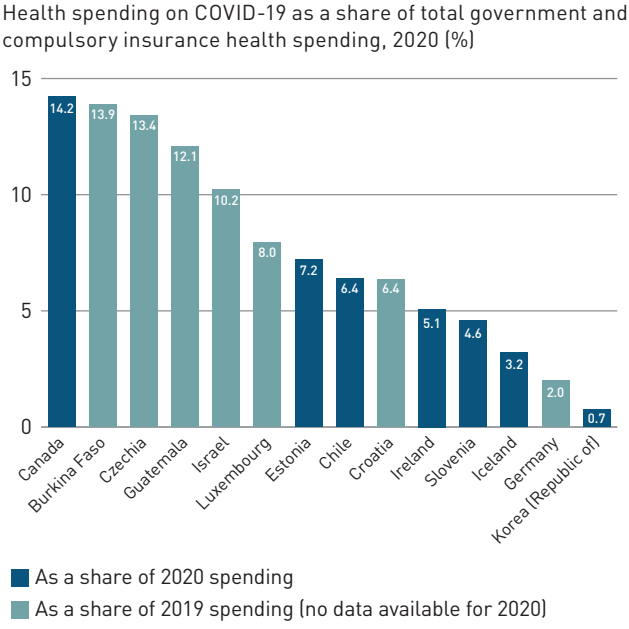
The preliminary estimates for 16 countries show that current health spending on COVID-19 in 2020 financed through government and compulsory insurance financing arrangements was between US$ 12 and US$ 602 per capita in high income countries and between US$ 3.20 and US$ 22 per capita in low and middle income countries (Figure 4.11). However, COVID-19 spending might be overestimated in some countries (for example, some countries included part of capital and non-health spending due to limitations in data sources; others such as Canada included spending on pre-purchased vaccines that were used mostly in 2021) and underestimated in others. Furthermore, health spending on COVID-19 financed through voluntary financing arrangements and out-of-pocket spending remains largely unknown (Annex 4).

FIGURE 4.11 Government and compulsory insurance financed health spending on COVID-19 of between US$ 12 and US$ 602 per capita in high income countries



Note: Bubble size represents the number of confirmed deaths due to COVID-19 per million population in 2020. Government spending on COVID-19 for Germany includes only social health insurance schemes (HF.1.2.1).
Data sources: Joint Health Accounts Questionnaire and Global Health Expenditure Database data collection 2021; COVID-19 rapid assessment studies *[4, 5, 6]*; WHO *[7, 8]* for epidemiological indicators.

FIGURE 4.12 Health spending on COVID-19 accounted for a large share of health spending financed through government and compulsory insurance schemes



Note: For countries in light blue, the denominator of the indicator (overall current health expenditure financed through compulsory schemes (HF.1)) was not available for 2020, and the value for 2019 was used instead. For Germany, the indicator includes only social health insurance scheme (HF.1.2.1) spending. Values for Ghana (71%, excluding capital goods) and Senegal (54%) are not presented due to uncertainty of the compulsory schemes' spending in 2019 and of the composition of COVID-19 health spending, which might include capital spending and spending outside the SHA 2011 boundaries related to the COVID-19 response.
Data sources: Joint Health Accounts Questionnaire and Global Health Expenditure Database data collection 2021; COVID-19 rapid assessment studies *[4, 5, 6]*.

The weight of governments' response to the COVID-19 pandemic, from the health spending perspective, is reflected by their current health spending on COVID-19 as a share of the total health spending financed through government and compulsory insurance schemes. The share was 14% in Canada, 6%–7% in Chile, Croatia and Estonia and around 5% in Ireland and Slovenia. In the Republic of Korea, the least affected by COVID-19 in 2020 in terms of reported cases and deaths among the high income countries analysed, less than 1% of government and compulsory insurance spending was related directly to COVID-19. In other countries for which no overall health expenditure estimates were available for 2020, government and compulsory insurance health spending 2019 was used as an alternative denominator to represent the weight of COVID-19 in health spending. In Burkina Faso, Czechia, Guatemala and Israel, health spending on COVID-19 in 2020 accounted for more than 10% of the amount of government and compulsory insurance health spending in 2019 (Figure 4.12). Health spending on COVID-19 as a share of GDP also varied widely, from 0.04% in the Republic of Korea to 0.87% in Czechia, 1.0% in Ghana and 1.4% in Canada.

EXTERNAL AID MIGHT PLAY AN IMPORTANT ROLE IN FINANCING HEALTH SPENDING ON COVID-19 IN LOW AND MIDDLE INCOME COUNTRIES

In high income countries, domestic funding (as opposed to external funding) integrally financed health spending on COVID-19 activities by government and compulsory insurance financing arrangements. In low and middle income countries, rapid assessment studies of COVID-19 spending, even if they do not provide a comprehensive picture of all financing sources, suggest that external aid has been important in the COVID-19 response, from the health spending perspective (Box 4.3). At the global level, the substantial development assistance for the pandemic response in 2020 and 2021 is expected to be reflected in the share of health spending on COVID-19 financed through external aid. In addition, spending on COVID-19 vaccines financed by external donors through the COVAX Facility, the African Vaccine Acquisition Trust and other regional facilities will be reported in 2021 and will also likely have a major impact on external funding for immunization, with US$ 10.9 billion already committed for vaccine purchase and delivery as of November 2021 *[15]*.

