# Global spending on health

## Rising to the pandemic's challenges

World Health Organization

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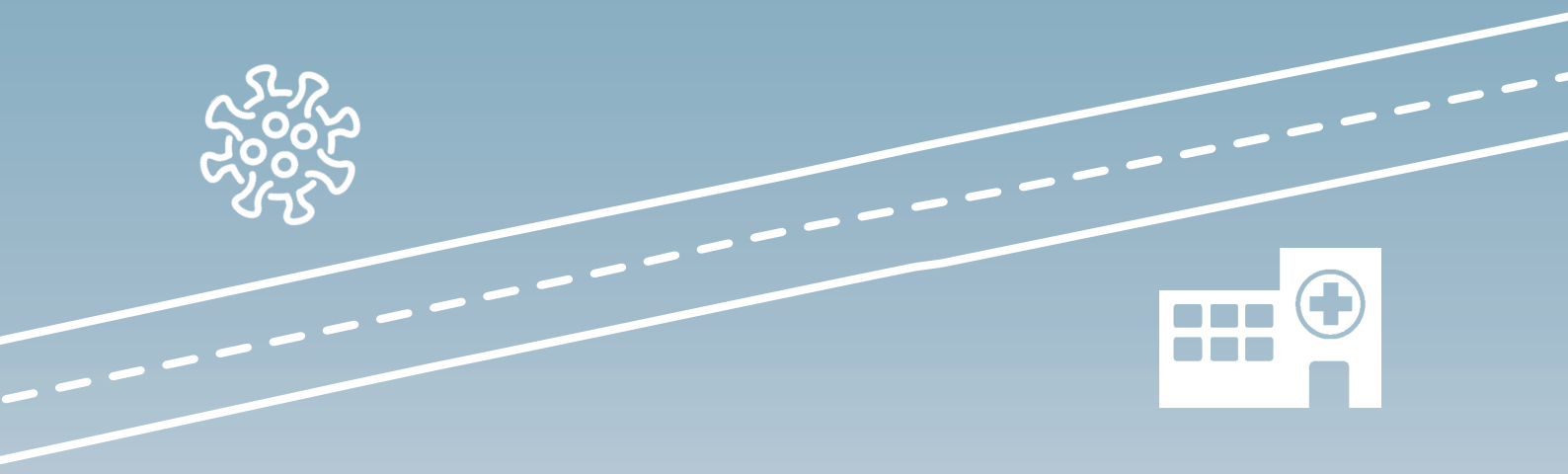

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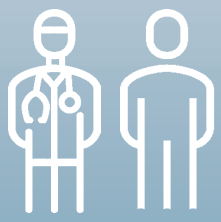
# Contents



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# Abbreviations

| | |
|---|---|
| **COVID-19** | Coronavirus disease |
| **DIS** | Classification of diseases and conditions |
| **FS** | Classification of revenues of health care financing schemes |
| **GDP** | Gross domestic product |
| **HAPT** | Health Accounts Production Tool |
| **HC** | Classification of health care functions |
| **HC.COV** | Special reporting items to track COVID-19 spending within current health expenditure |
| **HF** | Classification of health care financing schemes |
| **HP** | Classification of health care providers |
| **IMF** | International Monetary Fund |
| **OECD** | Organisation for Economic Co-operation and Development |
| **OOPS** | Out-of-pocket spending |
| **PCR** | Polymerase chain reaction |
| **PHC** | Primary health care |
| **SHA 2011** | System of Health Accounts 2011 |
| **WHO** | World Health Organization |

# Key messages

## Higher health spending in response to a global pandemic

- In 2020, global spending on health reached US$ 9 trillion, or 10.8% of global gross domestic product (GDP), and was highly unequal across income groups.
- Across countries, health spending in 2020 rose in per capita terms and as a share of GDP across all income groups.
- Government spending was the main driver of the increase in total health spending from 2019 to 2020. Per capita government spending on health increased in all income groups and rose faster than in previous years.
- Health spending as a share of total government expenditure, an indicator of the priority given to health, increased from 2019 to 2020 in all income groups except high income countries.
- Out-of-pocket spending per capita fell during the first year of the pandemic, which may reflect reduced health service utilization.
- External aid continued to play a critical role in low income countries. From 2019 to 2020, per capita health spending from aid increased marginally in low income countries.

## Health spending by type of service

- As expected, spending on inpatient care, outpatient care and medical goods accounted for more than 60% of total health spending in 2019 in all income groups, across the 109 countries with data. The rest was spent on preventive care, health system governance and administration, and other health services.
- In 2019, most government and donor spending on primary health care in the 18 low income countries with available data went to preventive care. Spending on preventive and outpatient care each accounted for more than one-third of government and donor spending on primary health care in the 26 lower-middle income countries with data. And spending on outpatient care accounted for more than half of government and donor spending on primary health care in the 20 upper-middle income countries with data.
- Across the 50 countries with data (29 high income, 17 middle income and 4 low income), the overall distribution of health spending by type of service in 2020 remained similar to that in 2019.
- Across the 50 countries with data, per capita total health spending rose 6% on average in real terms in 2020, though the increase varied by type of service:
  - Per capita spending on inpatient care rose in 42 of the 50 countries, whereas per capita spending on outpatient care rose in nearly half of the 50 countries. On average, per capita spending on inpatient care rose 10% in real terms, and per capita spending on outpatient care rose marginally, 1%.
  - Per capita spending on preventive care rose substantially, by 32% on average—and at a higher rate than total health spending in 41 of the 50 countries.

- Per capita spending on medical goods rose in around two-thirds of the 50 countries, by 3% on average.
- Spending on health system governance and administration rose in more than two-thirds of the 50 countries, by an average of 7%.

## Health spending on COVID-19 in 2020

- Reported per capita health spending on COVID-19 from government and compulsory insurance financing arrangements in 2020 averaged US$ 212 in 16 high income countries and US$ 14 in 21 low and middle income countries with comprehensive data.
- Health spending on COVID-19 accounted for an average of about 8% of overall health spending from government and compulsory insurance financing arrangements in 2020, or 1% of general government expenditure, across 35 countries with data.
- In 15 low and middle income countries with data by source, the average share of health spending on COVID-19 in 2020 financed externally was 58% in low income countries and 28% in lower-middle income countries.
- Most reported health spending on COVID-19 from government and compulsory insurance financing arrangements in 2020 was allocated to treatment (41%) and general preventive care and administration (36%), but the types of services financed and characteristics of provision varied across countries.
- Early data from six high income countries and one lower-middle income country show that health spending on COVID-19 rose in 2021, driven by increased spending on vaccination and on testing and contact tracing.

## Government spending on health in the context of social spending

- Government spending on health does not exist in a vacuum; health spending and health outcomes are also shaped by other social spending, particularly on education and social protection.
- Before the COVID-19 pandemic, the profile of social spending in countries reflected a combination of macro-fiscal and demographic factors, as well as the government's role in funding social services.
  - Higher income countries, which typically have ageing populations, allocated a larger share of public spending to health and social protection but a lower share to education than lower income countries did. However, there is considerable heterogeneity across countries.
  - Between 2000 and 2019, all three components of per capita social spending rose in real terms in high and upper-middle income countries. Health and education spending rose in lower-middle and low income countries. The trends in social protection spending in low and lower-middle income countries are unknown due to lack of data.
  - While some convergence across income groups occurred in government spending on education as a share of GDP between 2000 and 2019, government spending on health became more unequal, with low income countries falling much further behind.
  - A large proportion of high and upper-middle income countries reported rising health and social protection shares of government spending and declining education shares.
- During the first year of the COVID-19 pandemic, in high income countries, per capita health and social protection spending rose strongly, while education rose modestly. In upper-middle income countries, per capita health and social protection spending rose strongly while education spending fell. In lower-middle income countries, health spending rose strongly, while education spending remained flat. And in low income countries, both health and education spending rose strongly.
- The additional public debt accumulated across all income groups will present a further challenge to sustaining social spending.


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OVERVIEW

# Global expenditure on health: rising to the pandemic's challenges

The 2022 Global Health Expenditure Report focuses on health spending in 2020, a particularly tumultuous year. Countries around the world were simultaneously plunged into a pandemic for which few, if any, were adequately prepared. The COVID-19 pandemic resulted in severe and synchronized contractions in economic output across the world. It also compounded ongoing health system challenges and likely exacerbated existing inequalities in health and health coverage *[1]*. Most countries rose to the pandemic's initial challenges through exceptional budgetary allocations and reprioritization within health budgets. Globally, health spending rose to US $9 trillion in 2020, or about 10.8% of global GDP, a new high.

The increase in health spending in 2020 was driven by government spending, as average per capita public spending on health reached an all-time high in real terms across all income groups. In contrast, out-of-pocket spending fell in per capita terms and as a share of total health spending in 2020, due possibly to lower health service utilization. Per capita spending from external aid in low income countries in 2020 increased marginally from 2019.

Despite the pandemic and the huge disruptions in essential health services in many countries, the composition of health spending by type of service appears to have remained broadly unchanged in 2020, based on a set of 50 countries with data, 29 of them high income. Across all income groups, inpatient care, outpatient care and medical goods accounted for more than 60% of health spending. However, per capita spending rose sharply in real terms for both preventive care (by 32%) and inpatient services (by 10%), in line with the initial prevention, detection and treatment demands of the pandemic. Spending on governance and administration rose 7%, spending on medical goods rose 3% and spending on outpatient care remained stable between 2019 and 2020.

The limited available data suggest that countries allocated a substantial share of public spending to COVID-19-related activities. COVID-19-related health spending absorbed an average of 8% of government spending on health in 2020 and accounted for an average of 1% of total general government expenditure. In high income countries, most health spending on COVID-19 went to treatment, testing and hospital care. In contrast, in low and lower-middle income countries, most spending went to preventive measures, as well as administration and coordination of the health system.

The difficulties in identifying health spending on COVID-19 mean that actual spending on COVID-19 might have been higher. Moreover, by 2020, vaccinations were not available in most countries. Early estimates suggest that spending on COVID-19 rose in 2021, driven by growing spending on vaccination and on testing and contact tracing.

Health spending remained highly unequal across income groups in 2020 and skewed heavily towards high income countries. Despite accounting for 15% of the world's population, high income countries accounted for 80% of total health spending in 2020, with one country accounting

for 44% of all spending. Upper-middle income countries, with 33% of the world's population, accounted for 16% of total health spending; lower-middle income countries, with 43% of the world's population, accounted for just under 4%; and low income countries, with 8% of the world's population, accounted for just 0.2%. These distributions were similar to those in 2019.

For the first time, this report examines health spending alongside other government social spending (namely, on education and social protection). Collectively, these social spending components play a key role in supporting the well-being of the population by helping meet people's basic day-to-day needs, developing and preserving human capital and providing basic security in the face of unexpected shocks. This broader view helps contextualize government spending on health and how it changes in response to shifting demographics, underlying macro-fiscal conditions and economic and other crises that suddenly alter demand for government spending.

The mix of social spending across countries reflects a combination of income and demographic factors and governments' role in funding social services. Higher income countries, which have the largest share of adults over age 65 and the smallest share of school-age children, allocated a larger share of public spending to health and social protection in 2019 but a lower share to education than lower income countries did. From 2000 to 2019, health spending became increasingly unequal, with the gap in per capita terms and as a share of GDP widening between all income groups. The stagnation of government health spending in low income countries has left them further behind. In contrast, government spending on education converged slightly as a share of GDP.

The sharp increase in government spending on health during the first year of the COVID-19 pandemic was part of much broader fiscal response across all income groups in which the role of government expanded considerably. In upper-middle, lower-middle and low income countries, the increase was driven by the large rise in government's share of GDP and the greater priority given to health within fiscal envelopes. In contrast, in high income countries, the increase in government spending on health was due primarily to higher overall government spending. At the same time that health spending increased, social protection spending rose sharply in high and upper-middle income countries as governments attempted to cushion people from the economic impacts of the pandemic. No consistent data on social protection spending were available for low and lower-middle income countries. In contrast to health and social protection spending, growth in education spending was more subdued in 2020.

While governments effectively rose to the occasion during the first year of the COVID-19 pandemic, the ongoing challenge is sustaining government spending on health to meet population needs. The experiences of several decades, and now of the pandemic, have demonstrated that government spending on health is crucial to promoting universal health coverage. Government investment in public health functions is also essential for strengthening health security.

New challenges will likely emerge as the world enters an era of rising uncertainty, complexity and volatility *[2]*. Against the backdrop of the ongoing COVID-19 pandemic, ageing populations in most countries will reshape service delivery needs. The macroeconomic consequences of the pandemic suggest not only slowing growth but also widening income inequality and growing poverty within countries *[3]*. Moreover, new health threats will influence disease burdens and health system capacities. This will place a greater emphasis on building stronger and more resilient health systems. A key lesson of the pandemic is that health threats can have wide spillovers and jeopardize economic stability.

Additional public spending is also essential to address widening inequalities and growing poverty. These are challenges for low income countries in particular because their fiscal capacity is generally low. They will continue to rely on external funding to support public spending in order to ensure that poor and otherwise vulnerable people can access essential health services when needed and that the necessary investments in pandemic preparedness are made.

Yet as the demand for health resources rises, a combination of factors is narrowing the budgetary space available to governments. The sharply deteriorating global macroeconomic context, with weakening income growth and rising inflation, means that governments face lower revenue and higher costs. This is compounding the structural challenge many countries face due to ageing populations, which reduce capacity

to collect government revenues from labour markets. The large stock of additional public debt accumulated will also have ongoing budgetary implications—particularly in low and lower-middle income countries, where debt servicing is already on par with health spending. The uncertain geostrategic situation created by the war in Ukraine exacerbates these threats through implications for the global food supply, inflation and world trade.

The report, therefore, prompts many important questions for the next two to three years, such as:

- To what extent can governments sustain higher public spending on health and other social sectors? Will the increase in 2020 slow or be reversed—for example, due to increased debt service obligations?
- Similarly, will the decline in private health spending in 2020 continue or change? How will the pace and distribution of economic recovery within countries affect who can pay for and receive needed health services? To what extent will government efforts to support vulnerable groups enable service use while protecting against out-of-pocket spending?
- How will levels and distribution of external assistance to global public goods and country-level development assistance change given the fiscal challenges facing many high income countries?

To tackle these and other important questions, reliable policy-relevant evidence is needed. Gaps in data on health, education and social protection spending prevent a comprehensive assessment of overall social spending patterns, especially in low and lower-middle income countries. More detailed, accurate and widely available information on health spending would inform better investigations and policy analysis to guide future allocations to and within health systems. Key to this is the general institutionalization of health accounts practices, in line with the global standard for the System of Health Accounts framework, at the country level.

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# Higher health spending in response to a global pandemic

## Key messages

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- Across countries, health spending in 2020 rose in per capita terms and as a share of GDP across all income groups.
- Government spending was the main driver of the increase in total health spending from 2019 to 2020. Per capita government spending on health increased in all income groups and rose faster than in previous years.
- Health spending as a share of total government expenditure, an indicator of the priority given to health, increased from 2019 to 2020 in all income groups except high income countries.
- Out-of-pocket spending per capita fell during the first year of the pandemic, which may reflect reduced health service utilization.
- External aid continued to play a critical role in low income countries. From 2019 to 2020, per capita health spending from aid increased marginally in low income countries.

## Global spending on health

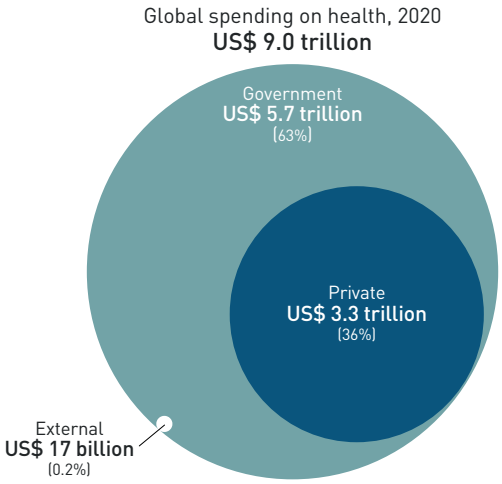
### *In 2020, global spending on health reached US$ 9 trillion, or 10.8% of global gross domestic product, and was highly unequal across income groups.*

The emergence and rapid global spread of COVID-19 defined 2020. In addition to being a Public Health Emergency of International Concern *[1]*, the pandemic triggered a global economic crisis, as countries around the world were plunged into a severe and synchronized economic contraction. Global GDP fell 3.4% in real terms in 2020, with 164 of 188 countries analysed in this report experiencing an economic contraction. The pandemic thus looms large over this report. In addition to profoundly influencing the world's health systems and economies, the pandemic introduced additional challenges to compiling and reporting health spending information (Box 1.1).

Countries and the global community were generally caught unprepared for the COVID-19 pandemic. However, the response in the first year was substantial, with health spending[1] in 188 of 194 WHO Member States reaching US$ 9 trillion[2] in 2020, up 6.3% in real terms from the US$ 8.5 trillion in 2019.[3] Global aggregate health spending as a share of global GDP reached 10.8% in 2020, up from 9.8% in 2019 *[2]*. Of the US$ 9 trillion in health spending, 63% was from government sources, 36% was from private sources (including out-of-pocket spending [OOPS]) and 0.2% was from external sources[4] (Figure 1.1).

The distribution of health spending in 2020 remained highly unequal across country income groups[5] and heavily skewed towards high income countries, continuing the pattern of previous years. High income countries accounted for about 80% of global spending on health (with the United States of America alone accounting for 43.5% of global spending on health), despite accounting for only 15.3% of the world's population (Figure 1.2). Upper-middle income countries, with 33% of the world's population, accounted for 16%; lower-middle income countries, with 43% of the world's population, for just under 4%; and low income countries, with 8% of the world's population, for approximately 0.2%. This distribution of health spending was similar to that in 2019.

**FIGURE 1.1 In 2020, global spending on health reached US$ 9 trillion**




**Data source:** WHO Global Health Expenditure Database, 2022.

### *Across countries, health spending in 2020 rose in per capita terms and as a share of GDP across all income groups.*

Per capita health spending rose in real terms in 2020 by an average of 1.7%, to US$ 39 in low income countries; by an average of 4.7%, to US$ 125, in lower-middle income countries; by an average of 3.8%, to US$ 515, in upper-middle income countries; and by an average of 5.7%, to US$ 3,708 in high income countries.