BOX 4.3

External funding of the COVID-19 response: Early evidence from three West African countries

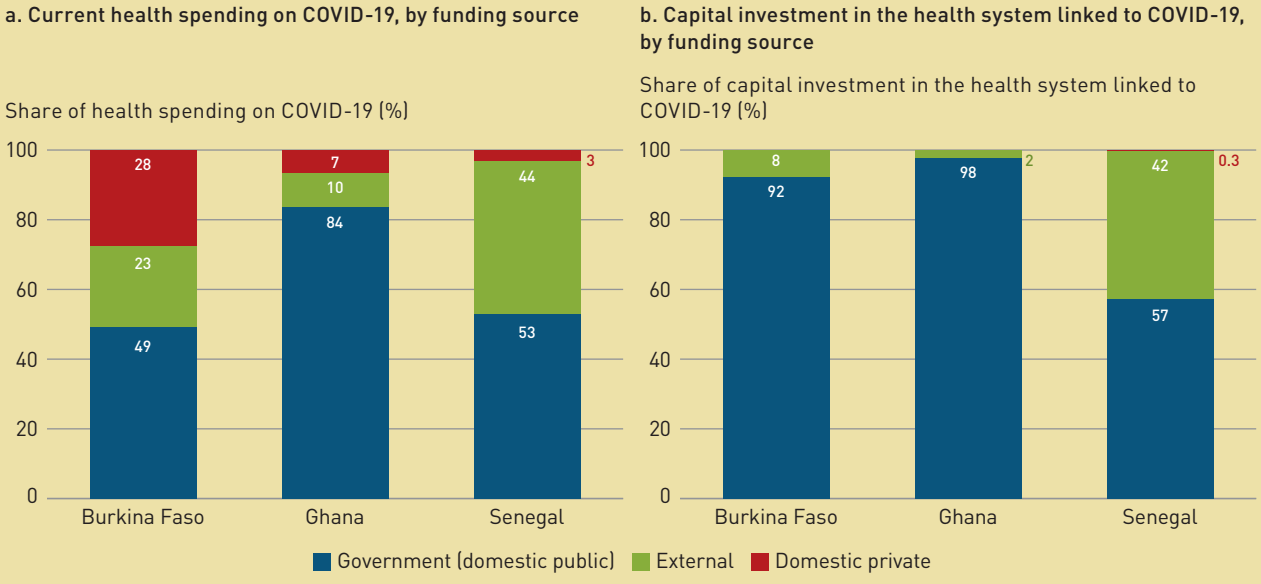
During the first half of 2021, three West African countries —Burkina Faso, Ghana and Senegal—conducted rapid assessments of health spending on COVID-19 *[4, 5, 6]*. Their ministries of health collected information on activities related to COVID-19 response from central government agencies, local governments, development partners and corporations to produce health spending estimates under System of Health Accounts (SHA 2011) classifications: financing schemes, revenues of financing schemes, function, health care provider, factors of provision and capital spending. The estimates, developed to provide timely evidence to policy makers, might have data issues and will likely be revised when the countries develop their health accounts for 2020. However, these studies provide the first available SHA 2011 data on health spending on COVID-19 for low and lower-middle income countries and present important preliminary data on financing sources and on the weight of external funding in the COVID-19 response.

Before the COVID-19 pandemic, a significant share of current health spending in these countries was financed through external sources: 16% in Burkina Faso, 11% in Ghana and 18% in Senegal in 2019 *[16]*. The first estimates for 2020 show that the share of external funding in health spending on COVID-19 was higher than its share in 2019 current health spending: 23% in Burkina Faso (representing spending on COVID-19 of US$ 1.20 per capita) and 44% in Senegal (US$ 4.20 per capita). However, in Ghana, the share was slightly lower, at 10% (US$ 2.20 per capita; Box Figure 1), mainly because of the mobilization of important domestic public resources for the COVID-19 response.

External funding in these three countries was directed primarily to preventive care and health system governance functions, supporting the ministries of health in their response to the pandemic. Part of the external funding for current health spending was also directed to supplies for health care providers, to deliver curative and preventive care, such as personal protective equipment.

Most of the capital spending in the health sector that was directly related to the COVID-19 pandemic (such as investment in laboratories and intensive care units) was financed through domestic public sources, except in Senegal, where 42% of capital spending was financed externally (see Box Figure 1). Classifying capital investment as COVID-19 or non-COVID-19 spending is complex because capital goods can be used for multiple diseases and conditions. However, COVID-19 clearly triggered new investment in the health system. In Senegal, external funding for strengthening the installed capacity in capital goods was directed mostly to hospital and intensive care beds, medical imaging equipment and vehicles.

BOX FIGURE 1 External aid financed a significant share of health spending on COVID-19 and capital investments in Burkina Faso, Ghana and Senegal



Note: Data collection for domestic private funding was limited to these three countries and is not representative of final estimates. For Ghana, the partition between current health spending and capital spending was not provided in the rapid assessment and was derived by WHO based on programmatic descriptions reported by the country.
Data sources: Ministries of health of Burkina Faso *[4]*, Ghana *[5]* and Senegal *[6]*.

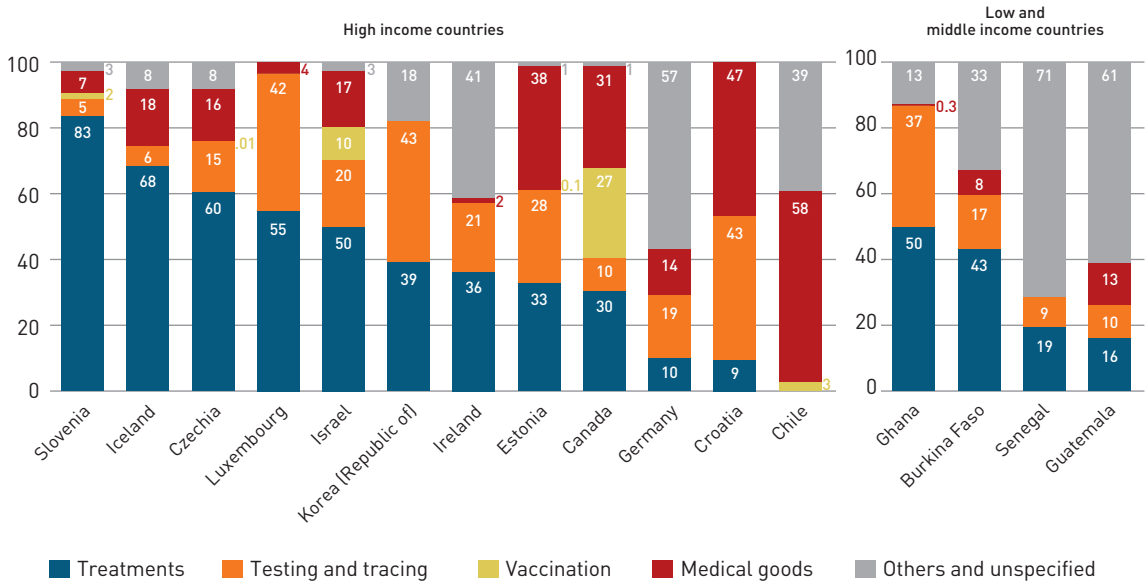
MOST CURRENT HEALTH SPENDING ON COVID-19 WENT TO TREATMENTS, FOLLOWED BY TESTING/ TRACING AND MEDICAL GOODS

In the 12 high income countries with available estimates, an average of 40% of COVID-19 current health spending went to treatments, 21% to testing and tracing, 21% to medical goods (such as personal protective equipment), 15% to other functions (mainly coordination and preventive care) and 3% to immunization.[10] The composition of the expenditure by purpose is likely based on each country's epidemiological indicators. For example, countries with fewer COVID-19 cases and deaths in 2020, such as Ghana and the Republic of Korea, spent more on testing and tracing and on governance and coordination (which are included in the category other and unspecified spending), whereas countries more affected by COVID-19, such as Czechia and Slovenia, show a higher share of spending on COVID-19 treatments (Figure 4.13). However, these findings should be interpreted with caution because of countries' difficulties in clearly identifying and classifying health activities linked to the COVID-19 pandemic under the SHA 2011 framework.

Some countries have also produced preliminary estimates of health spending on COVID-19 by health care provider (HP under the SHA 2011 framework). Most of the spending was directed to hospitals, followed by providers of preventive care. In some countries, a sizeable share of health spending on COVID-19 was directed to providers of health system administration and governance, such as ministries

FIGURE 4.13 Most health spending on COVID-19 went to treatments, followed by testing and tracing and medical goods

Health spending on COVID-19, by purpose, as a share of health spending on COVID-19 from government and compulsory insurance (%)

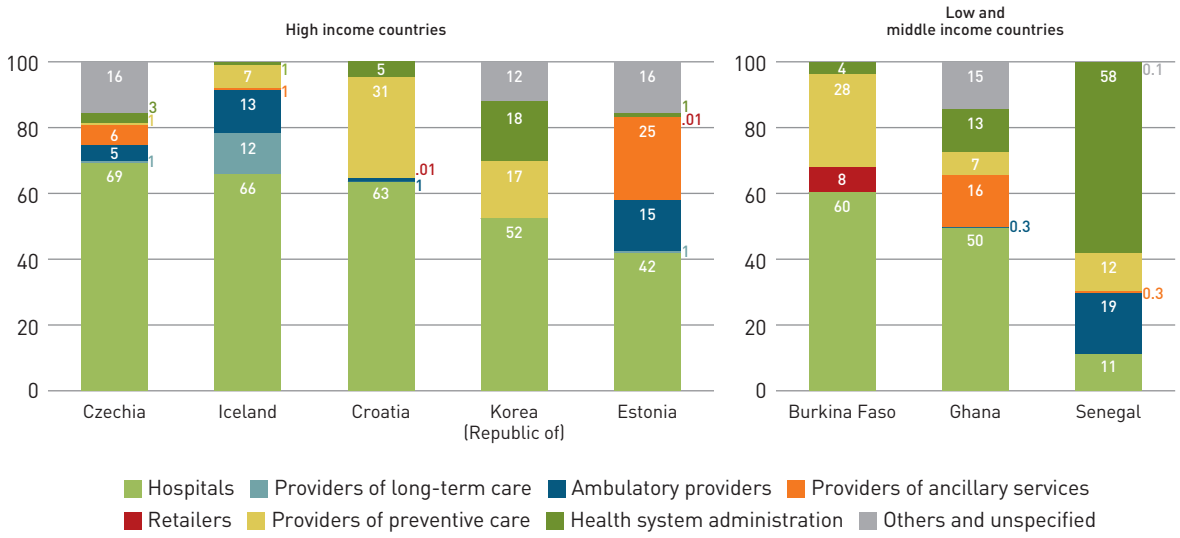


Note: For Canada, spending on vaccination includes pre-purchased vaccines that were not administered in 2020. For Germany, government spending includes only social health insurance schemes (HF.1.2.1). For Burkina Faso, Ghana and Senegal, health spending on COVID-19 reporting items was derived from the rapid assessment studies' HF x HC x FP tables.
Data sources: Joint Health Accounts Questionnaire and Global Health Expenditure Database data collection 2021; COVID-19 rapid assessment studies *[4, 5, 6]*.