The rise in health spending combined with the widespread declines in economic activity led to a sharp rise in health spending as a share of GDP in 2020. This meant that after having trended higher in the 20 years preceding the pandemic, health spending as a share of GDP reached its highest value in

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

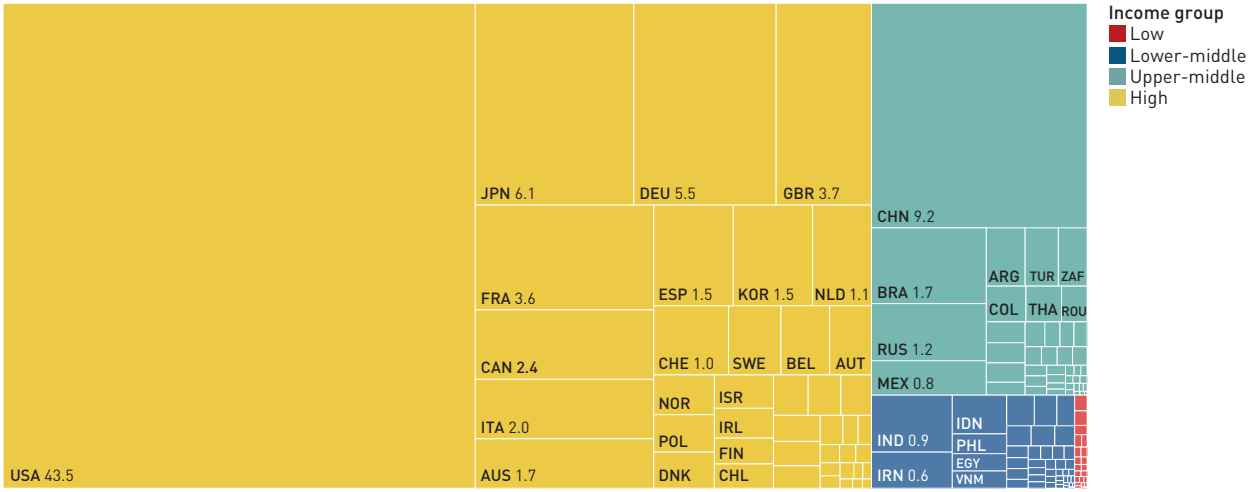
2. Exchange rates for the respective years were used when converting national currency to US dollars in current terms.

3. The data presented in Figures 1.1 and 1.2 are the sum of total health spending in US dollars across 188 countries. The conversion from national currency units to US dollars is based on the exchange rate in 2020. The average statistics in the rest of the chapter are unweighted cross-country averages (for example, the average of per capita government spending on health in low income countries).

4. Spending from external sources is current health spending funded by nondomestic sources, which corresponds mainly to external aid, including grants, concessional loans and donations in kind to countries from bilateral, multilateral and private external donors. Recipients of external aid are generally either the government or nonprofit institutions, such as nongovernmental organizations.

5. Country income group classifications in this report follow World Bank 2020 classifications. Group averages exclude countries with fewer than 600,000 people. Population data used in the report are from United Nations, *World Population Prospects,* 2022 revision. Venezuela was also excluded from income group calculations because it was temporarily excluded from World Bank classification pending release of revised national accounts statistics.

**FIGURE 1.2** **High income countries accounted for over 80% of health spending in 2020**




Share of global spending on health, 2020 (%)

**Data source:** WHO Global Health Expenditure Database, 2022.

**BOX 1.1**

## Data sources and challenges of data collection in countries during the COVID-19 pandemic

Data on health spending for this report are derived from country health accounts, which identify health financing flows using the international health accounting framework, the System of Health Accounts 2011 (SHA 2011) *[3]*.

The routine and timely production of health accounts is ordinarily a substantial undertaking that requires well-designed procedures and coordination among a wide range of parties. Depending on the context, health accounts teams compile information on health spending from several data sources, including national accounts, non-SHA health accounts, government records (such as ministry of health budgetary information and regional government data) and social security data. This information is complemented with other data and metadata from dedicated surveys (for example, of facilities and households), insurance umbrella organizations, trade associations, nongovernmental organization accounts and the like *[3]*. Compiling these data often requires coordinating with experts and the agencies that own the data. And the entity in charge of health accounts (such as a country's statistical office or a department in the ministry of health or elsewhere) often engages technical assistance for data collection, analysis and report writing.

In 2020, the COVID-19 pandemic posed major challenges to the production of health accounts. Many core health accounts team members were reassigned to help respond to the pandemic, as in Gabon. Others were subject to lockdowns, unable to conduct fieldwork collecting data, as in Chad. And workshops to discuss and analyse data could not be held, as in Sao Tome and Principe. The closure of international borders severely hampered technical assistance. With in-person missions no longer possible, the delivery mode of technical assistance had to be reinvented. Countries that needed hands-on training, such as Mozambique and Saint Lucia, were the most affected, while others that already had well-trained health accounts experts, such as Cameroon, pivoted to virtual assistance. WHO's Region of the Americas suspended all technical assistance in 2020 to avoid further overwhelming already overstretched country teams.

In some countries, household surveys were postponed or cancelled in 2020 due to restricted face-to-face contact, leading to difficulties in compiling data on household out-of-pocket spending (OOPS). Furthermore, established methods used in the past may not work for estimating spending during the pandemic. OOPS is usually estimated by multiplying the share of OOPS in total household consumption (from household surveys) by total final private consumption (from national accounts). This method is based on the fact that in a given country, OOPS is strongly correlated with private consumption. However, in 2020, the pandemic could have disrupted this relationship.

*(continued)*

**BOX 1.1 (continued)**

When information on direct government spending was unavailable, the estimation assumed the same share of health spending in total government spending as in the previous year. But the allocation of government spending may have changed due to the pandemic, so estimates of total government spending on health may not be as reliable as in previous years.

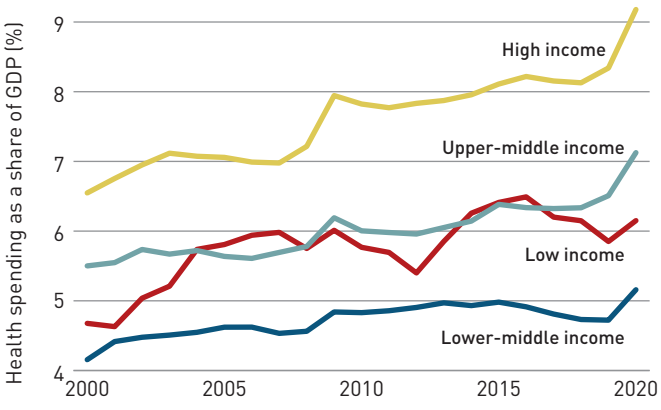
The primary source of data on external aid is recipient countries. When data from recipient countries are unavailable, disbursement amounts from donor reports are used. The main source for donor reports is the Organisation for Economic Co-operation and Development's Creditor Reporting System database, which includes disbursements for current expenditure and for capital investments. Because the database does not report actual expenditures, estimates use a one-year lag to account for recipient capacities to absorb and consume the funds received. During the pandemic, capacities may have changed, so these estimates should be interpreted with caution.

More disaggregated estimates of spending, such as by disease, age or health care function, require data on health service utilization (number of outpatient visits per disease, number of admissions and the like) to split nondirect spending lines such as salaries of health personal and material costs. This information rarely changes much from year to year. But disruptions in health services during the pandemic may have caused a break from past trends. For example, government spending to health providers needs to be disaggregated by type of service (outpatient care, inpatient care, preventive care and so on) and by disease (infections, noncommunicable diseases, reproductive health and so on), but some countries were unable to provide these estimates for 2020 *[4]*. So, fewer countries have data for 2020 by disease and by health care function. The only countries with spending data for 2020 by type of service, disease and age in the Global Health Expenditure Database are those that updated the data on their own.

This report uses *T* – 2 (year 2020) spending amounts on financing arrangements and sources of funds/ (SHA 2011 classifications HF and FS, respectively) for 188 of WHO's 194 Member States. More detailed breakdowns by service, disease and age are only for the sets of countries with data indicated in each chapter.

available history for most income groups. In high income countries, health spending reached 9.2% of GDP, up 2.7 percentage points from 2000. The trajectories were similar for upper-middle income countries (7.1% of GDP in 2020, up 1.6 percentage points) and lower-middle income countries (5.2% in 2020, up 1 percentage point). In low income countries, health spending accounted for 6.2% of GDP, below the peak in 2016 (Figure 1.3).

**FIGURE 1.3 Health spending as a share of gross domestic product (GDP) jumped in 2020**




**Data source:** WHO Global Health Expenditure Database, 2022.

## Government spending on health

***Government spending was the main driver of the increase in total health spending from 2019 to 2020. Per capita government spending on health increased in all income groups and rose faster than in previous years.***

Governments had a central role in the growth in health spending in 2020. Government spending on health increased substantially across all income groups, to all-time highs in real per capita terms. The increases from 2019 to 2020 were much larger than in preceding years, led by low income countries, where per capita government spending on health rose 18.6% in 2020, to US$ 9.20 (Figure 1.4). In lower-middle income countries, it rose 14.9%, to US$ 61. Growth was slower, though still brisk, in upper-middle income countries (8.4%, to US$ 307) and high income countries (11.0%, to US$ 2,689).

In most countries, the substantially weaker economic conditions in 2020 reduced government ability to generate tax and other revenue. Accordingly, the growth in government spending on health came not through income growth but through a combination of policy choices that rapidly expanded the government's role in the economy and that, in most

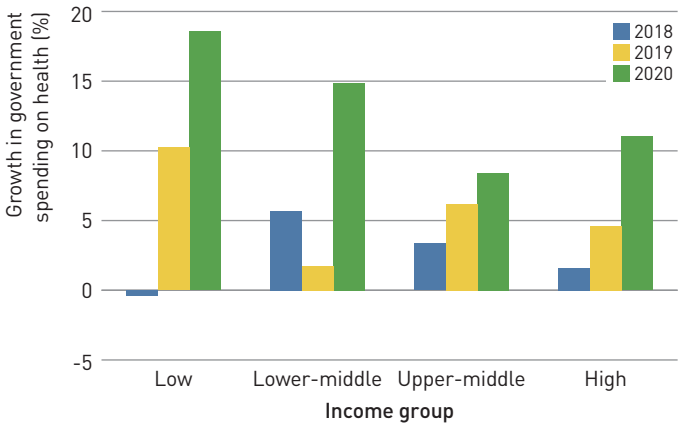
places, increased health spending's share of the fiscal envelope. In many countries, total government spending per capita rose substantially in 2020, as controlling the pandemic and insulating households and businesses from the worst of the economic slowdown became top priorities. This rapid fiscal expansion was financed largely by borrowing, which helped cover the gap from falling revenues (see Chapter 4). In many countries, both general government expenditure and government spending on health rose from 2019 to 2020 (Figure 1.5, upper-right quadrant).

## Health priority

***Health spending as a share of total government expenditure, which indicates the priority given to health, increased from 2019 to 2020 in all income groups except high income countries.***

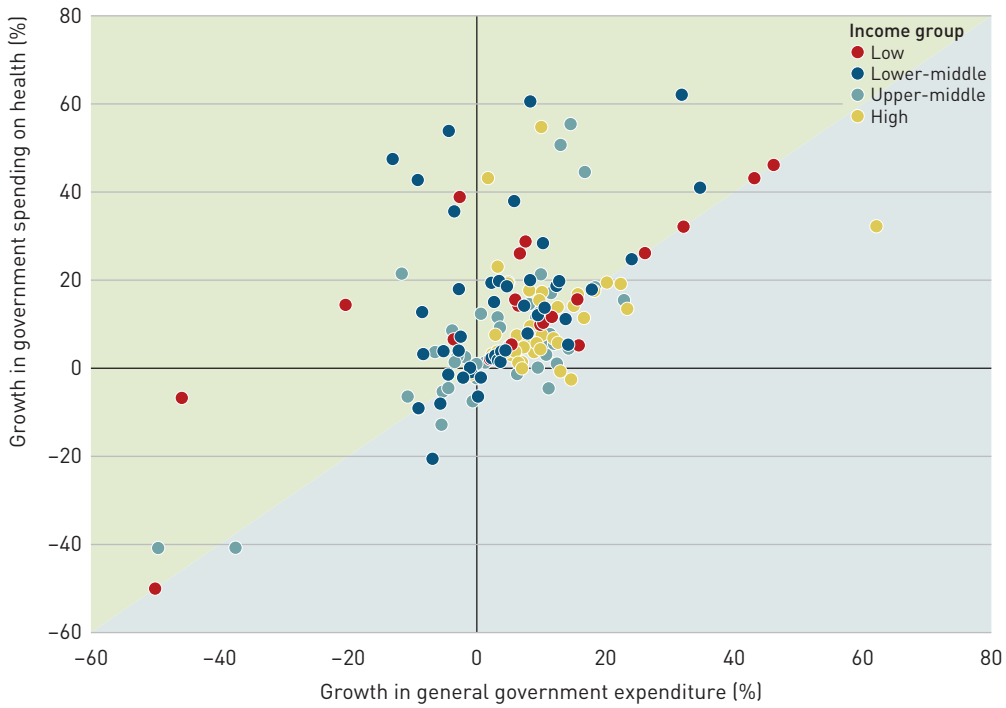
Health priority, proxied by health spending as a share of total government expenditure, increased from 2019 to 2020 in all income groups, except high income countries. It rose 0.6 percentage point in both low and lower-middle income countries and 0.3 percentage point in upper-middle income countries (Figure 1.6). The rising share of health spending was financed by additional mobilized

**FIGURE 1.4 Government spending on health rose faster in 2020 than in previous years**



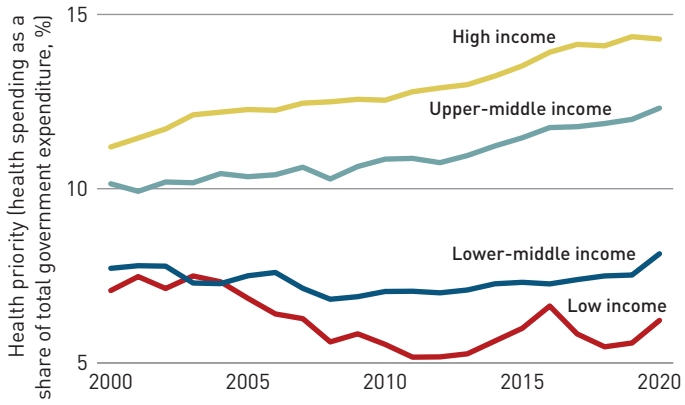

**Note:** Growth rates are based on per capita values in constant (2020) national currency units. Country-specific gross domestic product deflators were used to convert current values to constant values.
**Data source:** WHO Global Health Expenditure Database, 2022.

**FIGURE 1.5 In more countries, government spending on health increased more than general government expenditure, except in high income countries, from 2019 to 2020**




**Note:** Growth rates are based on per capita values in constant (2020) national currency units. Country-specific gross domestic product (GDP) deflators were used to convert current values to constant values. In countries in the green shaded area, government spending on health grew more than general government expenditure; in countries in the blue shaded area, general government expenditure grew more. Countries where the growth rate of government spending on health was more than 75% (Afghanistan and Guyana) or less than –75% (Zimbabwe) are excluded for better visualization of the graph. In 2020, Afghanistan collected data on health spending by the military, which accounted for 26% of government spending on health; this category was not included in 2019 data. Guyana has data issues with the GDP deflator and is planning to revise it. Zimbabwe's national currency was subject to high inflation, and a way forward on improving estimates for the country is under discussion.
**Data source:** WHO Global Health Expenditure Database, 2022.

**FIGURE 1.6 Health priority rose sharply in low, lower-middle and upper-middle income countries in 2020**




**Data source:** WHO Global Health Expenditure Database, 2022.

resources and reallocation of existing funds to the health sector *[5]*. In high income countries, where the health spending response and the fiscal response were both large, health spending as a share of total government expenditure remained close to its 2019 level.

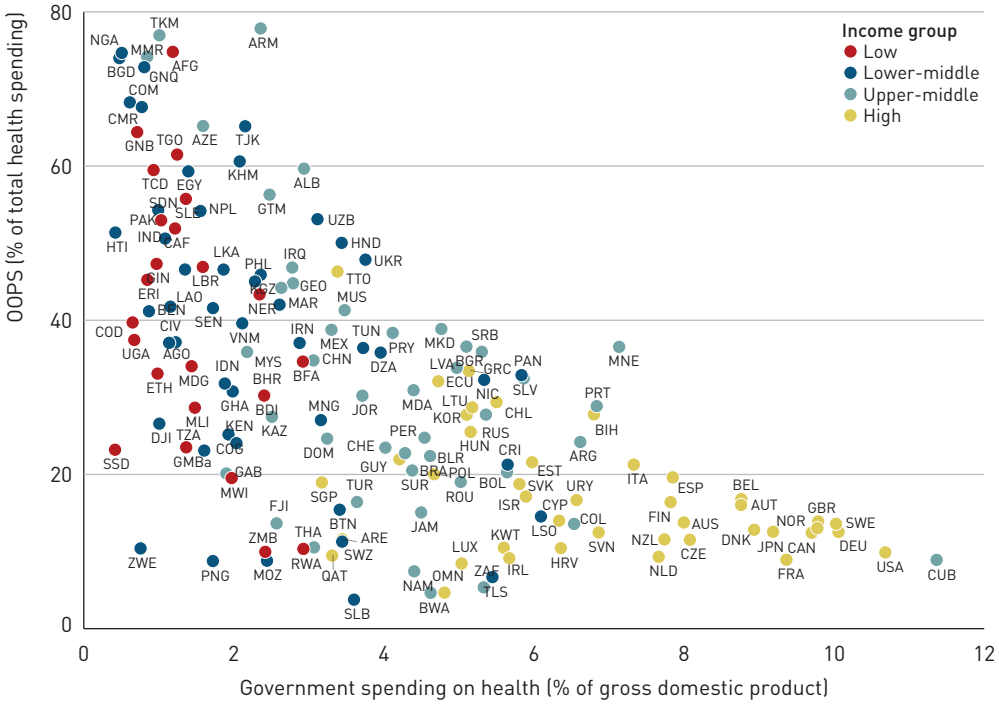
Since 2000, health prioritization has been steadily rising in upper-middle income countries, to 12.3% in 2020 (see Figure 1.6). In lower-middle income countries, it declined from 2000 to 2008, then began rising, to 8.1% of total government spending in 2020. In high income countries, prioritization has also been on a generally upward trajectory, notwithstanding modest tapering at 14.3% in 2020. Average prioritization is lowest in low income countries (6.2% in 2020), having risen since 2018 but still below a recent high in 2016 and historical peak in 2003.

## Out-of-pocket spending

***Out-of-pocket spending per capita fell during the first year of the pandemic, which may reflect reduced health service utilization.***

A health system that relies heavily on OOPS has a higher financial burden for households, particularly poor ones *[6]*. In general, higher government spending is associated with lower reliance on OOPS for funding the health system and, therefore, better financial protection (Figure 1.7). However, the substantial variation in OOPS observed at a given level of public spending suggests that a country's health financing policy also matters—for example, the size and comprehensiveness of benefit packages, co-payment policy, unregulated balance billing and

**FIGURE 1.7 Higher government spending is associated with lower reliance on out-of-pocket spending (OOPS) for funding the health system**




**Data source:** WHO Global Health Expenditure Database, 2022.

beneficiaries of government spending on health.