10. Treatment costs (HC.COV.1) refer to the treatment costs of patients with a confirmed COVID-19 diagnosis in inpatient and outpatient settings. It also includes the costs of pharmaceuticals used for treatment (as part of treatment episode in inpatient or outpatient setting) and follow-up costs from "long COVID-19 patients." Testing and contact tracing (HC.COV.2) refer to the laboratory costs (including staff costs) for the analysis of polymerase chain reaction tests, antigen tests (or other molecular diagnostic tests) and serological tests. This cost item includes tests for people with and without symptoms, as part of a programme or taken at people's initiatives. Costs for contact tracing include all current costs incurred to identify possible contacts of infected people. Vaccinations (HC.COV.3) refer to the costs of vaccination against SARS-CoV-2. It includes the costs of the vaccine, the distribution and organization costs and the service charge by health professional administering the vaccination. Research and development costs are excluded. Medical goods (HC.COV.4) refer mainly to spending on facemasks and other protective equipment for final use purchased either by people themselves or by public authorities and distributed among the population. This item would also include prescribed and over-the-counter pharmaceuticals to treat COVID-19 patients in case these products are not dispensed as part of an inpatient or outpatient treatment. Others and unspecified (HC.COV.5) refer to all other COVID-19 related costs—within the SHA boundary of current health expenditure—not classified in any other category HC.COV.1–4, such as the organization and coordination of the pandemic emergency response and other costs.

FIGURE 4.14 Most health spending on COVID-19 was directed to hospitals

Health spending on COVID-19, by type of health care provider, as a share of health spending on COVID-19 from government and compulsory insurance (%)



Data sources: Joint Health Accounts Questionnaire and Global Health Expenditure Database data collection 2021; COVID-19 rapid assessment studies *[4, 5, 6]*.

of health, providers of ancillary services (for example, laboratories) and—in Iceland—providers of long-term care (Figure 4.14).

The way forward and efforts in 2022 for better data on health spending on COVID-19

The preliminary evidence from a small set of countries, mostly high income, on health spending during the COVID-19 pandemic yields insights on the evolution of financing arrangements and on the importance of COVID-19 spending within government health spending. The pattern of health spending in most low and middle income countries remains unknown. More evidence and more granularity in the data are needed to assess the impact of COVID-19 on health spending during the first year of the pandemic, including:

- Health accounts and spending estimates in low and middle income countries.
- Information on household out-of-pocket spending.
- Information on the origin of funding (health spending by financing source, new funding versus reprogrammed funding, role of national pooled funds and external aid).
- Detailed data on health spending on COVID-19 by governments, social and voluntary insurance agencies or companies, households, employers and non-profit institutions, disaggregated by function, provider and factor of provision.
- Health spending data on other essential services ("non-COVID-19 health spending").
- Data on budget execution, to reveal how much spending aligned with budget commitments made during the pandemic.

Moreover, the high variation in growth in current health spending in 2020 and the substantial differences in health spending on COVID-19 raise questions as to whether some of the differences are due to data gaps and countries' accounting practices. Thus, more efforts will be needed in 2022 to identify data gaps, increase the granularity of the data, assess data quality, harmonize methodology and further contribute to many important unanswered questions, such as:

- What has been the impact on non-COVID-19 health spending, such as spending on regular immunization and other essential services? Has COVID-19 led to disinvestment from pre-COVID-19 external aid health priorities (HIV, tuberculosis and maternal health, among others)?
- How did spending on COVID-19 evolve between 2020 and 2021? What were the effects of COVID-19 vaccine roll-out and of COVID-19 variants on health spending? Did countries that invested early and sufficiently in vaccination have lower COVID-19 curative spending?
- How did the existing structure of the health financing system affect how quickly countries mobilized resources and the type of interventions financed? What effects

have all the public financing management changes during the pandemic had on health spending?
- How has the structure of the health financing system evolved during the COVID-19 pandemic, and what has been the impact in countries that created specific funds for the COVID-19 response? Will countries that increased the relative share of pooled funds in total health spending in 2020/2021 regress to pre-pandemic financing arrangements in the following years (2022 and later)?
- How have government COVID-19 responses affected out-of-pocket spending on COVID-19 and overall? Have countries that funded the COVID-19 health response mainly through specific funds performed better in reducing out-of-pocket spending on COVID-19 and limiting households' catastrophic spending on health?
- Whether health financing related to COVID-19 accelerated investment and whether spending on health (such as health workers) will be maintained in the coming years?
- To what extent are the variations between countries in the level and composition by function of health spending on COVID-19 linked to pre-pandemic capacities on health emergency preparedness and health security? And how will pandemic preparedness and health security financing evolve during and after the COVID-19 pandemic?

Tracking health spending provides more insight into the answers to these questions, but more quantitative and qualitative evidence is needed to gain full understating and further guide health system investment and public finance towards better preparedness for and more resilience to future pandemics.

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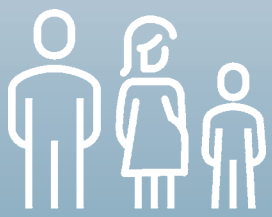


Annexes

ANNEX 1 Country code, WHO region and World Bank income group for all countries

Country name	ISO-3 code	WHO region	World Bank income group (2019)
Afghanistan[a]	AFG	Eastern Mediterranean	Low
Albania	ALB	Europe	Upper-middle
Algeria	DZA	Africa	Lower-middle
Andorra*	AND	Europe	High
Angola	AGO	Africa	Lower-middle
Antigua and Barbuda*	ATG	Americas	High
Argentina	ARG	Americas	Upper-middle
Armenia[a]	ARM	Europe	Upper-middle
Australia	AUS	Western Pacific	High
Austria	AUT	Europe	High
Azerbaijan	AZE	Europe	Upper-middle
Bahamas*	BHS	Americas	High
Bahrain	BHR	Eastern Mediterranean	High
Bangladesh	BGD	South-East Asia	Lower-middle
Barbados*	BRB	Americas	High
Belarus[a]	BLR	Europe	Upper-middle
Belgium	BEL	Europe	High
Belize*	BLZ	Americas	Upper-middle
Benin[a]	BEN	Africa	Lower-middle
Bhutan[a]	BTN	South-East Asia	Lower-middle
Bolivia (Plurinational State of)	BOL	Americas	Lower-middle
Bosnia and Herzegovina	BIH	Europe	Upper-middle
Botswana[a]	BWA	Africa	Upper-middle
Brazil	BRA	Americas	Upper-middle
Brunei Darussalam*	BRN	Western Pacific	High
Bulgaria	BGR	Europe	Upper-middle
Burkina Faso[a]	BFA	Africa	Low

Country name	ISO-3 code	WHO region	World Bank income group (2019)
Burundi	BDI	Africa	Low
Cabo Verde*	CPV	Africa	Lower-middle
Cambodia[a]	KHM	Western Pacific	Lower-middle
Cameroon	CMR	Africa	Lower-middle
Canada	CAN	Americas	High
Central African Republic[a]	CAF	Africa	Low
Chad	TCD	Africa	Low
Chile	CHL	Americas	High
China	CHN	Western Pacific	Upper-middle
Colombia	COL	Americas	Upper-middle
Comoros[a]	COM	Africa	Lower-middle
Congo[a]	COG	Africa	Lower-middle
Cook Islands*	COK	Western Pacific	High
Costa Rica	CRI	Americas	Upper-middle
Côte d'Ivoire[a]	CIV	Africa	Lower-middle
Croatia	HRV	Europe	High
Cuba	CUB	Americas	Upper-middle
Cyprus	CYP	Europe	High
Czechia	CZE	Europe	High
Democratic People's Republic of Korea	PRK	South-East Asia	Low
Democratic Republic of the Congo[a]	COD	Africa	Low
Denmark	DNK	Europe	High
Djibouti	DJI	Eastern Mediterranean	Lower-middle
Dominica*	DMA	Americas	Upper-middle
Dominican Republic	DOM	Americas	Upper-middle
Ecuador	ECU	Americas	Upper-middle
Egypt	EGY	Eastern Mediterranean	Lower-middle
El Salvador	SLV	Americas	Lower-middle
Equatorial Guinea	GNQ	Africa	Upper-middle
Eritrea	ERI	Africa	Low
Estonia	EST	Europe	High
Eswatini[a]	SWZ	Africa	Lower-middle
Ethiopia[a]	ETH	Africa	Low
Fiji	FJI	Western Pacific	Upper-middle
Finland	FIN	Europe	High
France	FRA	Europe	High
Gabon[a]	GAB	Africa	Upper-middle
Gambia	GMB	Africa	Low
Georgia[a]	GEO	Europe	Upper-middle
Germany	DEU	Europe	High
Ghana[a]	GHA	Africa	Lower-middle
Greece	GRC	Europe	High
Grenada*	GRD	Americas	Upper-middle
Guatemala	GTM	Americas	Upper-middle
Guinea[a]	GIN	Africa	Low
Guinea-Bissau	GNB	Africa	Low
Guyana[a]	GUY	Americas	Upper-middle
Haiti[a]	HTI	Americas	Low

Country name	ISO-3 code	WHO region	World Bank income group (2019)
Honduras	HND	Americas	Lower-middle
Hungary	HUN	Europe	High
Iceland*	ISL	Europe	High
India	IND	South-East Asia	Lower-middle
Indonesia	IDN	South-East Asia	Upper-middle
Iran (Islamic Republic of)	IRN	Eastern Mediterranean	Upper-middle
Iraq	IRQ	Eastern Mediterranean	Upper-middle
Ireland	IRL	Europe	High
Israel	ISR	Europe	High
Italy	ITA	Europe	High
Jamaica	JAM	Americas	Upper-middle
Japan	JPN	Western Pacific	High
Jordan	JOR	Eastern Mediterranean	Upper-middle
Kazakhstan	KAZ	Europe	Upper-middle
Kenya[a]	KEN	Africa	Lower-middle
Kiribati*	KIR	Western Pacific	Lower-middle
Kuwait	KWT	Eastern Mediterranean	High
Kyrgyzstan[a]	KGZ	Europe	Lower-middle
Lao People's Democratic Republic[a]	LAO	Western Pacific	Lower-middle
Latvia	LVA	Europe	High
Lebanon	LBN	Eastern Mediterranean	Upper-middle
Lesotho	LSO	Africa	Lower-middle
Liberia[a]	LBR	Africa	Low
Libya	LBY	Eastern Mediterranean	Upper-middle
Lithuania	LTU	Europe	High
Luxembourg	LUX	Europe	High
Madagascar	MDG	Africa	Low
Malawi[a]	MWI	Africa	Low
Malaysia	MYS	Western Pacific	Upper-middle
Maldives*	MDV	South-East Asia	Upper-middle
Mali[a]	MLI	Africa	Low
Malta*	MLT	Europe	High
Marshall Islands*	MHL	Western Pacific	Upper-middle
Mauritania[a]	MRT	Africa	Lower-middle
Mauritius[a]	MUS	Africa	High
Mexico	MEX	Americas	Upper-middle
Micronesia*	FSM	Western Pacific	Lower-middle
Monaco*	MCO	Europe	High
Mongolia	MNG	Western Pacific	Lower-middle
Montenegro	MNE	Europe	Upper-middle
Morocco	MAR	Eastern Mediterranean	Lower-middle
Mozambique[a]	MOZ	Africa	Low
Myanmar[a]	MMR	South-East Asia	Lower-middle
Namibia[a]	NAM	Africa	Upper-middle
Nauru*	NRU	Western Pacific	High
Nepal[a]	NPL	South-East Asia	Lower-middle
Netherlands	NLD	Europe	High
New Zealand	NZL	Western Pacific	High