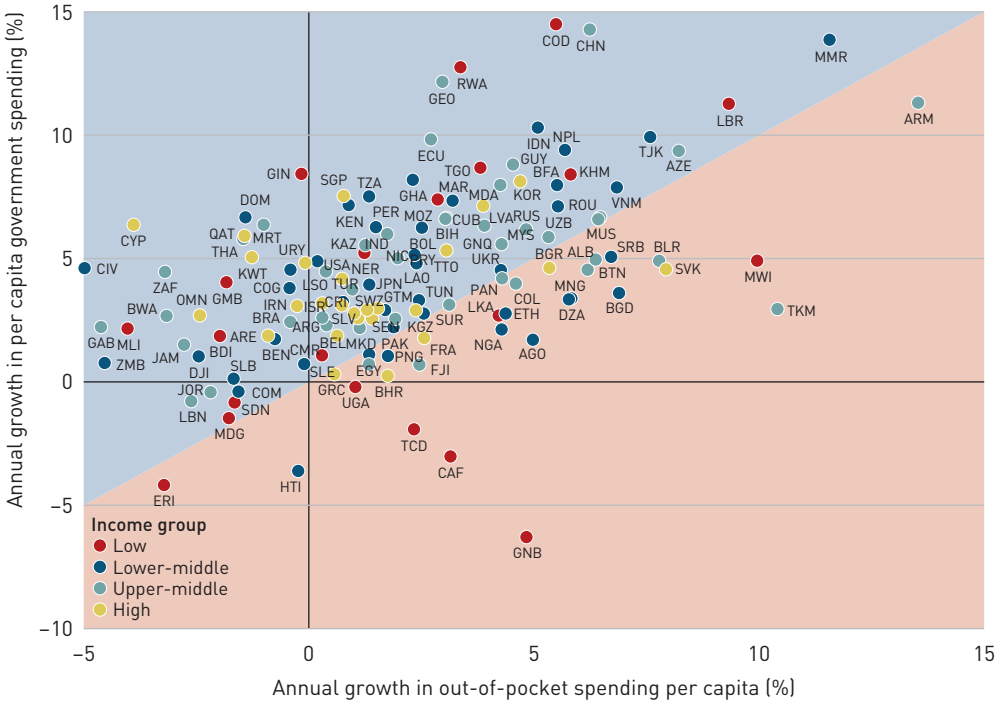
Before the COVID-19 pandemic, from 2000 to 2019, both government spending on health and OOPS per capita rose in real terms in most countries. But higher per capita government spending on health does not translate directly into lower OOPS, so government spending increased much faster (Figure 1.8). The average annual growth in per capita government spending in real terms was 4.3%, compared with 2.1% for OOPS per capita. There was no clear pattern across income groups.

The COVID-19 pandemic interrupted the provision and use of routine health services. In many countries, service utilization dropped, due possibly to reduced service hours or closure of health facilities during the pandemic or to patients' fear of contracting COVID-19. In 105 countries that responded to the first round of the WHO global pulse survey on the continuity of essential health services during the COVID-19 pandemic, more than half of essential health services had been disrupted in the third quarter of 2020. Disruptions occurred in all health care settings, especially in outpatient and primary health care *[7]*. Affordability of services for households may also have been an important factor. The economic downturn triggered by the pandemic affected household incomes, particularly among households in lower income brackets *[8, 9]*. This might have led more households to forgo health services for financial reasons.

In 2020, the first year of the COVID-19 pandemic, OOPS per capita fell in real terms in more than half of countries, particularly in high income countries (Figure 1.9). In all income groups, average OOPS per capita fell in real terms: 2.0% in low and lower-middle income countries, 1.8% in upper-middle income countries and 5.2% in high income countries. Most of the countries where OOPS increased were middle income. At the same time, government spending rose in most countries, including in nearly all high income countries.

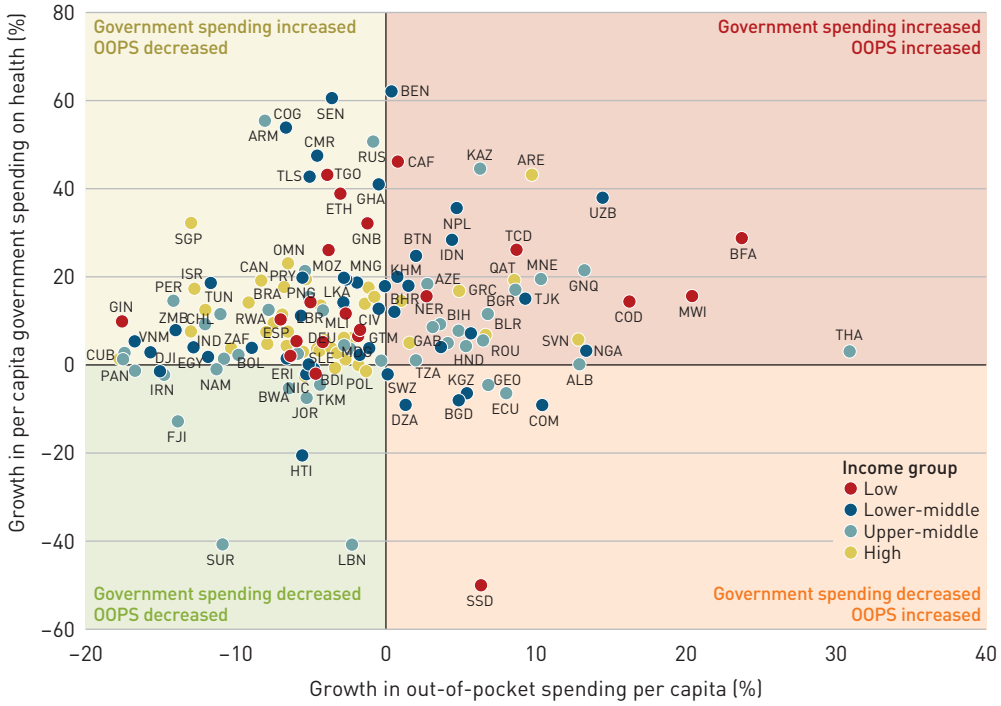
As government spending generally rose in real per capita terms in 2020 and OOPS fell, the share of OOPS in total health spending declined in all income groups, while the share of public spending commensurately increased. These developments continued the trend of

**FIGURE 1.8 In most countries, annual growth in government spending on health in real terms was higher than growth in out-of-pocket spending (OOPS) from 2000 to 2019**




**Note:** Growth rates are based on per capita values in constant (2020) national currency units. Country-specific gross domestic product deflators were used to convert current values to constant values. Only countries with data for all years (2000–2019) are included. In countries in the blue shaded area, annual growth in government spending on health was higher than growth in OOPS; in countries in the red shaded area, annual growth in OOPS was higher.
**Data source:** WHO Global Health Expenditure Database, 2022.

**FIGURE 1.9 In more than half of the countries with data, out-of-pocket spending (OOPS) per capita fell and government spending rose during the first year of the COVID-19 pandemic from 2019 to 2020**




**Note:** Growth rates are based on per capita values in constant (2020) national currency units. Country-specific gross domestic product deflators were used to convert current values to constant values. Countries where the growth rate of government spending on health or OOPS was extreme (Afghanistan, Cyprus, Guyana, Sudan and Zimbabwe) are excluded for better visualization of the graph. The huge increase in government spending on health in Afghanistan was due to inclusion of health spending by the military, which accounted for 26% of government spending on health and had not been included in estimates for previous years. The huge decrease in OOPS in Cyprus reflects a combination of the full implementation of the General Healthcare System in 2020 and the drop in utilization of health services during the pandemic. Guyana data has issues with the gross domestic product deflator and is planning to revise it. Sudan had inconsistent exchange rates across different sources, which need further analysis. Zimbabwe's national currency was subject to high inflation, and a way forward on improving estimates for the country is under discussion.
**Data source:** WHO Global Health Expenditure Database, 2022.

the two decades preceding the COVID-19 pandemic (Figure 1.10). However, because the share of OOPS had its largest decline in 2020 in all income groups, the trend was accelerated.

Whether the trend continued into 2021 remains uncertain given changes in both household and government health spending patterns (Box 1.2). Demand for health services that was delayed or suppressed in 2020 may eventually catch up, which may lead to higher OOPS.

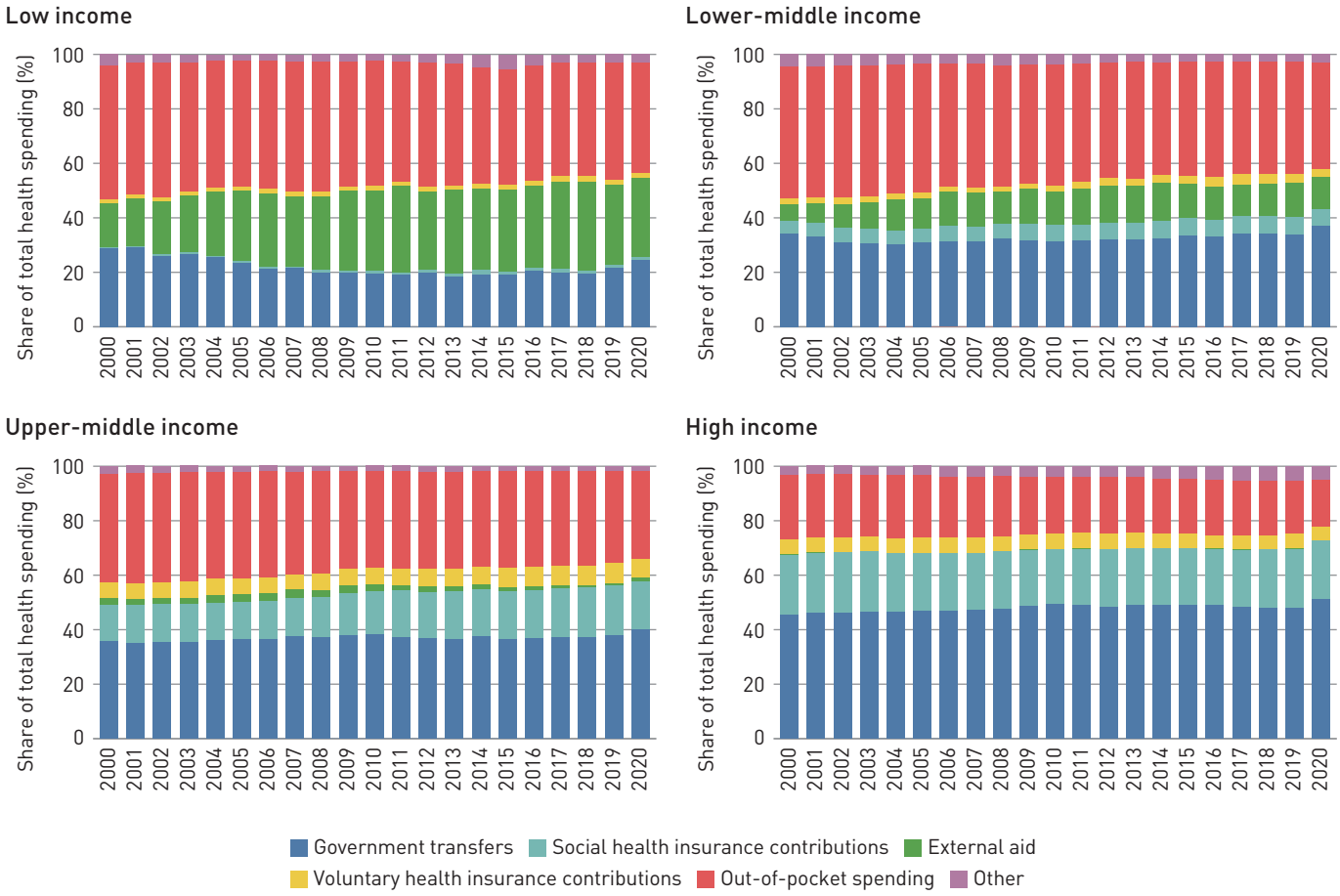
## External aid

***External aid continued to play a critical role in low income countries. From 2019 to 2020, per capita health spending from aid increased marginally in low income countries.***

Low income countries continue to rely heavily on external aid to finance health spending. Despite increased commitments and disbursements of aid during the first year of the COVID-19 pandemic, actual health spending from external aid among low income countries rose only marginally, from an average of US$ 10.10 per capita in 2019 to US$ 10.80 in 2020. The average share of external aid in total health spending in low income countries remained at 29% in 2020, the same as in 2019. In some low income countries, health spending financed via external aid accounted for a substantial share of health spending (Figure 1.11). On average, external aid was higher than government spending on health (US$ 9.20 per capita) in 2020.

External aid has also been an important driver of growth in total health spending in low income countries over the past two decades. Between 2000 and 2020, health spending from external aid grew on average from 0.7% of GDP to 1.8% in low income countries (Figure 1.12). In contrast, government sources consistently accounted for 1.0%–1.4% of GDP. Although average health

**FIGURE 1.10** **Health spending became more reliant on government sources in 2020 in 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, 2022.

spending as share of GDP was higher in low income countries than in lower-middle income countries (as shown earlier), if aid were excluded for low income countries, the share would drop from 6.2% to 4.4% in 2020, making it the lowest among all income groups. Despite the growth of aid as a share of GDP, private domestic sources accounted for the largest share of GDP in low income countries, 2.9% in 2020.

## Implications

The impact of the COVID-19 pandemic goes far beyond health, posing real challenges to many aspects of social and economic development. During 2020, the first year of the pandemic, health systems in many countries faced huge challenges in sustaining routine essential services and COVID-19 testing, contact tracing and treatment. Total financial resources devoted to health rose in 2020, driven by growth in government spending on health in per capita terms and as share of total government spending in most countries. At the same time, OOPS fell in real terms due to both demand- and supply-side constraints.

Government spending on health is essential to ensuring equitable access to health services and to reducing household financial hardship by paying for health services when needed. Governments also play a major role in providing public goods. The COVID-19 pandemic caught most health systems off guard *[10]* and triggered economic crises. In 2020, nearly all governments deployed more financial resources to health to control the pandemic. With higher government spending and lower OOPS, the share of OOPS in total health spending decreased.

However, whether these patterns continued into 2021 and beyond remains unclear.

BOX 1.2

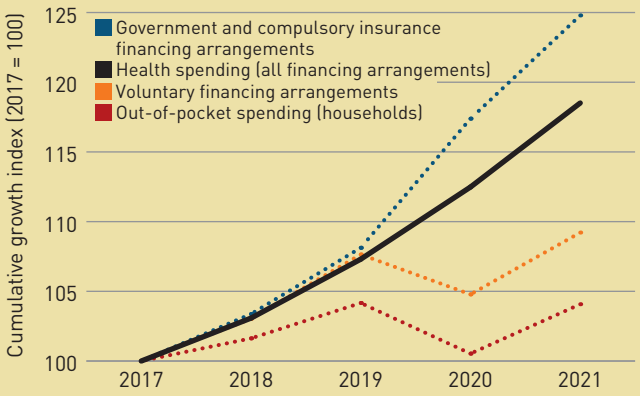
## Preliminary data for 2021 in a small set of countries

In 2022, WHO began collecting and publishing data on global health spending with a lag of only one year after the end of the reported period. The 20 countries[1] that reported preliminary data for 2021 are mainly high income European countries, and most provided information on health spending only by financing arrangement. Given this small number of countries and their composition, patterns are not internationally representative or generalizable beyond the group.

On average across the 20 countries, per capita health spending rose 5.8% in real terms in 2021, slightly more than the 4.5% in 2020, and accounted for the same share of gross domestic product as in 2020 (9.3%). Government and compulsory health insurance spending rose substantially in 2021, though by less than in 2020, while both spending from voluntary financing arrangements (mainly voluntary health insurance spending but also spending by nonprofit institutions and employers' own health services for their workers) and out-of-pocket spending, which fell in 2020, bounced back to positive growth in 2021 and reached a similar level as in 2019 (Box Figure 1).

Government spending on health continued to rise in 2021, except in 2 of the 20 countries, where preliminary estimates showed a decrease. In the broader context of total government spending, health priority rose substantially in 2021. In 2020, government and compulsory insurance spending as a share of general government expenditure fell in most of the 20 countries because substantial additional public resources were urgently needed for other purposes, such as social protection and economic stabilization *[2]*. In 2021, government spending on health as a share of general government expenditure rose again because of sustained growth in government spending on health and stable general government expenditure (Box Figure 2).

**BOX FIGURE 1** A sustained increase in health spending in 2021

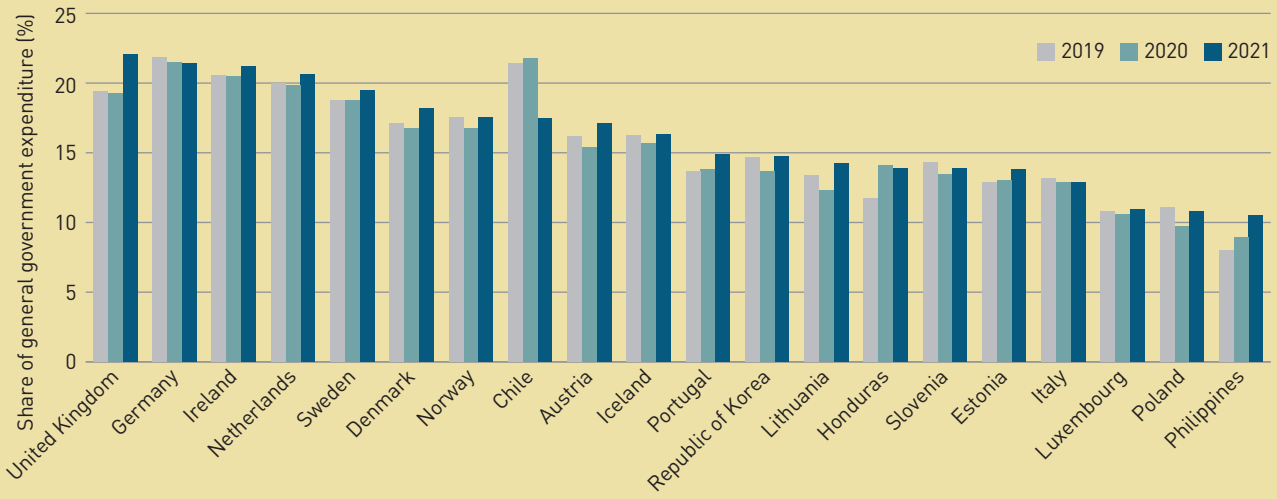



**Note:** Covers 20 countries. Cumulative growth data are based on per capita values in constant (2020) national currency units. Country-specific gross domestic product deflators were used to convert current values to constant values.
**Data source:** WHO Global Health Expenditure Database, 2022.

### Note

1. Austria, Chile, Denmark, Estonia, Germany, Honduras, Iceland, Ireland, Italy, Lithuania, Luxembourg, Netherlands, Norway, the Philippines, Poland, Portugal, the Republic of Korea, Slovenia, Sweden and the United Kingdom.

**BOX FIGURE 2** Health priority in government spending rose in 2021 in 17 of 20 countries

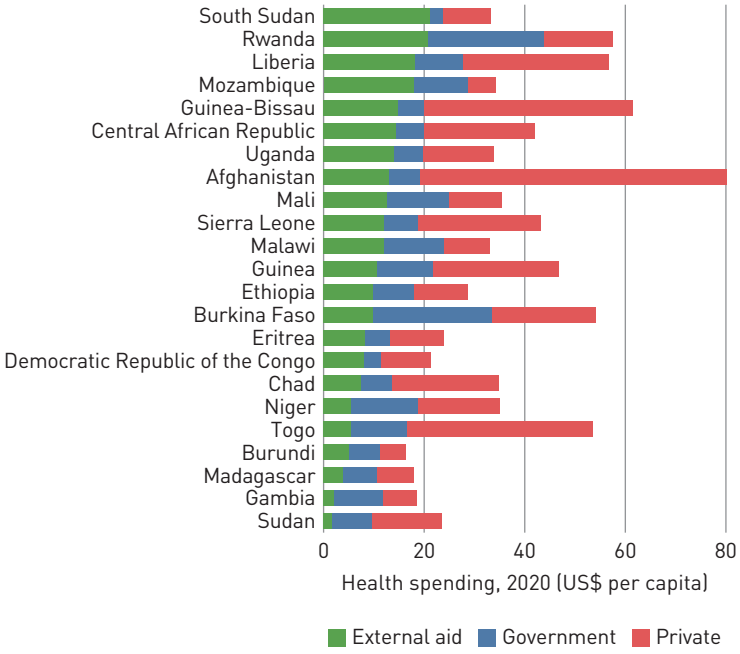



**Data source:** WHO Global Health Expenditure Database, 2022.

OOPS likely increased if income growth was renewed and provision of health services returned to prepandemic levels. But the pandemic has also resulted in higher poverty and income inequality, raising concerns as to whether and when a "return to normal" (in terms of health service utilization) will occur, whether aggregate health service use and OOPS will increase and what distribution patterns of care will be. Fiscal challenges will constrain governments' ability to respond—yet their response is crucial. Every country can decide how much to spend on health, but the choice is harder for many low and lower-middle income countries due to uneven economic recovery *[11]*. Nevertheless, the pandemic has reinforced the importance of improving the resilience and sustainability of health care systems to complement the response to existing trends such as ageing populations, advancing technologies, looming environmental risks and growing inequalities.