Country name	ISO-3 code	WHO region	World Bank income group (2019)
Nicaragua	NIC	Americas	Lower-middle
Niger[a]	NER	Africa	Low
Nigeria[a]	NGA	Africa	Lower-middle
Niue*	NIU	Western Pacific	High
Norway	NOR	Europe	High
Oman	OMN	Eastern Mediterranean	High
Pakistan	PAK	Eastern Mediterranean	Lower-middle
Palau*	PLW	Western Pacific	High
Panama	PAN	Americas	High
Papua New Guinea	PNG	Western Pacific	Lower-middle
Paraguay	PRY	Americas	Upper-middle
Peru	PER	Americas	Upper-middle
Philippines	PHL	Western Pacific	Lower-middle
Poland	POL	Europe	High
Portugal	PRT	Europe	High
Qatar	QAT	Eastern Mediterranean	High
Republic of Korea	KOR	Western Pacific	High
Republic of Moldova[a]	MDA	Europe	Lower-middle
Romania	ROU	Europe	High
Russian Federation	RUS	Europe	Upper-middle
Rwanda	RWA	Africa	Low
Saint Kitts and Nevis*	KNA	Americas	High
Saint Lucia*	LCA	Americas	Upper-middle
Saint Vincent and the Grenadines*	VCT	Americas	Upper-middle
Samoa*	WSM	Western Pacific	Upper-middle
San Marino*	SMR	Europe	High
Sao Tome and Principe*	STP	Africa	Lower-middle
Saudi Arabia	SAU	Eastern Mediterranean	High
Senegal[a]	SEN	Africa	Lower-middle
Serbia	SRB	Europe	Upper-middle
Seychelles*	SYC	Africa	High
Sierra Leone[a]	SLE	Africa	Low
Singapore	SGP	Western Pacific	High
Slovakia	SVK	Europe	High
Slovenia	SVN	Europe	High
Solomon Islands	SLB	Western Pacific	Lower-middle
Somalia	SOM	Eastern Mediterranean	Low
South Africa[a]	ZAF	Africa	Upper-middle
South Sudan[a]	SSD	Africa	Low
Spain	ESP	Europe	High
Sri Lanka[a]	LKA	South-East Asia	Lower-middle
Sudan[a]	SDN	Eastern Mediterranean	Low
Suriname*	SUR	Americas	Upper-middle
Sweden	SWE	Europe	High
Switzerland	CHE	Europe	High
Syria	SYR	Eastern Mediterranean	Low
Tajikistan[a]	TJK	Europe	Low
Thailand	THA	South-East Asia	Upper-middle

Country name	ISO-3 code	WHO region	World Bank income group (2019)
North Macedonia[a]	MKD	Europe	Upper-middle
Timor-Leste	TLS	South-East Asia	Lower-middle
Togo[a]	TGO	Africa	Low
Tonga*	TON	Western Pacific	Upper-middle
Trinidad and Tobago	TTO	Americas	High
Tunisia[a]	TUN	Eastern Mediterranean	Lower-middle
Turkey	TUR	Europe	Upper-middle
Turkmenistan	TKM	Europe	Upper-middle
Tuvalu*	TUV	Western Pacific	Upper-middle
Uganda[a]	UGA	Africa	Low
Ukraine	UKR	Europe	Lower-middle
United Arab Emirates	ARE	Eastern Mediterranean	High
United Kingdom	GBR	Europe	High
United Republic of Tanzania[a]	TZA	Africa	Lower-middle
United States of America	USA	Americas	High
Uruguay	URY	Americas	High
Uzbekistan[a]	UZB	Europe	Lower-middle
Vanuatu*	VUT	Western Pacific	Lower-middle
Venezuela	VEN	Americas	Upper-middle
Viet Nam	VNM	Western Pacific	Lower-middle
Yemen	YEM	Eastern Mediterranean	Low
Zambia[a]	ZMB	Africa	Lower-middle
Zimbabwe[a]	ZWE	Africa	Lower-middle

* Population of less than 600,000 in 2019. Population data used in the report are from United Nations, *World Population Prospects*, 2019 revision.
a. Included in disease spending analyses.

ANNEX 2 Dominant health financing arrangement in 2019, by HIC-29 country

ISO code	Country name	Dominant health financing arrangement group
ARE	United Arab Emirates	Government financing arrangements
AUS	Australia	Government financing arrangements
AUT	Austria	Other
BEL	Belgium	Compulsory insurance schemes
CAN	Canada	Government financing arrangements
CHE	Switzerland	Compulsory insurance schemes
CYP	Cyprus	Government financing arrangements
DEU	Germany	Compulsory insurance schemes
DNK	Denmark	Government financing arrangements
ESP	Spain	Government financing arrangements
FIN	Finland	Government financing arrangements
FRA	France	Compulsory insurance schemes
GBR	United Kingdom	Government financing arrangements
GRC	Greece	Other
IRL	Ireland	Government financing arrangements
ISR	Israel	Compulsory insurance schemes
ITA	Italy	Government financing arrangements
JPN	Japan	Compulsory insurance schemes
KWT	Kuwait	Government financing arrangements
LUX	Luxembourg	Compulsory insurance schemes
NLD	Netherlands	Compulsory insurance schemes
NOR	Norway	Government financing arrangements
NZL	New Zealand	Government financing arrangements
PRT	Portugal	Government financing arrangements
QAT	Qatar	Government financing arrangements
SGP	Singapore	Government financing arrangements
SVN	Slovenia	Compulsory insurance schemes
SWE	Sweden	Government financing arrangements
USA	United States of America	Compulsory insurance schemes

ANNEX 3 List of countries analysed in chapter 4

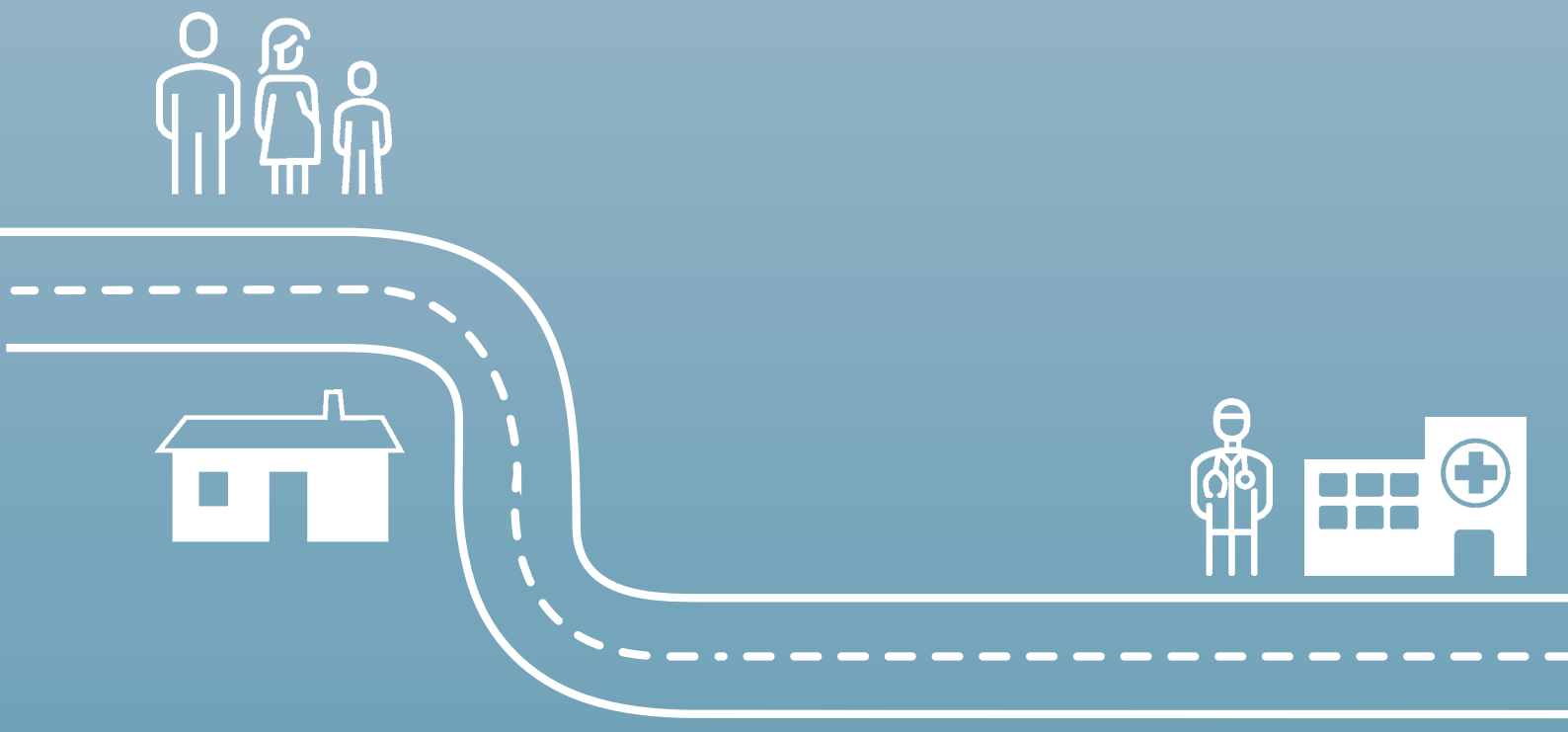
Country	Region	Income group (2019)	Preliminary data on health spending (current health expenditure), 2020 (US$ per capita)			Epidemiological indicators, 2020 (COVID-19)	
			Total health spending	Government and compulsory insurance	COVID-19 health spending (from government and compulsory insurance)	Cases per million population	Deaths per million population
Countries with estimates of both 2020 overall and COVID-19 health spending							
Canada	Americas	High	5,634	4,229	602	15,587	417
Chile	Americas	High	1,239	778	50	32,219	875
Estonia	Europe	High	1,880	1,470	106	21,920	184
Germany	Europe	High	5,734	4,881	79	21,230	412
Iceland	Europe	High	6,244	5,233	167	16,862	85
Ireland	Europe	High	6,066	4,675	237	18,976	440
Republic of Korea	Western Pacific	High	2,673	1,662	12	1,234	19
Slovenia	Europe	High	2,451	1,843	84	59,370	1,459
Countries with estimates of 2020 overall health spending only							
Austria	Europe	High	5,537	4,227		40,692	726
Bhutan	South-East Asia	Lower-middle	134	107		928	0
Colombia	Americas	Upper-middle	460	365		32,523	855
Finland	Europe	High	4,675	3,661		6,676	109
Iran (Islamic Republic of)	Eastern Mediterranean	Upper-middle	596	321		14,733	660
Italy	Europe	High	3,073	2,344		35,901	1,257
Mexico	Americas	Upper-middle	518	263		11,147	981
Netherlands	Europe	High	5,879	4,970		46,664	663
Niger	Africa	Low	35	18		133	4
Norway	Europe	High	7,648	6,577		9,515	81
Poland	Europe	High	1,119	821		34,737	767
Portugal	Europe	High	2,272	1,479		41,169	684
Sweden	Europe	High	5,959	5,070		44,287	963
United Kingdom	Europe	High	5,155	4,214		40,104	1,113
Countries with estimates of 2020 COVID-19 health spending only							
Burkina Faso	Africa	Low			3	332	4
Croatia	Europe	High			55	52,476	1,003
Czechia	Europe	High			199	69,267	1,151
Ghana	Africa	Lower-middle			21	1,772	11
Guatemala	Americas	Upper-middle			12	7,720	269
Israel	Europe	High			233	50,410	397
Luxembourg	Europe	High			421	74,808	803
Senegal	Africa	Lower-middle			9	1,165	25