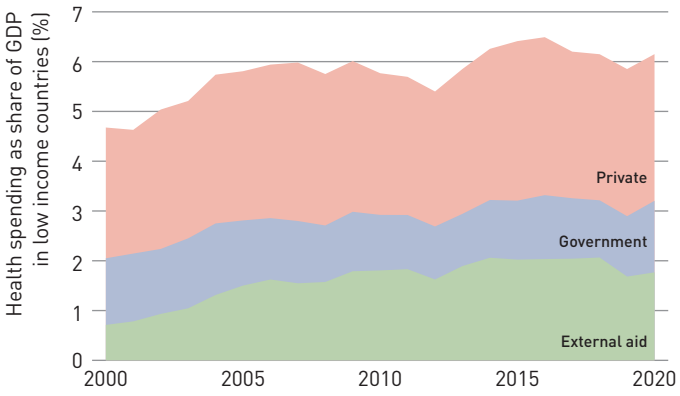
Ongoing monitoring of actual health spending by governments, individuals and donors will be essential to track these changes over time and in particular to understand how allocation and policy responses affect these patterns. More reliable and timely data remain critical to inform understanding of health spending patterns at the country, regional and global levels and of how these patterns relate to progress towards universal health coverage.

**FIGURE 1.11 Low income countries relied heavily on external aid and private spending to finance health spending**




**Data source:** WHO Global Health Expenditure Database, 2022.

**FIGURE 1.12 In low income countries, health spending from external aid rose from 0.7% of gross domestic product (GDP) in 2000 to 1.8% in 2020**




**Data source:** WHO Global Health Expenditure Database, 2022.

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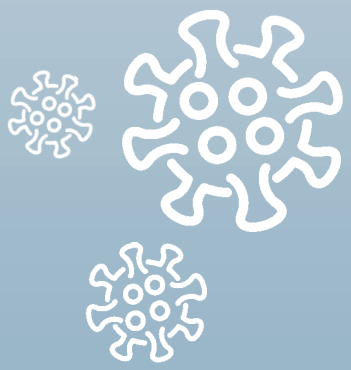



CyberKnife
H4
H3
H2
H1

2

# Health spending by type of service

## Key messages

- As expected, spending on inpatient care, outpatient care and medical goods accounted for more than 60% of total health spending in 2019 in all income groups, across the 109 countries with data. The rest was spent on preventive care, health system governance and administration, and other health services.
- In 2019, most government and donor spending on primary health care in the 18 low income countries with available data went to preventive care. Spending on preventive and outpatient care each accounted for more than one-third of government and donor spending on primary health care in the 26 lower-middle income countries with data. And spending on outpatient care accounted for more than half of government and donor spending on primary health care in the 20 upper-middle income countries with data.
- Across the 50 countries with data (29 high income, 17 middle income and 4 low income), the overall distribution of health spending by type of service in 2020 remained similar to that in 2019.
- Across the 50 countries with data, per capita total health spending rose 6% on average in real terms in 2020, though the increase varied by type of service:
  - Per capita spending on inpatient care rose in 42 of the 50 countries, whereas per capita spending on outpatient care rose in nearly half of the 50 countries. On average, spending on per capita spending on inpatient care rose 10% in real terms, and per capita spending on outpatient care rose marginally, 1%.
  - Per capita spending on preventive care rose substantially, by 32% on average—and at a higher rate than total health spending in 41 of the 50 countries.
  - Per capita spending on medical goods rose in around two-thirds of the 50 countries, by 3% on average.
  - Spending on health system governance and administration rose in more than two-thirds of the 50 countries, by an average of 7%.

As countries grappled with the COVID-19 pandemic, health systems were forced to quickly adjust and adapt, with direct and visible consequences for resource allocation across levels and types of health care. This chapter analyses available data on per capita health spending in 2019 and 2020, as well as the distribution by type of health service, and highlights shifts during the first year of the pandemic. The analysis classifies spending into six categories of health services: inpatient care, outpatient care, medical goods, preventive care, health system governance and administration, and other (Box 2.1). There are not enough data on health care spending by both function and source of revenues for 2019 and 2020 to study in this chapter, so the analysis does not compare the changes in government, private and external funding for all six health care service categories.

**BOX 2.1**

## Categories and methodology of health care functions

This chapter analyses health spending levels and distribution by type of health care service and good, according to the health care function classification under the System of Health Accounts (SHA 2011) *[1]*. These functions relate to the purpose of a health service or product transaction, including curative, rehabilitative, long-term and preventive care; ancillary services; medical goods; and health system governance and administration. Curative, rehabilitative and long-term care can also be classified by mode of provision (inpatient care, day care, outpatient care and home care). Health spending on COVID-19 is part of total health spending and is therefore included in the function categories. Under SHA 2011, health accounts measure spending at the time of consumption, so 2020 data did not yet include spending on COVID-19 vaccination.

- *Inpatient care* involves formal admission to a health care facility and an overnight stay. In this chapter, inpatient care refers to inpatient curative care only and excludes inpatient rehabilitative and long-term care.
- *Outpatient care* involves health services delivered on the premises of a health care provider without formal admission or overnight stay in the facility. In this chapter, outpatient care refers to outpatient curative care only and excludes outpatient rehabilitative and long-term care.
- *Medical goods* are mainly pharmaceuticals but also therapeutic appliances and other durable and nondurable medical goods. They exclude medical goods consumed during inpatient care and in other health services and settings. Some countries have difficulty separating spending on pharmaceuticals used outside health care facilities from spending on pharmaceuticals used as part of health service, which could lead to medical goods spending being underestimated and inpatient care and other services being overestimated *[2]*. In other situations, patients may be required to purchase pharmaceuticals from pharmacies and bring them to inpatient or outpatient settings for use during health service, which could lead to spending on medical goods being overestimated.
- *Preventive care* is limited to primary and secondary preventions in SHA 2011, which include interventions aimed at avoiding diseases and risk factors and detecting disease. It includes both population-based services, such as information and promotion programmes (for example, distribution of brochures and preparation of posters and radio and television advertisements promoting health) and epidemiological surveillance, and individual services, such as immunization (including voluntary private paid vaccination), screenings and healthy condition monitoring. Spending on epidemiological surveillance and monitoring by specific disease programmes (such as HIV, tuberculosis and malaria) are included, but spending on treatment for those diseases is not. Spending on preventive care in many countries could be underestimated because individual preventive care services are often integrated into curative care services, especially in high income countries, and it is therefore difficult for countries to separate spending on preventive care from spending on other services.
- *Health system governance and administration* involves governance and administration of the health system, as well as administration of health financing. These functions focus on the overall health system. This category excludes administrative activities of health care services in medical facilities, such as hospitals.
- *Other* involves rehabilitative care, long-term care, ancillary care, day and home-based curative care and unclassified health services in this chapter.

## Composition of health spending by type of service

***As expected, spending on inpatient care, outpatient care and medical goods accounted for more than 60% of total health spending in 2019 in all income groups, across the 109 countries with data. The rest was spent on preventive care, health system governance and administration, and other health services***

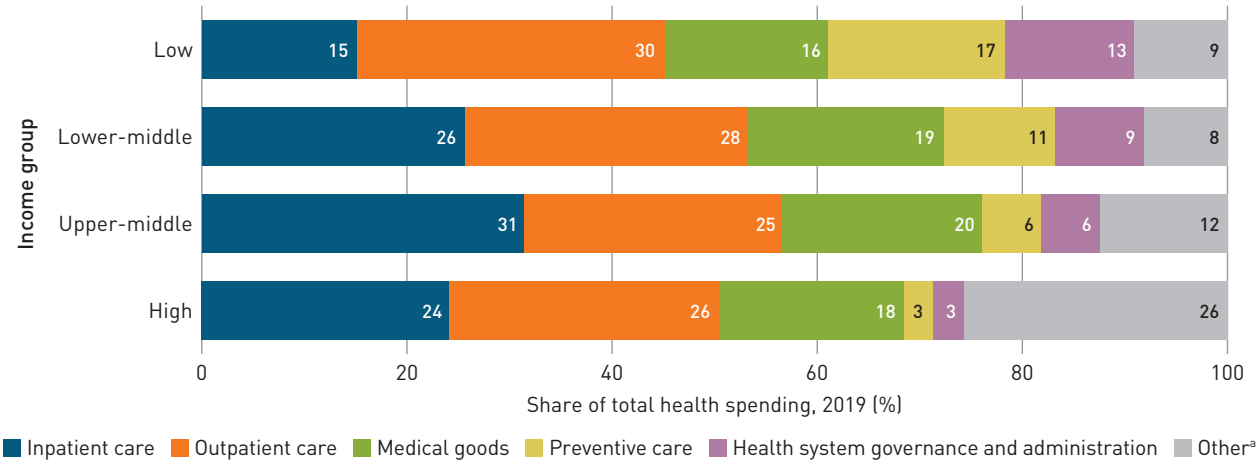
In 109 countries with data (Box 2.2), spending on inpatient and outpatient care accounted for the majority of total health spending in 2019 in all countries across income groups (Figure 2.1). The share of inpatient care in total health spending was 24%–31%, except in low income countries, where it was 15%. Spending on outpatient care accounted for 30% of total health spending in low income countries, 28% in lower-middle income countries, 25% in upper-middle income countries and 26% in high income countries.

In all income groups, spending on medical goods was also a large category and accounted for 16%–20% of total health spending (see Figure 2.1). Spending on medical goods captures medical appliances and medicines prescribed by a doctor and those purchased for self-treatment without consulting a medical professional. The operation of the health service delivery system affects reporting on spending. In some countries, medicines are dispensed in the health facility that provides the service, and the cost of medicines are included in the total bill for the consultation and are not recorded in the medical goods spending category. In other countries, medical goods may include some of the cost of medicines used for inpatient and outpatient treatment when the medicines are not available in health facilities and patients purchase them elsewhere and bring them to the health facility. So, caution should be used in interpreting the share of medical goods in total health spending.

Spending on preventive care as a share of total health spending varied widely across income groups: from 3% in high income countries to 17% in low income countries (see Figure 2.1). Spending on preventive care is likely to be underestimated because of the difficulties in separating it from spending on other services, such as outpatient care (see Box 2.1). In general, higher income countries allocated a smaller share of total health spending to preventive care than lower income countries did. One reason could be that more expensive services with advanced technology are available in higher income countries, driving total health spending higher.

Low and lower-middle income countries devoted a larger share of total health spending to health system governance and administration, 13% and 9%, respectively, than upper-middle and high income countries did (6% and 3%, respectively; see Figure 2.1). Lower total health spending could be one reason for the larger share of spending on governance and administration in lower income countries. However, other factors such as the structure of health system governance, could also

**FIGURE 2.1 Spending on inpatient care, outpatient care and medical goods accounted for the majority of total health spending in 2019 in all income groups**




**a.** Includes rehabilitative, long-term, ancillary, day and home-based curative care and unclassified health spending.
**Note:** Includes data for 109 countries.
**Data source:** WHO Global Health Expenditure Database, 2022.

BOX 2.2

## Data used in this chapter

WHO began publishing data on health spending by function for reference year 2016. The number of countries submitting information by health function has since risen, and the disaggregation, granularity and general quality of data have improved every year. Today, the Global Health Expenditure Database *[3]* includes at least one data point on spending by function for 2016–2019 for 115 countries, although data quality and granularity vary. In addition to disrupting health systems, the COVID-19 pandemic also affected health information systems and statistics, including production of health accounts, so almost half of these countries were unable to provide health spending data by function for 2020. The analyses of the growth in spending by health function from 2019 to 2020 is based on 50 countries, with data for both years and a population greater than 600,000 in 2020.[1] Since the data cover mostly high income countries, readers should refrain from generalizing any patterns presented in this chapter and from drawing conclusions for middle or low income countries.

The following countries are excluded from the graphs presenting comparisons or growth rates between 2019 and 2020 because of methodological changes in 2020, deviation from System of Health Accounts 2011 definitions or potential data quality issues: Afghanistan, Armenia, Bhutan, Bulgaria, Burkina Faso, Canada, Chile, Costa Rica, Ethiopia, Montenegro, the Philippines, Senegal, Timor-Leste, the United Arab Emirates and the United States of America.

The analysis of primary health care spending in 2019 in this chapter is based on 94 countries, and the analysis of primary health care spending by source of financing is based on 66 countries. The number of countries with data on primary health care spending in 2019 is lower than the number with data on health spending by function in 2019 because calculating primary health care spending requires higher granularity in the disaggregation of health service spending.

**BOX TABLE 1** Number of countries with data on health spending by function, 2019 and 2020

| Income group | 2019 | 2020 | Both 2019 and 2020 |
|---|---|---|---|
| Total | 109 | 64 | 50 |
| Low | 18 | 6 | 4 |
| Lower-middle | 28 | 10 | 6 |
| Upper-middle | 29 | 15 | 11 |
| High | 34 | 33 | 29 |

**Data source:** WHO Global Health Expenditure Database, 2022.

**BOX TABLE 2** Number of countries with data on primary health care spending, 2019

| Income group | Primary health care spending | Primary health care spending by source of financing |
|---|---|---|
| Total | 94 | 66 |
| Low | 18 | 18 |
| Lower-middle | 26 | 26 |
| Upper-middle | 25 | 20 |
| High | 25 | 2 |

**Data source:** WHO Global Health Expenditure Database, 2022.

**Note**

1. Population data used in the report are from United Nations, *World Population Prospects,* 2022 revision.

contribute. In some countries, particularly lower income countries, the disease control function is under the ministry of health and is difficult to separate from the ministry's total spending. Furthermore, efficiency in administration may also play a role.

Other types of services, mostly rehabilitative and long-term care (Box 2.3), accounted for a substantial share of total health spending in high and upper-middle income countries (see Figure 2.1). With the ageing population in high and some upper-middle income countries, long-term care is playing an increasingly important role in meeting health needs.

## Primary health care spending

***In 2019, most government and donor spending on primary health care in the 18 low income countries with data went to preventive care. Spending on preventive and outpatient care each accounted for more than one-third of government and donor spending on primary health care in the 26 lower-middle income countries with data. And spending on outpatient care accounted for more than half of government and donor spending on primary health care in the 20 upper-middle income countries with data.***

Primary health care (PHC) is the cornerstone of a sustainable health system with universal

**BOX 2.3**

## Spending on rehabilitative and long-term care in high income countries in 2019

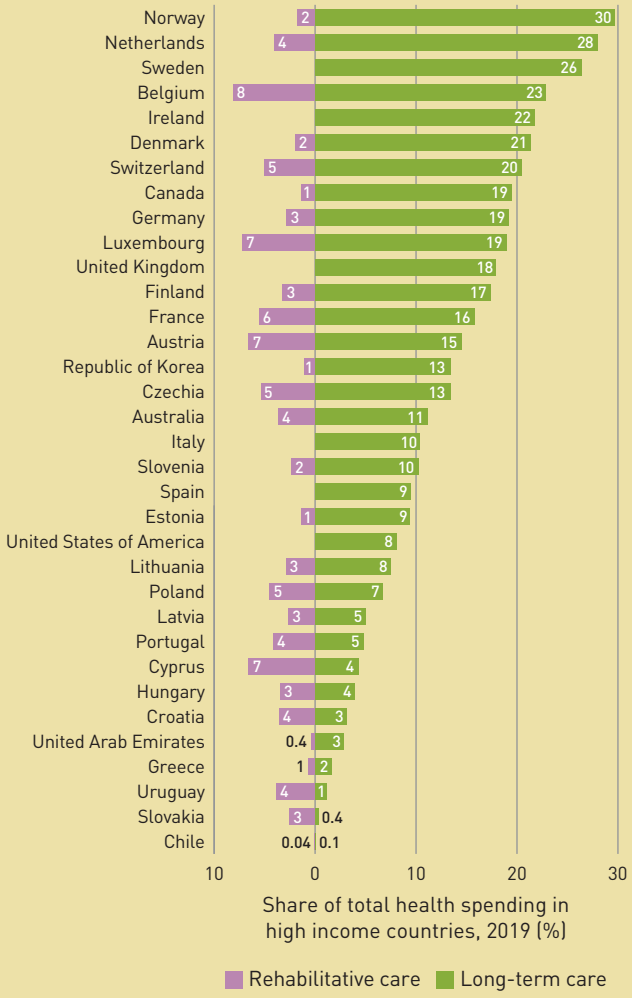
In the 34 high income countries with data, a large share of the "other" spending in Figure 2.1 went to health-related long-term care,[1] which accounted for 12% of total health spending. Driven by ageing populations, high income countries are expanding and reforming long-term care systems to meet the needs of the growing number of older people at risk of frailty, disability and dementia. In the coming decades, spending on long-term care is expected to grow faster than GDP and total health spending *[4]*. Still, the share of spending on long-term care varied considerably across high income countries. Norway, the Netherlands and Sweden, with established formal institutional and home-based care arrangements for the elderly and dependent population, allocated more than 25% of total health spending to long-term care in 2019, compared with less than 10% in many Southern and Eastern European countries and the United Arab Emirates, the United States of America and Uruguay (Box Figure).

In the 34 high income countries, spending on rehabilitative care accounted for an average of 3% of total health spending in 2019, ranging from 0.04% in Chile to 8% in Belgium. However, for some countries, separating spending on rehabilitative care from spending on other health services is difficult, likely resulting in an underestimate *[5]*.

**Note**

1. Long-term care (health) consists of a range of medical and personal care services for patients with a long-term dependency due to limitations in basic activities of daily living. It reflects only long-term health care spending, though in some countries, it is difficult to separate the health and social aspects of long-term care.

**BOX FIGURE** **Spending on health-related long-term care accounted for an average of 12% of total health spending in 2019 in high income countries**




**Note:** Includes data on long-term care spending for 34 high income countries. Ireland, Italy, Spain, Sweden, the United Kingdom and the United States of America did not provide data on rehabilitative care spending.
**Data source:** WHO Global Health Expenditure Database, 2022.

health coverage and of the health-related Sustainable Development Goals, as stated in the Declaration of Alma-Ata and reaffirmed in the Declaration of Astana *[6]*.

Across 94 countries with data, spending on PHC (Box 2.4) in 2019 amounted to half of total health spending on average and differed by income group. A larger share of health spending went to PHC in lower income countries than in higher income countries. One possible explanation for this is that in low income countries, which have less service delivery capacity, most available interventions fall under the PHC category, while in high income countries, more expensive services with more advanced technologies are available that are not counted under PHC.

Across income groups, the largest share of PHC spending went to unspecialized outpatient care (Figure 2.2). The second largest component was medical goods, except in low income countries, where it was preventive care.