Note: Per capita data were calculated using data from United Nations, World Population Prospects, 2019 revision.
Data sources: Joint Health Accounts Questionnaire and Global Health Expenditure Database data collection 2021; WHO *[1, 2]* for epidemiological indicators.
References: 1. WHO. Coronavirus Disease (COVID-19) Weekly Epidemiological Update and Weekly Operational Update. Data downloaded 30 November 2021. Geneva: World Health Organization. Available from: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports. **2.** WHO. COVID-19 Detailed Surveillance Data Dashboard. Data downloaded 30 November 2021. Geneva: World Health Organization. Available from: https://covid19.who.int.

ANNEX 4 Scope of health spending on COVID-19 by country

Country	Data source	SHA 2011 classifications reported	Compulsory financing schemes reported (data sources)	COVID-19 spending purpose categories reported
Burkina Faso	Study *[1]*	HF, FS, HC, HP, FA, FP, HK	Government schemes (Ministry of Health, development partners)	Possibly includes spending outside SHA 2011 boundaries; classified by HC (HC.COV not available)
Canada	JHAQ	HC.COV, HF	Government schemes (Federal and provincial/territorial governments)	All COVID expenditure reporting items (HC.COV.1 to HC.COV.5); includes vaccines outside SHA 2011 boundaries (not consumed)
Chile	JHAQ	HC.COV, HF, HK	All compulsory schemes (Ministry of Health + budget transfers to National Health Fund and ISAPRES)	Treatment (HC.COV.1) and testing (HC.COV.2) not identified and partially reported under HC.COV.5
Croatia	JHAQ	HC.COV, HP	Overall compulsory schemes (Ministry of Health, Croatian Health Insurance Fund)	HC.COV.1 to HC.COV.4; HC.COV.5 not reported
Czechia	JHAQ	HC.COV, HF, HP, HK	All compulsory schemes (Ministry of Health, other relevant ministries, health insurance companies, regional authorities)	All COVID expenditure reporting items (HC.COV.1 to HC.COV.5)
Estonia	JHAQ	HC.COV, HF, HP, HK	All compulsory schemes (National Health Board, Estonian Health Insurance Fund, Ministry of Social Affairs)	All COVID expenditure reporting items (HC.COV.1 to HC.COV.5)
Germany	JHAQ	HC.COV, HF	Social Health Insurance (Statutory health insurance, health care fund)	All COVID expenditure reporting items (HC.COV.1 to HC.COV.5)
Ghana	Study *[2]*	HF, FS, HC, HP, FA, FP	Government schemes (Ministry of Health, military hospital, development partners)	Possibly includes spending outside SHA 2011 boundaries; classified by HC (HC.COV not available)
Guatemala	HAQ	HC.COV, HK	Overall compulsory schemes (HF.1) (Ministry of Health, Guatemala Social Insurance Institute)	All COVID expenditure reporting items (HC.COV.1 to HC.COV.5)
Iceland	JHAQ	HC.COV, HF, HP, HK	All compulsory schemes (Ministry of Health)	All COVID expenditure reporting items (HC.COV.1 to HC.COV.5)
Ireland	JHAQ	HC.COV, HF, HK	Government schemes (Ireland's Health Services)	All COVID expenditure reporting items (HC.COV.1 to HC.COV.5)
Israel	JHAQ	HC.COV, HF, HK	Overall compulsory schemes (HF.1) (Ministry of Health)	All COVID expenditure reporting items (HC.COV.1 to HC.COV.5)
Luxembourg	JHAQ	HC.COV, HF, HP, HK	All compulsory schemes (Ministry of Health, other central level programs, statutory health insurance)	All COVID expenditure reporting items (HC.COV.1 to HC.COV.5)
Republic of Korea	JHAQ	HC.COV, HF, HP	All compulsory schemes (Ministry of Health, government programs, National Health Insurance)	Medical goods for Government spending (HC.COV.4) not reported
Senegal	Study *[3]*	HF, FS, HC, HP, FA, FP, HK	Government schemes (Ministry of Health, other relevant ministries, regional services, development partners)	Possibly includes spending outside SHA 2011 boundaries; classified by HC (HC.COV not available)
Slovenia	JHAQ	HC.COV, HF, HK	All compulsory schemes (Ministry of Health, National Health Institute, Health Insurance Institute of Slovenia)	All COVID expenditure reporting items (HC.COV.1 to HC.COV.5)

References: 1. Ministère de la Santé (Burkina Faso). Évaluation des dépenses de la COVID-19 avec le Système des Comptes de Santé (SCS) 2011, rapport provisoire. Report and HAPT study shared by country focal point in September 2021. **2.** Ministry of Health (Ghana). Rapid Assessment of Health Expenditure during the COVID-19 Pandemic. Report and HAPT study shared by country focal point in July 2021. **3.** Ministère de la Santé et de l'Action Sociale (Sénégal). Évaluation rapide des dépenses de la COVID-19 selon la méthodologie des comptes de la santé. Report and HAPT study shared by country focal point in September 2021.



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