Spending on health system governance and administration accounted for the smallest

BOX 2.4

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

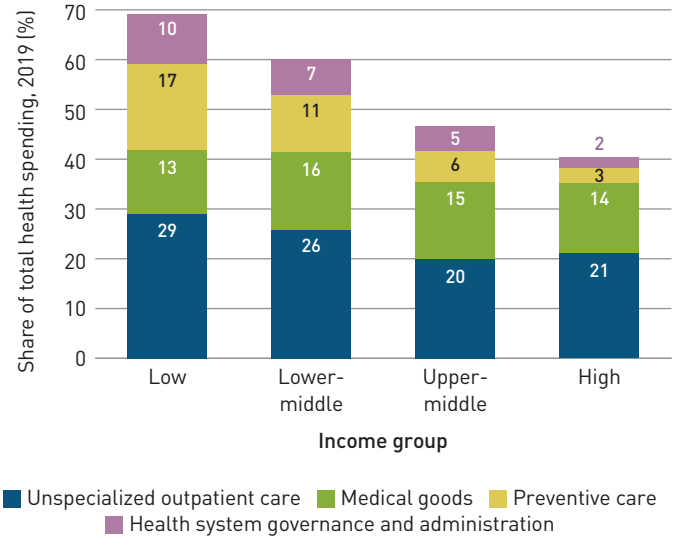
The System of Health Accounts 2011 does not include a ready-made classification for primary health care (PHC) spending, which can be defined differently depending on the objective. The global measure of PHC spending in the Global Health Expenditure Database aims to capture the PHC component of integrated health services throughout the life course and across essential public health functions. It is based on the type of services (classification of health care function) and aims to provide a benchmark for cross-country comparison, fully recognizing that countries organize systems differently. However, because health systems and service delivery patterns vary, the global measure is not equally relevant to all countries *[7]*, and the measure of PHC spending can differ depending on the policy concern in each country-specific situation. The following spending categories from the classification of health care function are considered part of PHC spending for the global measure *[8]*:

- Unspecialized outpatient care (including general and dental outpatient curative care, home-based curative care, outpatient and home-based long-term health care, and unclassified outpatient care).
- Preventive care *[1, 9]*.
- 80% of spending on medical goods purchased as a result of consultation and self-treatment.[1]
- 80% of spending on health system governance and administration.

**Note**

1. The 80% threshold for spending on medical goods and health system governance and administration is not based on empirical study and remains under discussion.

**FIGURE 2.2 Across income groups, the largest share of primary health care spending went to unspecialized outpatient care**




**Note:** Includes data for 18 low income countries, 26 lower-middle income countries, 25 upper-middle income countries and 25 high income countries.
**Data source:** WHO Global Health Expenditure Database, 2022.

share of PHC spending, but it varied across income groups and was largest in low income countries. There are some arguments that including part of governance and administration expenditure in the global measure (in line with the view that PHC is more than services) inflates PHC spending in low income countries *[10]*. But there are many possible reasons why lower income countries might have a larger share of PHC spending on governance. Governance structures in health systems differ across countries. For example, in low income countries, some prevention programs are assigned to the ministry of health rather than to a separate disease control agency, making it difficult to separate spending on preventive care from spending on other activities. So, what is attributed to governance in such settings actually includes functions that would be more appropriately assigned to preventive care. Deeper analysis is needed to better understand these differences and to distinguish real differences from artifacts of organization and measurement.

The 2021 Global Health Spending Report showed that nearly half of PHC spending in low and middle income countries in 2019 was funded by private sources. In low income countries, external aid funded one-third of PHC spending, and government sources funded only one-fifth *[3]*. Although outpatient care and medical goods were the main components of PHC in low income countries, medical goods were funded mostly by private sources (or, more concretely, households' out-of-pocket spending), and the share of spending on outpatient care funded by private sources was also larger than the share funded by government

and external aid combined. The pattern was similar in lower-middle income countries. In upper-middle income countries, although spending on medical goods was also funded mainly by private sources, government funded about two-thirds of outpatient care.

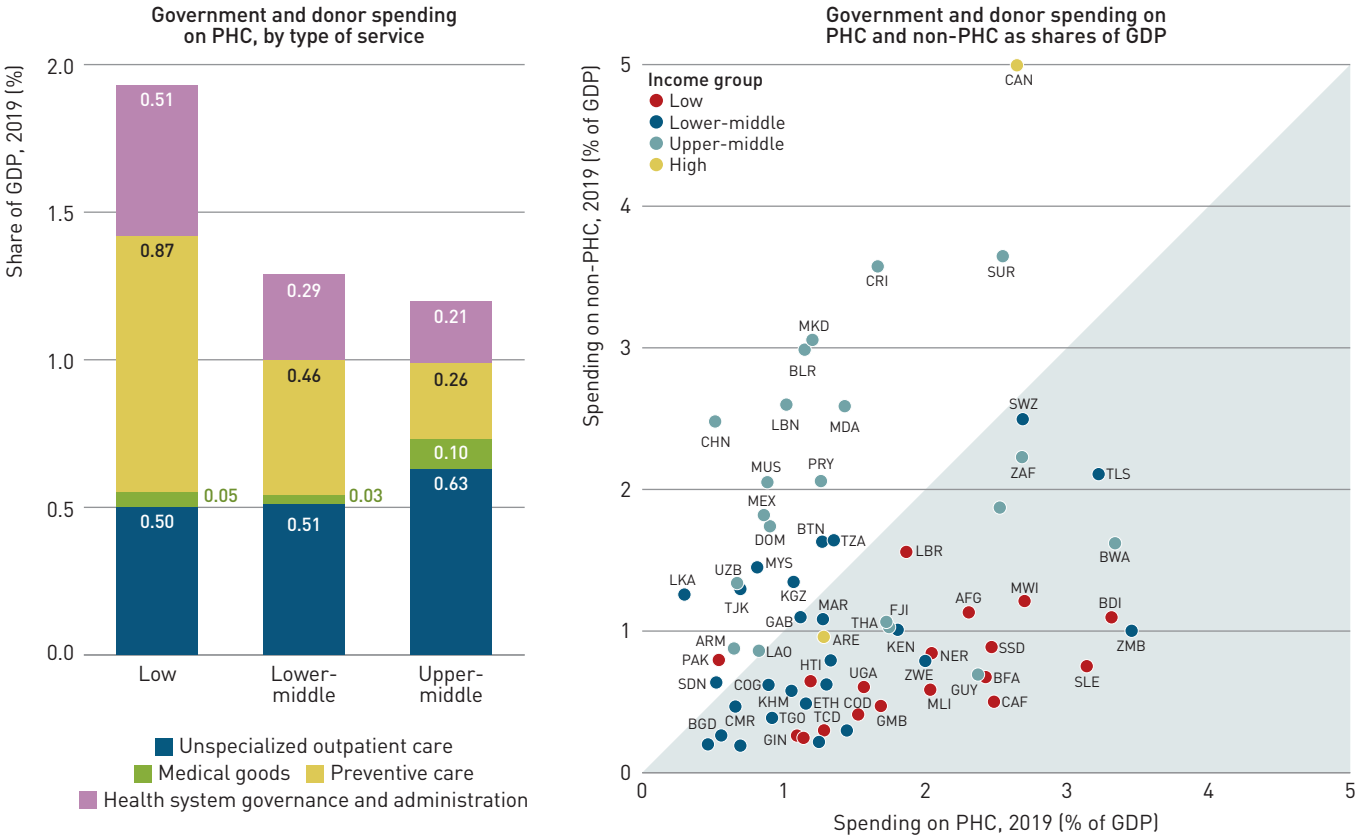
In contrast, preventive care relied heavily on external aid in low and lower-middle income countries. In upper-middle income countries, government was the main funder of preventive care. As expected, health system governance and administration was funded mainly by government in middle income countries, but in low income countries, external aid funded nearly half.

The 2019 Political Declaration of the High-level Meeting on Universal Health Coverage committed signatories to scaling up efforts to optimize budgetary allocations on health and increase public spending, with an emphasis on PHC, in accordance with national contexts and priorities *[6]*. In low and middle income countries, about half of PHC spending is funded by government and external aid, with the rest funded by private sources, mostly households' out-of-pocket payments *[11]*.

Across the 66 countries that reported PHC spending by funding source in 2019, government and donor spending on PHC as a share of gross domestic product (GDP) varied substantially (Figure 2.3). Across the 18 low income countries with data, average spending on PHC funded by government and external aid as a share of GDP was 1.9%, ranging from 0.5% in Sudan to 3.3% in Burundi. In the 26 lower-middle income countries, the average was 1.3%, ranging from 0.3% in Sri Lanka to 3.5% in Zambia, and in the 20 upper-middle income countries the average was 1.2%, ranging from 0.52% in China to 3.3% in Botswana. These data provide a benchmark for monitoring implementation of the strategy outlined in the 2019 political declaration on universal health care.

In low income countries, government and external aid mostly funded preventive care,

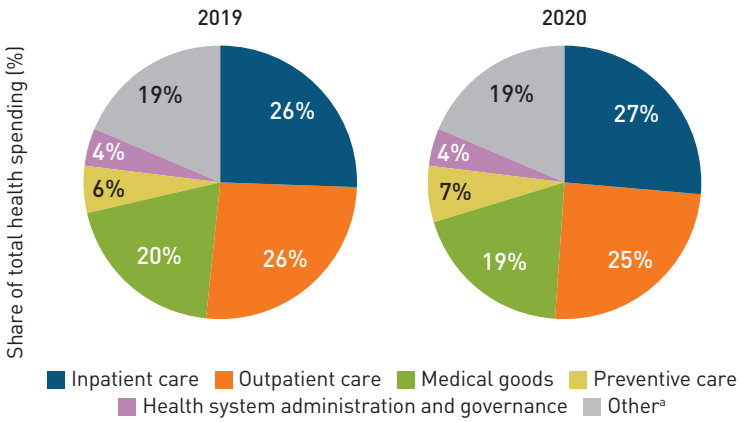
**FIGURE 2.3 Low income countries had the highest share of government and donor spending on primary health care (PHC) as a share of gross domestic product (GDP)**




**Note:** Includes data for 66 countries: 18 low income, 26 lower-middle income, 20 upper-middle income and 2 high income. The average for high income countries was not computed in the left panel due to lack of data. In countries in the shaded area in the right panel, government and donor (combined) spending on PHC as a share of GDP was larger than government and donor spending on non-PHC as a share of GDP; in countries in the unshaded area, government and donor spending on non-PHC as a share of GDP was larger.
**Data source:** WHO Global Health Expenditure Database, 2022.

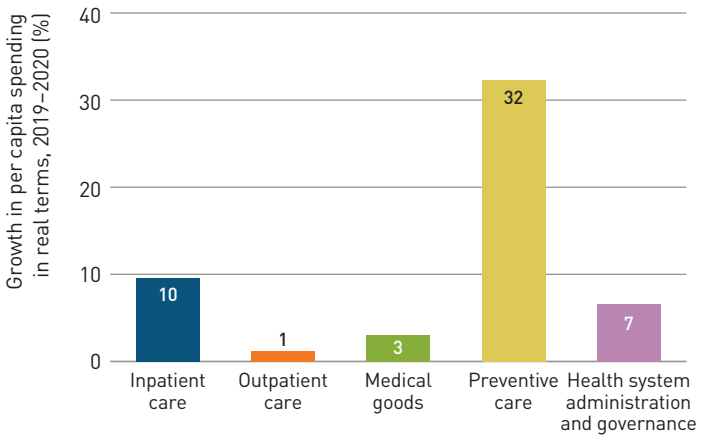
whereas in higher income countries, they mostly funded unspecialized outpatient care. In low income countries, health system governance and administration accounted for a large share of government and donor spending on PHC, close to the share that spending on unspecialized outpatient care accounted for. Many factors drive the spending ratio, so country scenarios need to be studied separately, and PHC spending should be considered in conjunction with other health indicators and a country's overall governance structure and performance. A common pattern across income groups was low government and donor spending on medical goods, most of which was funded by out-of-pocket payments. In low and middle income countries, about half of out-of-pocket payments went to medical goods *[11]*.

**FIGURE 2.4 Across the 50 countries with data, the overall distribution of health spending by type of service in 2020 remained similar to that in 2019**




**a.** Includes rehabilitative, long-term, ancillary, day and home-based curative care and unclassified health spending.
**Note:** Includes data for 50 countries.
**Data source:** WHO Global Health Expenditure Database, 2022.

**FIGURE 2.5 Per capita spending on most types of health services increased on average in 2020; spending on preventive care increased the most**




**Note:** Includes data for 50 countries. Growth rates are based on values in constant (2020) national currency units. Country-specific gross domestic product deflators were used to convert current values to constant values.
**Data source:** WHO Global Health Expenditure Database, 2022.

## Composition of health spending by type of service in 2019 and 2020

*Across the 50 countries with data (29 high income, 17 middle income and 4 low income), the overall distribution of health spending by type of service in 2020 remained similar to that in 2019.*

The distribution of health spending by type of service in the 50 countries with data was relatively stable between 2019 and 2020 (Figure 2.4). There was only a marginal change in the average shares of total health spending allocated to inpatient care, from 26% to 27%, and to outpatient care, from 26% to 25%. Average spending on preventive care rose 1 percentage point, from 6% to 7%, whereas spending on medical goods fell 1 percentage point, from 20% to 19%. Spending on health system governance and administration remained at 4%.

Given the limited number of countries in the analysis, these results probably reflect the experience of high income countries and should not be generalized to other income groups or a global pattern.

## Growth in per capita health spending by type of service from 2019 to 2020

*Across the 50 countries with data, per capita total health spending rose 6% on average in real terms in 2020, though the increase varied by type of service.*

Although the overall distribution of health spending by type of service remained stable from 2019 to 2020 in the 50 countries with data, per capita total health spending rose 6% on average in real terms. In the 29 high income countries, per capita total health spending rose 4% on average in real terms, with the change ranging from a decrease of 9% to an increase of 14%. In the 11 upper-middle income countries, per capita total health spending rose 7% on average in real terms, with some countries showing no change and a maximum increase of 31%.

The largest increase was in spending on preventive care, 32% on average, followed by spending on inpatient care, 10% on average (Figure 2.5). Per capita spending rose only 1%

on average for outpatient care, 3% for medical goods and 7% for health system governance and administration.

### *Per capita spending on inpatient care rose in 42 of the 50 countries, whereas per capita spending on outpatient care rose in nearly half of the 50 countries. On average, per capita spending on inpatient care rose 10% in real terms, and per capita spending on outpatient care rose marginally, 1%.*

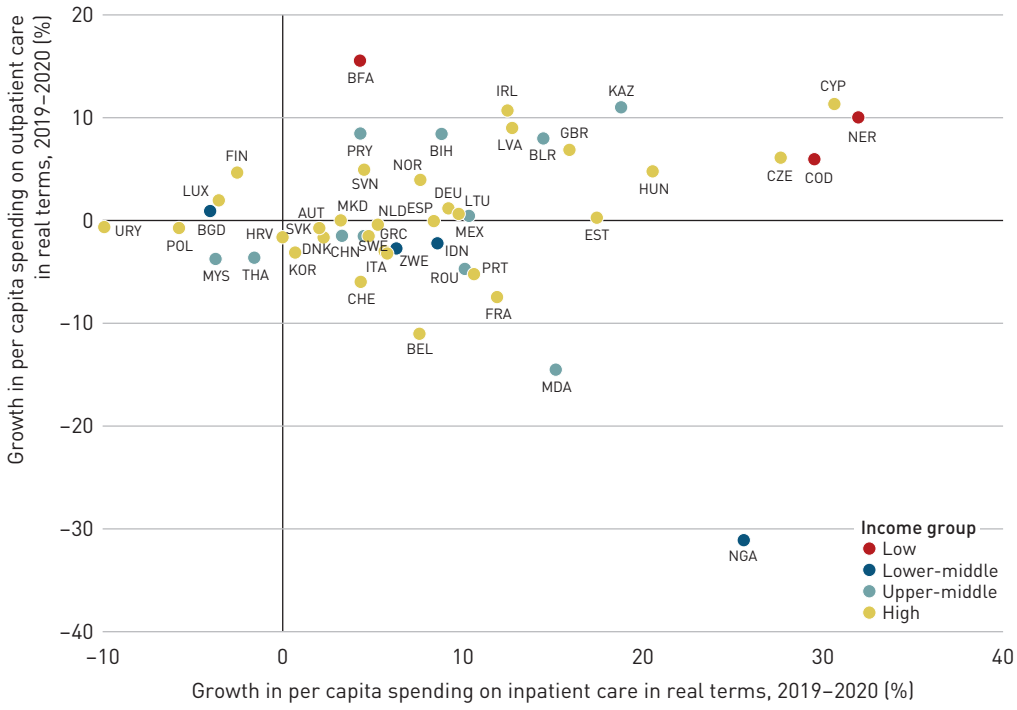
Before 2020, the amount and direction of changes in per capita spending on health services by function varied widely. In 2020, spending on inpatient care increased in 42 of the 50 countries with data (Figure 2.6). In many countries, the increase in spending on inpatient care reflected the higher costs of service provision in hospitals related to greater use of personal protective equipment, expanded cleaning requirements and additional payments to staff reported in many high income countries *[12]*. The increase also reflects the exceptional subsidies paid to hospitals in several countries to ensure sufficient treatment capacity for COVID-19 patients and retain staff *[2]*.

In more than half of the countries, most of them high income, spending on outpatient care fell (see Figure 2.6). This could be due to reduced activity caused by service disruption or postponement. In a WHO assessment of the impact of the COVID-19 pandemic on noncommunicable disease resources and services, conducted in May 2020, 59% of 163 countries reported that access to outpatient care was restricted to some degree, with 4% of countries reporting total closure *[13]*. In five countries (Malaysia, Poland, Slovakia, Thailand and Uruguay), spending on both types of health services fell.

### *Per capita spending on preventive care rose substantially, by 32% on average—and at a higher rate than total health spending in 41 of the 50 countries.*

Per capita spending on preventive care rose in real terms in 2020 in 41 of 50 countries with data. In many high income countries, the increase was due to spending on polymerase chain reaction (PCR) tests, COVID-19 contact tracing and positive case surveillance. Many countries introduced disaster and emergency response programmes or increased spending

**FIGURE 2.6 Across the 50 countries with data, per capita spending on inpatient care rose in 2020 in most countries, whereas spending on outpatient care fell in more than half**




**Note:** Includes data for 47 countries. Excludes Congo, Nepal and Sudan, where growth in spending on outpatient care was more than 30%, for better visualization of the graph. Growth rates are based on per capita values in constant (2020) national currency units. Country-specific gross domestic product deflators were used to convert current values to constant values.
**Data source:** WHO Global Health Expenditure Database, 2022.

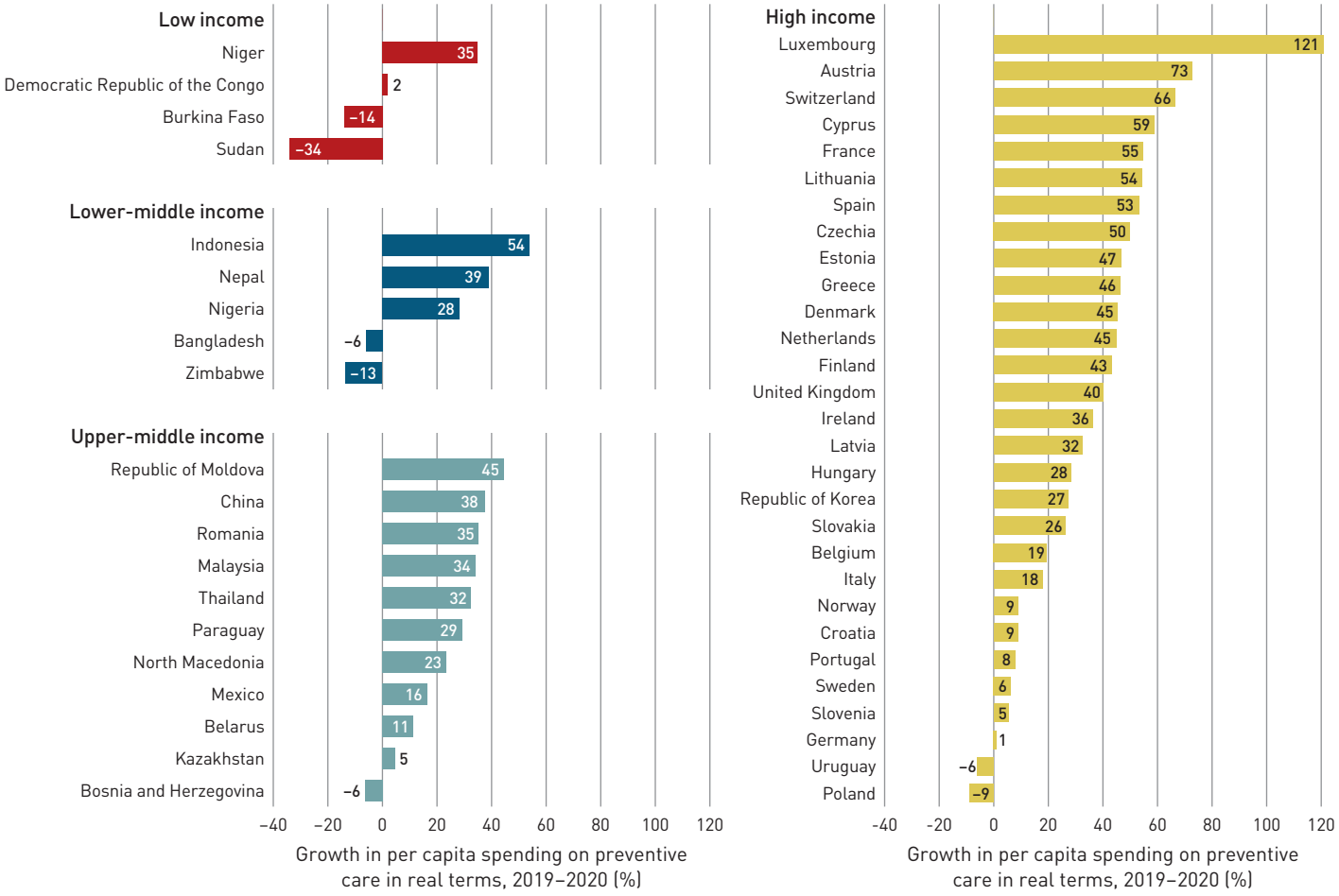
on existing programmes. This spending was closely linked to the COVID-19 response in 2020 for setting up and organizing work around the pandemic, as well as setting up central administrating organizations.[1] The highest growth was in high income countries, led by Luxembourg, where most of the increase was due to the cost of COVID-19 testing as part of large-scale systematic testing and tracing programmes (Figure 2.7). In Austria, the increase was due to spending on COVID-19 information campaigns and hotlines, as well as on contact tracing and positive case surveillance. In Cyprus the increase was also related to PCR tests as a part of a programme.[2]

With a few exceptions in the 50 countries with data, spending on preventive care grew faster than total health spending in 2020, regardless of country income. Growth in per capita spending on preventive care was 0%–60% in real terms in most countries but reached 73% in Austria and more than doubled in Luxembourg (Figures 2.7 and 2.8).

### *Per capita spending on medical goods rose in around two-thirds of the 50 countries, by 3% on average.*

Most countries recorded growth in real terms in per capita spending on medical goods from 2019 to 2020 (Figure 2.9). The highest growth rates were in Burkina Faso (47%), Thailand (45%) and China (22%). In high income countries, the main driver of growth was spending on nondurable medical goods, most of which included surgical and filtering face piece masks as well as other personal protective

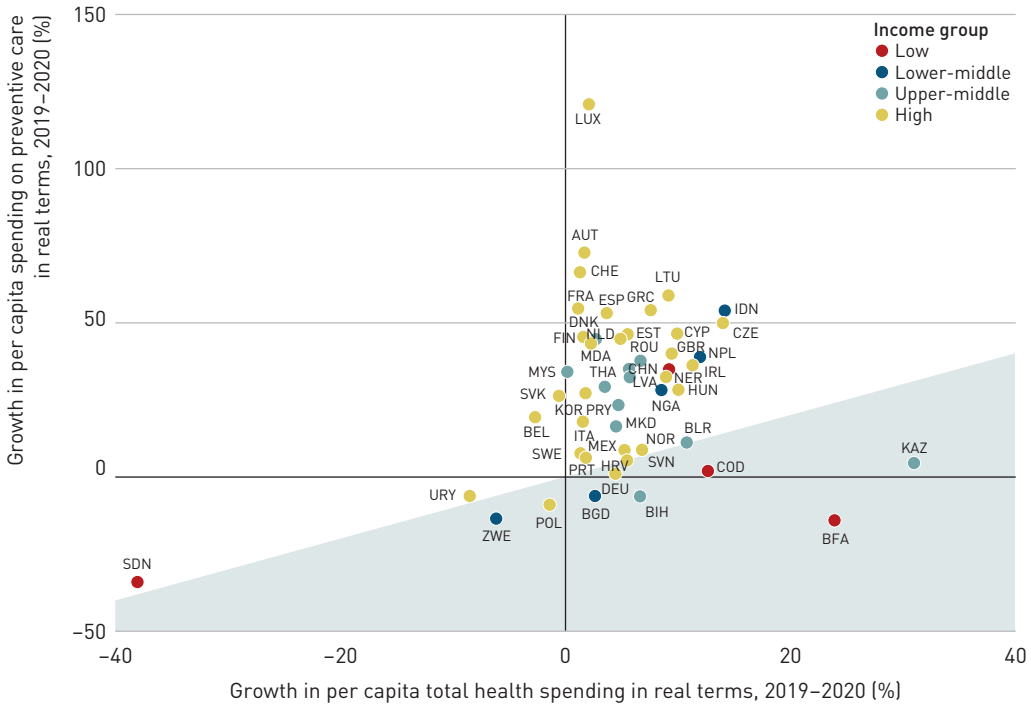
**FIGURE 2.7** **Per capita spending on preventive care rose substantially in 2020 in most countries with data**




**Note:** Includes data for 49 countries. Congo, where spending on preventive care grew by 250%, is excluded for better visualization of the graph. Growth rates are based on per capita values in constant (2020) national currency units. Country-specific gross domestic product deflators were used to convert current values to constant values.
**Data source:** WHO Global Health Expenditure Database, 2022.

1. WHO communication with countries during validation of health accounts data.
2. WHO communication with countries during validation of health accounts data.

**FIGURE 2.8 In most countries with data, spending on preventive care in 2020 grew faster than total health spending**




**Note:** Includes data for 49 countries. Congo, where spending on preventive care grew more than 250% and total health spending grew more than 50%, is excluded for better visualization of the graph. Countries in the shaded area had higher growth in total health spending than in spending on preventive care; countries in the unshaded area had higher growth in spending on preventive care. Growth rates are based on values in constant (2020) national currency units. Country-specific gross domestic product deflators were used to convert current values to constant values.
**Data source:** WHO Global Health Expenditure Database, 2022.

equipment, test kits and disinfectant substances *[2]*. However, some countries reported a decrease in spending on medical goods in 2020 which might be due to disruption in medicine supply *[14]*. Analysis of small set of countries with a breakdown of pharmaceutical spending by prescribed and over-the-counter medicines provides insight (Box 2.5), yet further studies are required to fully understand the change in those countries.

### *Spending on health system governance and administration rose in more than two-thirds of the 50 countries, by an average of 7%.*

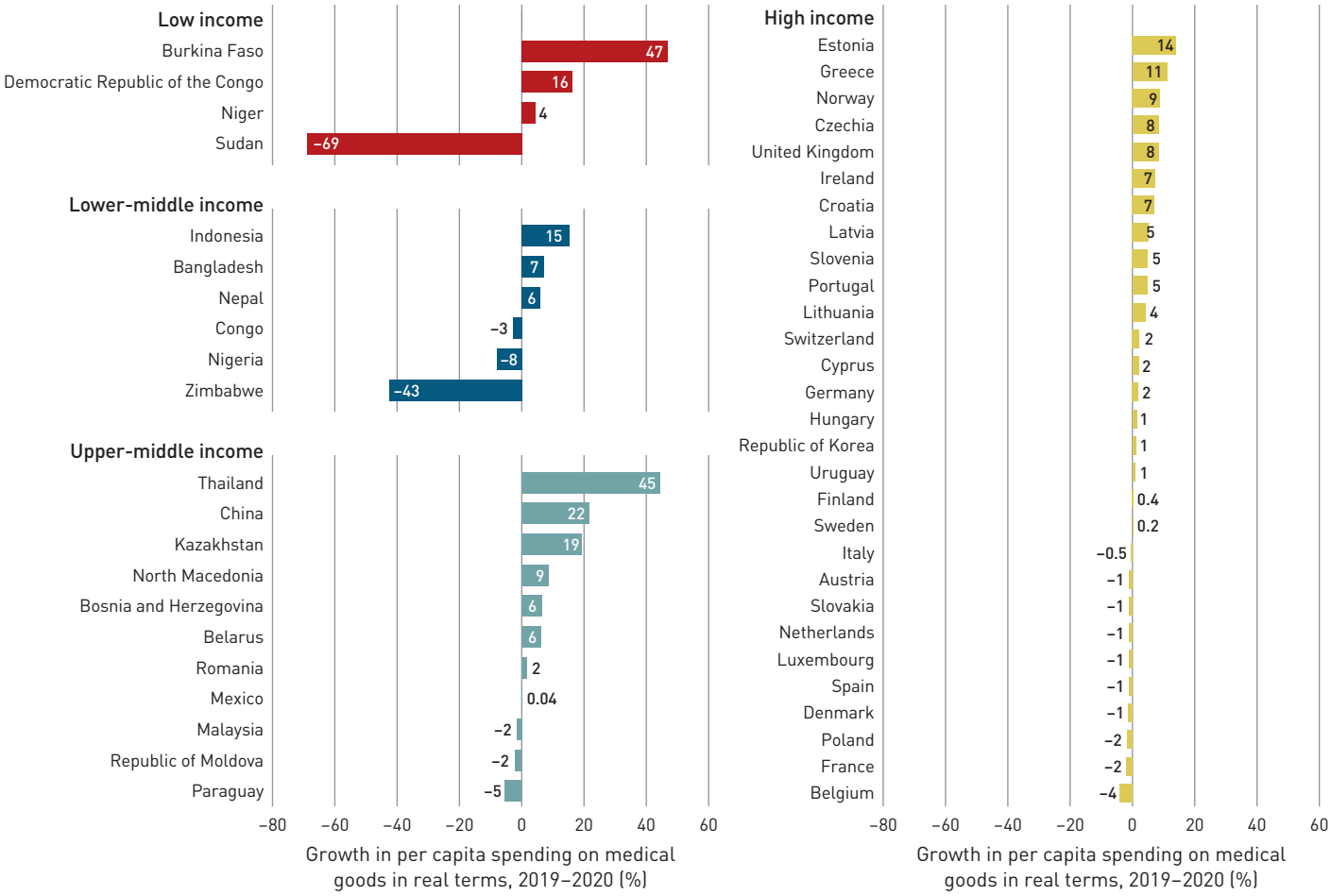
In the 50 countries with data, per capita spending on health system governance and administration rose 7% on average in 2020. Spending rose in real terms in more than two-thirds of the countries (34 of 50). In some high income countries, one likely reason for the increase was additional spending by the health care system for the response to the COVID-19 pandemic—for example, procuring on an emergency basis the essential goods (including vaccines) and services critical to mitigating the pandemic's impact, setting up systems for large-scale testing and contact tracing, creating databases and pursuing other policy responses such as establishing quarantine rules or fiscal stimulus for health care providers *[16]*.

The growth in spending on governance and administration varied widely across countries, reflecting not only differences in the structure of governance and administration but also in the measurement of these expenditures. Some countries face measurement difficulties, with spending on health system governance and administration sometimes impossible to separate from other spending, such as on health service programmes offering preventive care that are included in the overall budget of the ministry of health. These data issues should be taken into account when interpreting the results, which are subject to further study, data validation at the country level and improvement.

## Implications

In 2020, the COVID-19 pandemic tested the resilience and flexibility of health systems to reallocate and prioritize resources across health services. It challenged health systems

**FIGURE 2.9** **Spending on medical goods rose in 2020 in most countries with data**




**Note:** Includes data for 50 countries. Growth rates are based on per capita values in constant (2020) national currency units. Country-specific gross domestic product deflators were used to convert current values to constant values.
**Data source:** WHO Global Health Expenditure Database, 2022.

**BOX 2.5**

## Spending on retail pharmaceuticals, 2020

Health policymakers and managers often struggle to determine how much of health spending to allocate to pharmaceuticals and how much of pharmaceutical spending should come from government sources and risk pooling mechanisms versus household out-of-pocket spending.

Retail pharmaceuticals, a subcategory of medical goods, includes prescription medicines and self-medication, which is often referred to as over-the-counter products. The subcategory excludes nondurable medical goods (such as hypodermic syringes, hot-water bottles, ice bags and the like), therapeutical appliances (glasses, hearing aids and the like), vaccines (which are included under preventive care under the System of National Accounts 2011) and pharmaceuticals consumed in hospitals and other health care settings. Spending on pharmaceuticals includes wholesale and retail margins and value-added tax. In most countries, total spending on pharmaceuticals refers to net spending—that is, adjusted for rebates from manufacturers, wholesalers or pharmacies *[15]*.

In 2020, the share of spending on pharmaceuticals in total health spending ranged from 5% in Thailand to 50% in Bangladesh (Box Figure 1). The share of spending devoted to pharmaceuticals is greater in middle income countries than in high income countries.

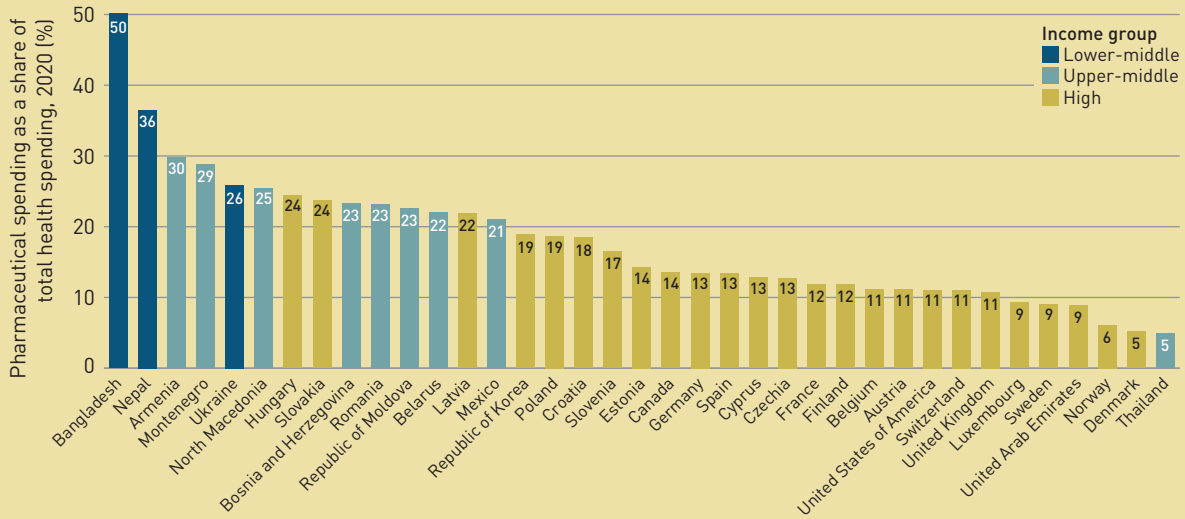
The ratio of spending on prescribed medicines to spending on over-the-counter medicines differed across countries (Box Figure 2). In most high income countries,

*(continued)*

**BOX 2.5 (continued)**

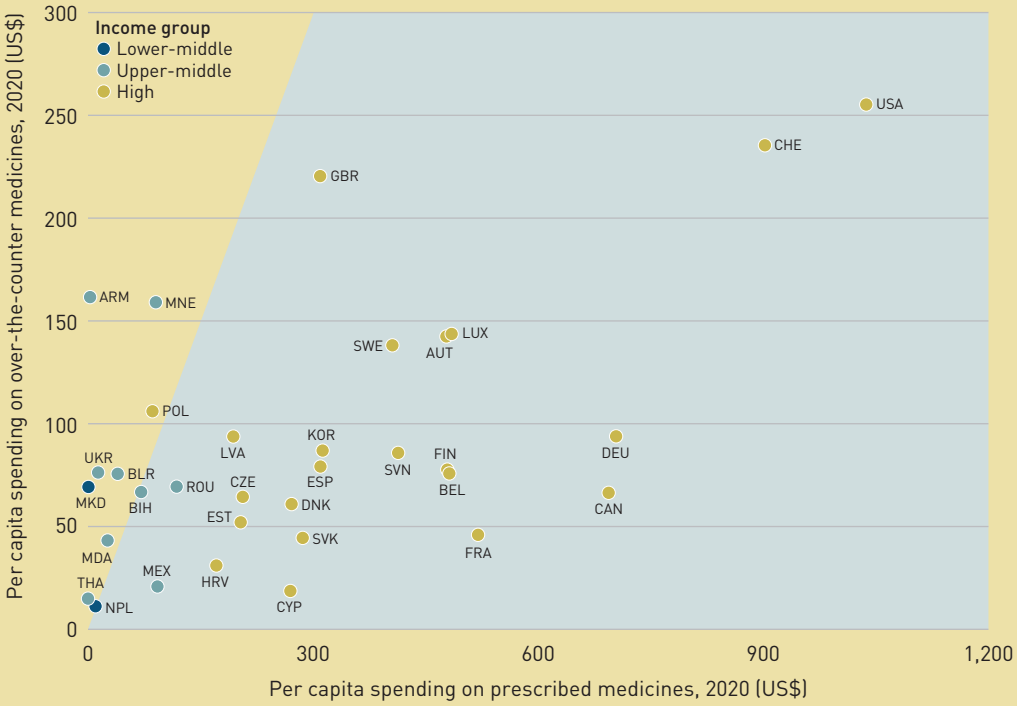
average spending on prescribed medicines was higher than average spending on over-the-counter medicines, whereas in most middle income countries with data, spending on over-the-counter medicines was higher. A wide range of reasons may contribute to these results, such as distribution channels, availability of generic medicines, access to prescribed medicines, prevalence of self-medication and relative prices; further investigation is needed to link results to country health system settings.

**BOX FIGURE 1** In general, lower income countries allocated a larger share of total health spending to pharmaceuticals in 2020 than higher income countries did



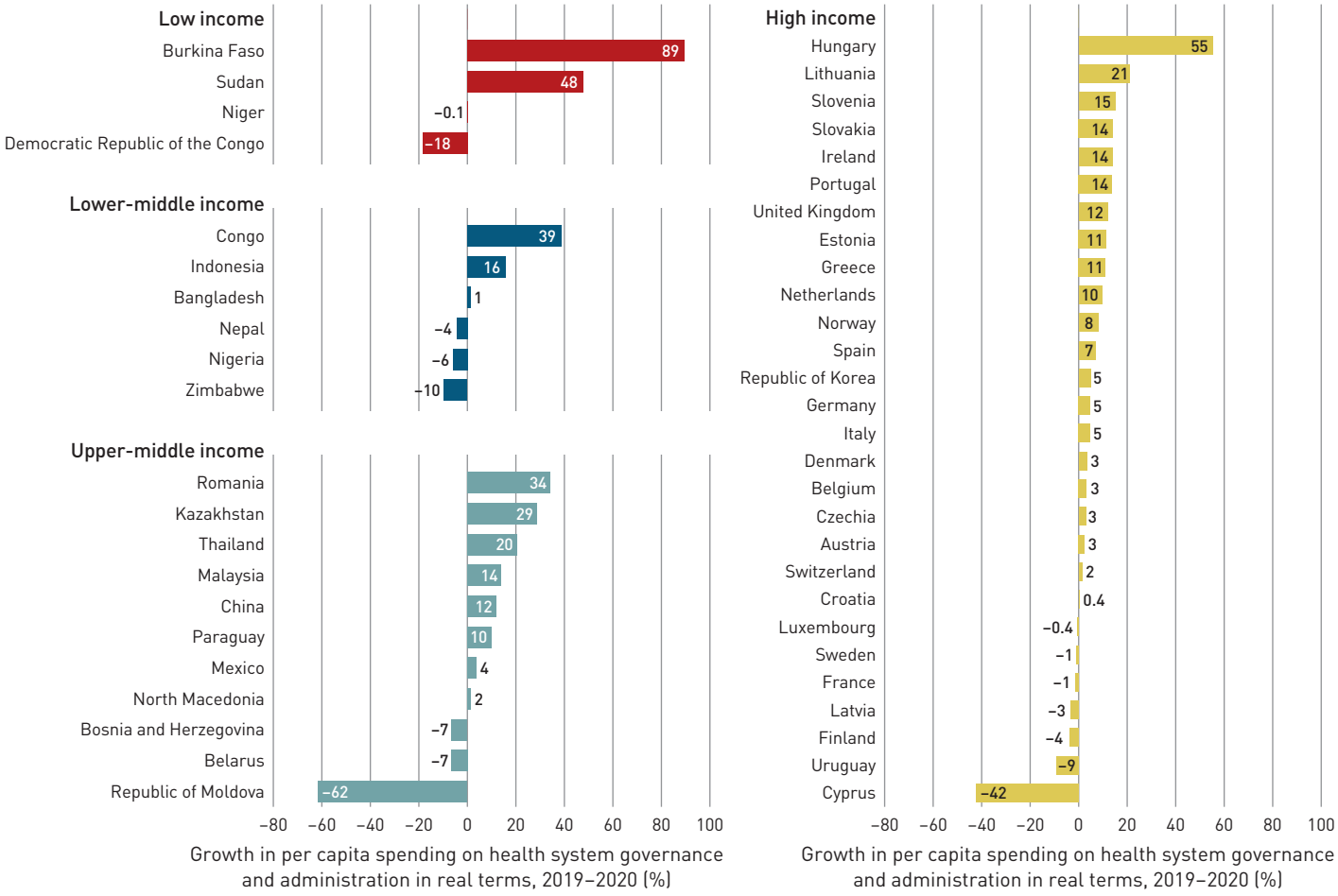

**Note:** Includes data for 37 countries.
**Data source:** WHO Global Health Expenditure Database, 2022.

**BOX FIGURE 2** In most high income countries, per capita spending on prescribed medicines in 2020 was higher than spending on over-the-counter medicines




**Note:** Includes data for 33 countries. Countries in the shaded area had higher per capita spending on prescribed medicines than on over-the-counter medicines; countries in the unshaded area had higher per capita spending on over-the-counter medicines.
**Data source:** Country data collected for the 2022 Global Health Expenditure Database update.

**FIGURE 2.10 Spending on health system governance and administration rose in 2020 in more than two-thirds of countries with data**




**Note:** Include data for 50 countries. Growth rates are based on per capita values in constant (2020) national currency units. Country-specific gross domestic product deflators were used to convert current values to constant values.
**Data source:** WHO Global Health Expenditure Database, 2022.

to adjust health service delivery practices to improve their response. To better understand the internal shifts in health spending by type of service in 2020 and beyond, more disaggregated data are needed to connect health spending by type of service to health financing revenue sources, health financing schemes, service provider types, diseases and factors of provision.

Although the details and pace of the impact varied across countries, disruption, shifts and capacity changes were common themes. Many factors, including service delivery volume, costs, epidemiological patterns, fiscal policies, demographic structure and population health status, influence health spending by type of service. The averages may mask variations in these details. Indeed, despite all the changes in real per capita health spending in 2020, the average changes in the distribution of health spending by type of service between 2019 and 2020 in the 50 countries with data were only marginal. It is also useful to have a global measure of PHC spending across countries. Equally important are country-specific measures that better serve national policy discussions. Such analyses will be critical to reorienting health systems towards PHC as midterm reviews for the Sustainable Development Goals take place and trajectories are set towards 2030.

This report calls for more timely and detailed data reporting by WHO Member States, investigation and policy analysis at the country level to determine the full impact of the COVID-19 pandemic on supply and demand of health services.

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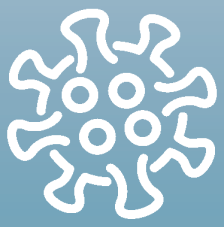


3

# Health spending on COVID-19 in 2020

## Key messages

- Reported per capita health spending on COVID-19 from government and compulsory insurance financing arrangements in 2020 averaged US$ 212 in 16 high income countries and US$ 14 in 21 low and middle income countries with comprehensive data.
- Health spending on COVID-19 accounted for an average of about 8% of overall health spending from government and compulsory insurance financing arrangements in 2020, or 1% of general government expenditure, across 35 countries with data.
- In 15 low and middle income countries with data by source, the average share of health spending on COVID-19 in 2020 financed externally was 58% in low income countries and 28% in lower-middle income countries.
- Most reported health spending on COVID-19 from government and compulsory insurance financing arrangements in 2020 was allocated to treatment (41%) and general preventive care and administration (36%), but the types of services financed and characteristics of provision varied across countries.
- Early data from six high income countries and one lower-middle income country show that health spending on COVID-19 rose in 2021, driven by increased spending on vaccination and on testing and contact tracing.

In 2020, the first year of the COVID-19 pandemic, nearly all countries responded with exceptional budget allocations to health, social protection and economic stabilization. In particular, health spending financed through government domestic sources rose substantially in 2020 (see chapter 1). This chapter focuses on current health spending on COVID-19—that is, resources allocated to health activities related to COVID-19, such as prevention, detection and treatment, as categorized under the System of Health Accounts 2011 (SHA 2011; Box 3.1) *[1]*. Knowing how much countries spent on COVID-19, on which activities and through which types of providers and how the response was financed help in understanding how health systems responded to the pandemic and, when combined with other quantitative and qualitative information, in assessing the resilience of health financing regimes. Such analysis can guide future investments for universal health coverage, health system resilience, and pandemic preparedness and response.

**BOX 3.1**

### Defining health spending on COVID-19 under the System of Health Accounts 2011

The definition of health spending on COVID-19, which is based on the definition of current health expenditure according to the System of Health Accounts (SHA 2011) *[1]*, is the final consumption expenditure of resident units on health care goods and services targeted to COVID-19, including the health care goods and services provided directly to individuals for treating, preventing and mitigating COVID-19, as well as collective health services for the response to the pandemic *[2]*. It includes detection, diagnosis and treatment of COVID-19; health promotion and prevention targeted to COVID-19; and public health functions and health system governance and administration linked to COVID-19.

Reporting data on current health expenditure using the SHA 2011 framework provides important information about the pandemic's impact on health system financing, but it does not offer a complete view of all the resources and transactions involved in responding to the pandemic. Spending on some essential activities related to COVID-19—both spending within the health sector (such as capital investments triggered by the pandemic and 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)—is not included.

## Methodology and collection of data on COVID-19 spending

In 2022, several countries increased efforts to track and report COVID-19 health spending for international data collection, either by reporting a complete disaggregation of 2020[1] health spending by disease and condition (including spending on COVID-19) or by reporting the special COVID-19 spending memorandum items using the Joint Health Accounts Questionnaire/WHO Health Accounts Questionnaire (Box 3.2). WHO received data on COVID-19 spending from 53 countries, but several data collection challenges remained for countries' health accounts teams: tracking COVID-19 spending was new for several countries and therefore limited mostly to government and compulsory insurance financing arrangements, and voluntary insurance and out-of-pocket spending on COVID-19 was in most cases not reported, except co-payments. Several countries reported health spending from specific COVID-19 funds but did not identify spending on COVID-19 from regular financing flows. Others were able to track only a few activities (such as only testing).

Therefore, the analysis in this chapter is limited to 37 countries[2] for which spending by government and compulsory insurance financing arrangements is reported comprehensively for 2020 and for which treatment, testing and other spending (including governance, surveillance and prevention costs) are reported (see Annex 2 for more information on the collection of data on COVID-19 spending and the countries included). For these reasons, averages presented in this chapter do not necessarily reflect the global tendency and, where possible, refer only to specific

1. Australia, Ethiopia and Nepal reported data based on the fiscal year starting in July 2019 and ending in June/July 2020, Thailand reported data based on the fiscal year starting in October 2019 and ending in September 2020 and the remaining countries reported data for the calendar year from January 2020 through December 2020.

2. Of the 53 countries with data on health spending on COVID-19, 16 reported partial data and are not analysed in this chapter: 14 because important compulsory financing arrangements or important activities (such as treatment) were not reported and 2 because spending on COVID-19 was not disaggregated by financing scheme. Among the 37 countries included, El Salvador, North Macedonia, Spain and Ukraine did not report spending on testing separately, and data for Canada and Uganda were adjusted by WHO to exclude spending on vaccines because the data included mostly purchase of vaccines consumed in 2021 (corresponding to 2021 health spending).

**BOX 3.2**

## Data collection and reporting items for tracking health spending on COVID-19

Since 2014, WHO and its partners have helped countries produce full disease-distributed health accounts against five broad categories—a mix of functional and anatomical classifications derived mostly from the international classification of disease *[3]*. In 2021, a separate category was added for COVID-19 under the broader category of infectious and parasitic diseases (DIS.1.9.2). This is intended to allow countries to completely distribute health spending by disease category, including spending on COVID-19, and disaggregate these data by all other dimensions of health accounts (financing schemes, sources of revenue, functions, providers, factors of provision and the like).

For countries that do not produce accounts by disease and condition, WHO, the Organisation for Economic Co-operation and Development and Eurostat have, since 2021, included seven items related to health spending on COVID-19 in their annual collection of data on health spending *[4, 5]*: five items on current health expenditure on COVID-19, total and disaggregated by System of Health Accounts 2011 (SHA 2011) classifications of financing schemes (HF) and health care providers (HP) (Box Table).

**BOX TABLE** **Spending reporting items related to COVID-19 in the 2022 Organisation for Economic Co-operation and Development, Eurostat and WHO Joint Health Accounts Questionnaire and 2022 WHO Health Accounts Questionnaire**

| Item | Description |
|---|---|
| COVID-19 related treatment (HC.COV.1) | Treatment costs of patients with a confirmed COVID-19 diagnosis in inpatient and outpatient settings. It includes the costs of pharmaceuticals used for treatment (as part of a treatment episode in an inpatient or outpatient setting) and follow-up costs from long COVID-19 patients. |
| COVID-19 testing and contact tracing (HC.COV.2) | Laboratory costs (including staff costs) for analysing polymerase chain reaction tests, antigen tests (or other molecular diagnostic tests) and serological tests. It includes the costs of tests for people with and without symptoms, as part of a programme or taken at people's own initiative. Costs for contact tracing include all current costs incurred to identify possible contacts of infected people. |
| Vaccination against SARS-CoV-2 (HC.COV.3) | Costs of vaccination against SARS-CoV-2. It includes the costs of the vaccine, distribution and organization costs, and service charges by health professionals administering the vaccination. It excludes research and development costs. |
| COVID-19 medical goods (HC.COV.4) | Spending on facemasks and other personal protective equipment for final use either purchased by people themselves or purchased by public authorities and distributed to the population. It includes prescribed and over-the-counter pharmaceuticals to treat COVID-19 patients that are not dispensed as part of inpatient or outpatient treatment. It excludes intermediate consumption of medical goods by health system personnel, which is registered under the corresponding type of service (treatment or other activities). |
| Other and unspecified COVID-19 related health spending (HC.COV.5) | All other COVID-19 related costs—within the SHA 2011 boundary of current health expenditure—not classified in HC.COV.1–HC.COV.4, such as the organization and coordination of the response to the pandemic, epidemiological surveillance, communication and information, and the like. It can also include health spending on COVID-19 not defined by purpose or function due to data limitations. |

**Source:** OECD, Eurostat and WHO *[5]*.

countries. Moreover, even with the most comprehensive data, reporting issues may remain in the countries analysed, and the amounts and shares reported could understate the actual level of health spending on COVID-19.

In addition to the methodological and data quality challenges for the early available evidence, the phase of the COVID-19 pandemic in 2020 differed considerably across the countries analysed. The measures that countries took to control the pandemic in 2020 also varied widely. So, comparisons across countries—in particular, comparisons of health spending on COVID-19—should be made with caution.

## Government and compulsory insurance health spending on COVID-19

***Reported per capita health spending on COVID-19 from government and compulsory insurance in 2020 averaged US$ 212 in 16 high income countries and US$ 14 in 20 low and middle income countries.***

Estimates from 37 countries show that in 2020, per capita current health spending on

COVID-19 financed through government and compulsory insurance financing arrangements[3] averaged US$ 99: US$ 212 in 16 high income countries, US$ 28 in 6 upper-middle income countries, US$ 11 in 9 lower-middle income countries and US$ 2.40 in 6 low income countries (Figure 3.1a). Given the difficulties in identifying health spending on COVID-19, these values should be considered minimum estimates for spending from government and compulsory insurance; actual government spending on COVID-19 might have been higher.

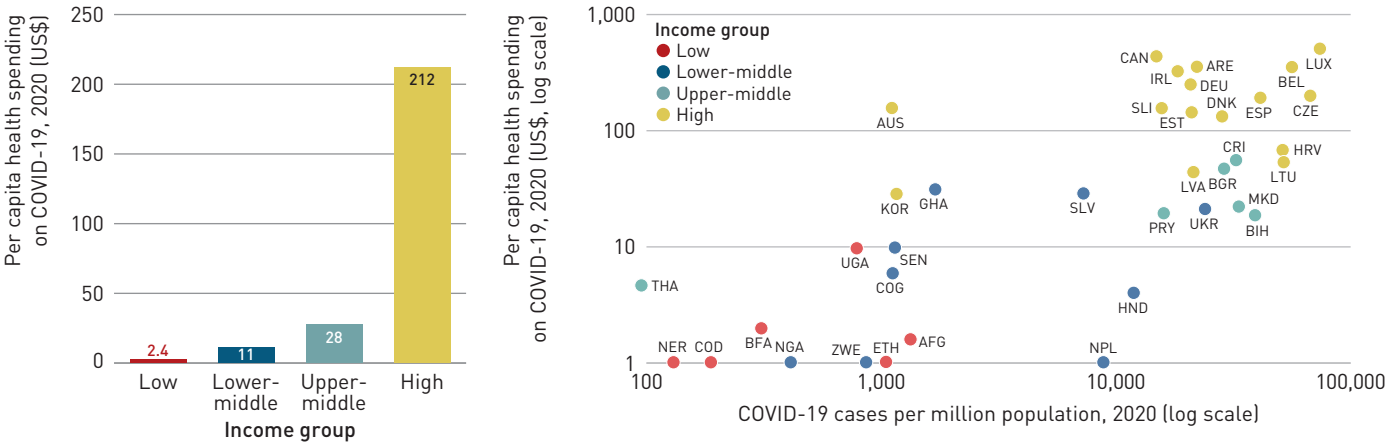
Across the 37 countries analysed, per capita health spending on COVID-19 in 2020 ranged in low income countries from US$ 0.10 in Niger to US$ 9.60 in Uganda, in lower-middle income countries from US$ 0.45 in Nigeria to US$ 31 in Ghana, in upper-middle income countries from US$ 4.60 in Thailand to US$ 55 in Costa Rica and in high income countries from US$ 28 in the Republic of Korea to US$ 507 in Luxembourg, with variations by country (Figure 3.1b). There is no clear relationship between the number of COVID-19 cases detected in 2020 and health spending on COVID-19 because some components of health spending on COVID-19, such as communication, surveillance, and health system general governance and administration, are collective services whose sizes are not proportional to the number of detected cases (most of these collective activities are reported under the type of activity "other activities"; see figures 3.4 and 3.5 later in the chapter). In addition, the number of cases detected is likely underestimated in several countries due to differences in surveillance system capacity and in strategies for capturing and notifying COVID-19 cases.

Some of the 16 countries with partial data on COVID-19 spending (which are not included in figure 3.1) also had high spending on COVID-19 from government and compulsory insurance financing arrangements but were able to report data for only limited elements: the United Kingdom had the second highest spending on testing per capita (US$ 91), after Luxembourg. And per capita spending for COVID-19 testing from government and

**FIGURE 3.1 Per capita health spending on COVID-19 from government and compulsory insurance in 2020 averaged US$ 212 in 16 high income countries and US$ 14 in 20 low and middle income countries**

a. Average per capita health spending on COVID-19 from government and compulsory insurance, by income group

b. Per capita health spending on COVID-19 from government and compulsory insurance and COVID-19 cases




**Note:** Includes data from 6 low income countries, 9 lower-middle income countries, 6 upper-middle income countries and 16 high income countries.
**Data sources:** WHO Global Health Expenditure Database, 2022; WHO Coronavirus (COVID-19) Dashboard *[6]*.

3. Under the SHA 2011 framework, financing schemes (HF) are the main financing arrangements through which health services are paid for and obtained by the population *[1]*. Health spending from government and compulsory insurance financing arrangements corresponds to SHA 2011 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/local government spending, financed with domestic budget and external revenues for services for which entitlement is noncontributory) 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]). Where compulsory health insurance does not exist, the aggregate for spending from government and compulsory insurance refers only to health spending from government financing arrangements.

compulsory insurance in 2020 was US$ 59 in Austria, US$ 56 in Finland and US$ 46 in France.

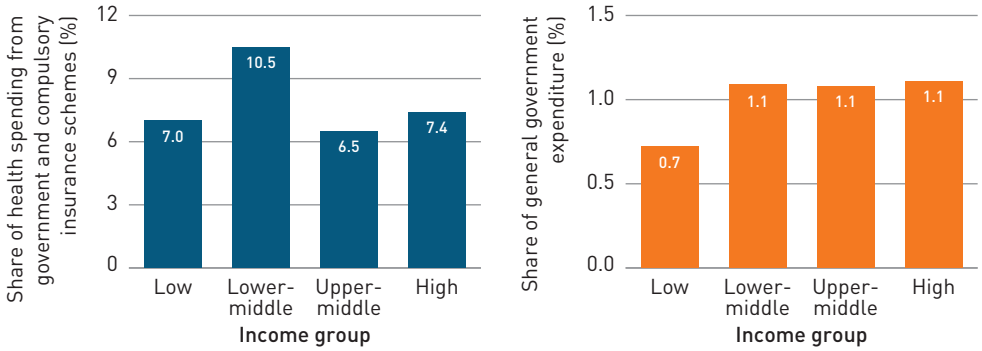
***Health spending on COVID-19 accounted for an average of about 8% of overall health spending from government and compulsory insurance in 2020, or 1% of general government expenditure.***

From the health spending perspective, the importance of governments' response to the COVID-19 pandemic is reflected in their current health spending on COVID-19 as a share of health spending financed through government and compulsory insurance financing arrangements (representing the level of prioritization of COVID-19 in health spending) and as a share of general government expenditure (representing the level of prioritization of health spending on COVID-19 in total public spending).

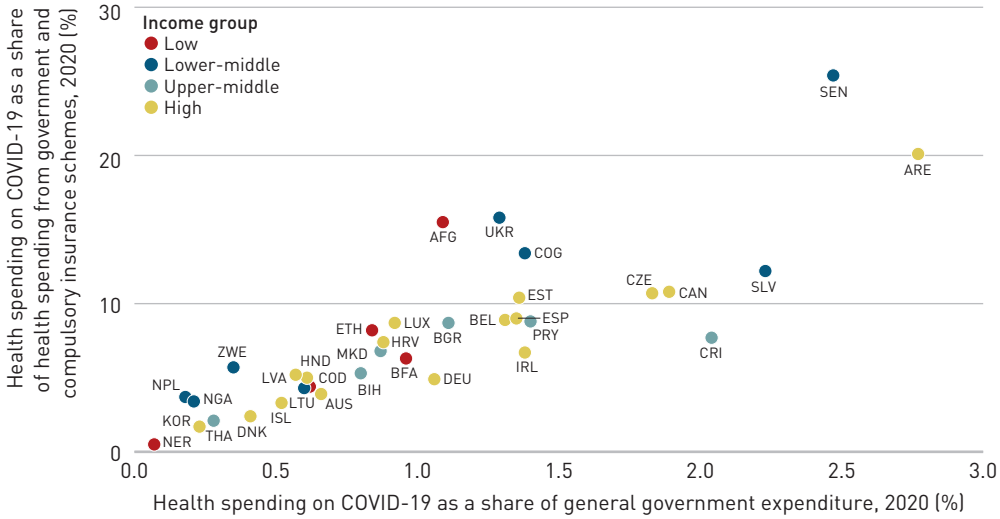
On average across countries with data, almost 8% (7.9%) of health spending from governments and compulsory insurance in 2020 went to COVID-19: 7% in low income countries (ranging from 0.5% in Niger to 15.5% in Afghanistan), 10.5% in lower-middle income countries (ranging from 3.4% in Nepal to 25.4% in Senegal), 6.5% in upper-middle income countries (ranging from 2.1% in Thailand to 8.8% in Paraguay) and 7.4% in high income countries (ranging from 1.7% in the Republic of Korea to 20% in the United Arab Emirates; figures 3.2a and 3.2b).

**FIGURE 3.2 Health spending on COVID-19 accounted for an average of about 8% of health spending from government and compulsory insurance in 2020, or 1% of general government expenditure**

a. Average health spending on COVID-19 from government and compulsory insurance, by income group, 2020



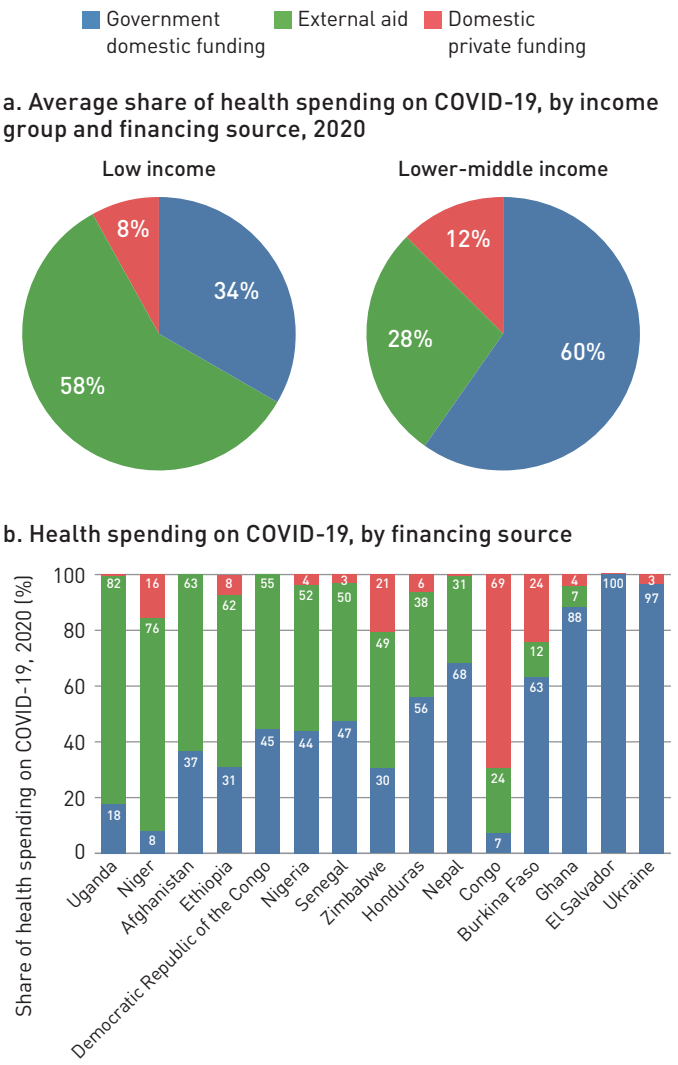

b. Health spending on COVID-19 as a share of health spending from government and compulsory insurance and as a share of general government expenditure




**Note:** Includes data from 5 low income countries, 8 lower-middle income countries, 6 upper-middle income countries and 16 high income countries. Of the 37 countries analysed in the chapter, Ghana and Uganda are not included in the figure because they did not report total health spending (only COVID-19 spending).
**Data source:** WHO Global Health Expenditure Database, 2022.

Health spending on COVID-19 accounted for an average of 1% of total general government expenditure. Middle and high income countries had a slightly larger share than low income countries: in 2020, the share of general government expenditure that went to health spending on COVID-19 was 0.7% in low income countries (ranging from 0.06% in Niger to 1.09% in Afghanistan), 1.09% in lower-middle income countries (ranging from 0.18% in Nigeria to 2.46% in Senegal), 1.08% in upper-middle income countries (ranging from 0.28% in Thailand to 2.04% in Costa Rica) and 1.11% in high income countries (ranging from 0.23% in the Republic of Korea to 2.77% in the United Arab Emirates; see figures 3.2a and 3.2b).

**FIGURE 3.3 External aid played an important role in financing the response to COVID-19 in 2020: the average share of health spending on COVID-19 financed externally was 58% in six low income countries and 28% in nine lower-middle income countries**




**Note:** Includes data from 6 low income countries and 9 lower-middle income countries. Nonprofit institution schemes, though they exist, are not reported for El Salvador and Ghana, so data on external funding for these two countries include only external funds for COVID-19 spent by the government.
**Data source:** WHO Global Health Expenditure Database, 2022.

## Financing sources of health spending on COVID-19 in low and middle income countries

*In 15 low and middle income countries with data by source, the average share of health spending on COVID-19 in 2020 financed externally was 58% in low income countries and 28% in lower-middle income countries.*

In upper-middle and high income countries, almost all the reported spending on COVID-19 was financed through general government domestic sources. However, in low and lower-middle income countries, domestic funding was limited, even when countries made strong fiscal efforts. Therefore, external funding complemented domestic funding to finance the response, even in countries that were not heavily affected by COVID-19 in 2020. On average, the share of overall COVID-19 spending (across all reported financing schemes) financed through external sources was 58% in the six low income countries and 28% in the nine lower-middle income countries with data by source,[4] or an average of US$ 2.30 per capita across both income groups (Figure 3.3a). In these countries, the share of spending financed externally was higher for COVID-19 than for other diseases: as a point of comparison, external aid financed 27% of total health spending on average in the same six low income countries and 12% on average in the nine lower-middle income countries.

External funding financed more than 50% of COVID-19 spending in half of countries, with a maximum of 82% in Uganda (Figure 3.3b). However, levels of health spending on COVID-19 were generally low in 2020 in these countries, so the large share of COVID-19 spending financed externally reflects an immediate need to fund preventive and governance activities at the beginning of the pandemic in the few countries analysed more than a trend in all low and lower-middle income countries for 2021 and 2022.

4. Most of the reported COVID-19 spending in these 15 countries was from government schemes and nonprofit institution schemes. Therefore, health spending on COVID-19 from external sources reported in figure 3.3 includes external funding channelled to the government and to the private nonprofit sector (that is, nongovernmental organizations or direct execution by the donor agency).

## Health spending on COVID-19 by type of service and health care provider

*Most health spending on COVID-19 from government and compulsory insurance in 2020 was allocated to treatment (41%) and general prevention and administration (36%), but the types of services financed and characteristics of provision varied across countries.*

### By type of service

In high income countries, most health spending on COVID went to treatment and testing; in low and lower-middle income countries, most went to preventive services and health system governance and administration.

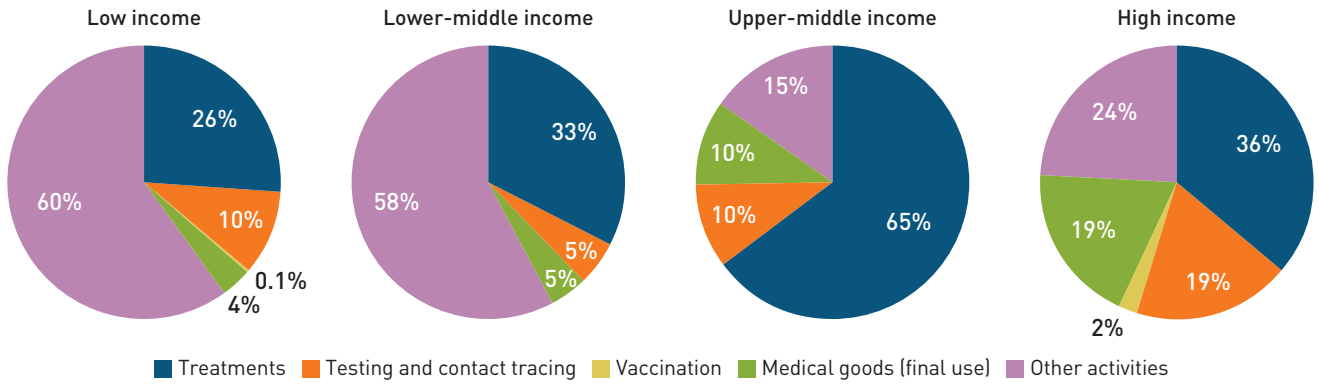
The 37 countries analysed allocated an average of 41% of health spending on COVID-19 from government and compulsory insurance in 2020 to treatment, 12.5% to testing and contact tracing, 9.5% to medical goods for final use by the population (such as personal protective equipment), 1% to vaccination and 36% to other activities.[5] Most of these other activities related to COVID-19 (referred to as "other activities" in Figures 3.4 and 3.5) correspond to general prevention and health system governance and administration linked to COVID-19, such as organization and coordination of the response to the pandemic, epidemiological surveillance, communication and information, and compensation to health care providers for loss of revenue (mainly in high income countries), although in some countries, it includes a small part of health spending on COVID-19 not defined by purpose or function due to data limitations.

Upper-middle and high income countries allocated larger shares of health spending on COVID-19 to treatment than low and lower-middle income countries did, and, across income groups, the largest share allocated to testing and contact tracing was in high income countries. Almost all health spending on COVID-19 vaccines in 2020 was limited to high income countries and was very low when reported: most countries rolled out the vaccine in 2021, and if they reported spending for 2020, the data corresponded to only a few days of vaccination in December 2020 (Figure 3.4).

There is variation across countries in health spending on COVID-19 in 2020 by type of service (Figure 3.5). Not surprisingly, countries more affected by COVID-19 tended to allocate a larger proportion of health spending on COVID-19 to treatment and to testing and contact tracing, whereas less affected countries tended to allocate more to coordination and preventive care (included in the category "other activities"). However, part of the variation is also linked to data issues and country difficulties identifying health spending on COVID-19.

**FIGURE 3.4 In high income countries, most health spending on COVID-19 in 2020 went to treatment and to testing and contract tracing; in low and lower-middle income countries, most went to other activities (preventive services and health system governance and administration)**

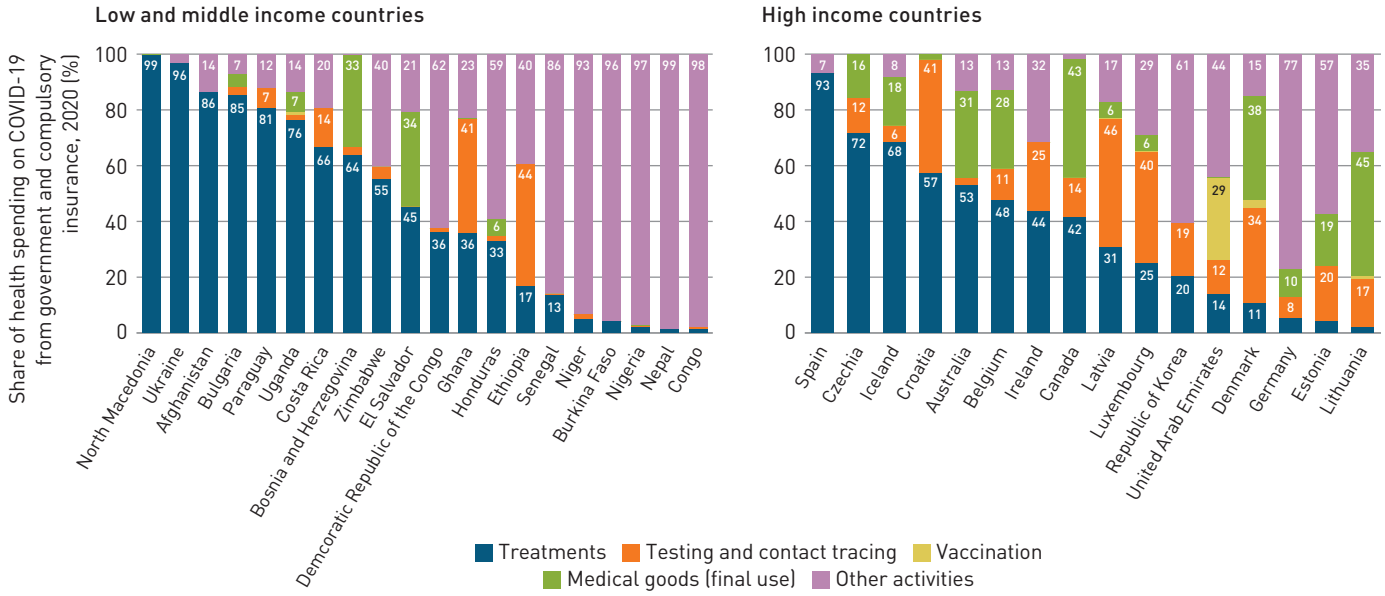
Average share of health spending on COVID-19 from government and compulsory insurance, by income group and type of service, 2020 (%)




**Note:** Includes data from 6 low income countries, 9 lower-middle income countries, 6 upper-middle income countries and 16 high income countries. Data issues can affect the distribution of health spending on COVID-19 by type of service and limit comparability across countries. In particular, the category "other activities," in addition to health spending on general prevention and health system governance and administration linked to COVID-19, includes health spending on COVID-19 not identified by function, so some treatment and testing costs could be counted in this category.
**Data source:** WHO Global Health Expenditure Database, 2022

5. Following health spending reported by countries under the five special COVID-19 reporting items (see box 3.2). For countries that did not report health spending by special COVID-19 reporting item, WHO calculated these aggregates using the health accounts cross table by disease and health care function reported by the countries.

**FIGURE 3.5** **Variation across countries in health spending on COVID-19 in 2020 by type of service**




**Note:** Data issues can affect the distribution of health spending on COVID-19 by type of service and limit comparability across countries. In particular, the category "other activities," in addition to spending on general prevention and health system governance and administration linked to COVID-19, includes health spending on COVID-19 not identified by function, so some treatment and testing costs could be counted in this category. El Salvador, North Macedonia, Spain and Ukraine did not report spending on testing and contact tracing separately. Spending on vaccination reported by Canada and Uganda are excluded because most of it corresponds to spending for 2021.
**Data source:** WHO Global Health Expenditure Database, 2022.

Moreover, the five COVID-19 reporting items used in figures 3.4 and 3.5, which were reported by the majority of countries, might be too aggregated to fully explain health spending on COVID-19 by type of service, in particular for treatment (HC.COV.1) and other activities (HC.COV.5). Countries that use the Health Accounts Production Tool, mostly low and middle income countries, reported more detailed data on spending on COVID-19 by SHA 2011 functional category (Box 3.3), allowing more insights on spending by type of activity.

### By type of health care provider

Most health spending on COVID-19 went to hospitals and providers of preventive care, but characteristics of provision differed across countries.

Of the 37 countries analysed in this chapter, 31 reported health spending on COVID-19 by type of health care provider, following the SHA 2011 classification. The pattern by type of provider is linked not only to the magnitude of the pandemic in a country in 2020 and the strategies countries responded with but also

**BOX 3.3**

## Crossing COVID-19 health spending and health care functions using the WHO Health Accounts Production Tool for a deeper analysis of health spending on COVID-19

Using the WHO Health Accounts Production Tool (HAPT) to elaborate health accounts allows countries to completely disaggregate their health spending across System of Health Accounts 2011 (SHA 2011) classifications (financing schemes, sources of revenue, functions, providers, factors of provision and the like). Therefore, countries can also disaggregate COVID-19 spending by the same SHA 2011 function categories that are analysed in chapter 2.

For the 16 countries that reported data on COVID-19 spending by health care function, most of them low and middle income, the cross tables from the HAPT show that on average, two-thirds of curative care spending on COVID-19 went to inpatient settings (25% of health spending on COVID-19, on average) and one-third went to outpatient settings (9.5% of health spending on COVID-19; Box Figure). The HAPT also differentiates spending on health system governance and administration (14%) and preventive care (43%), which provides more granular information on the content of the category "other activities" reported using

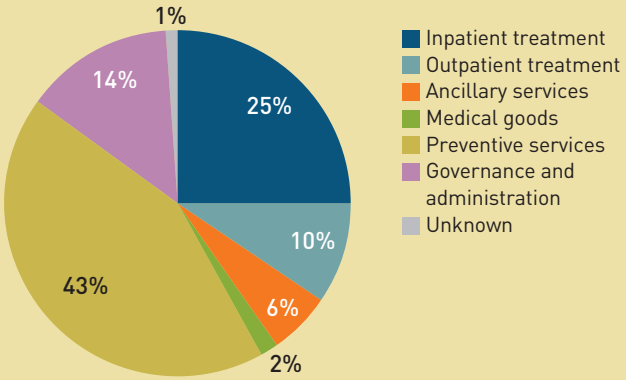
*(continued)*

**BOX 3.3 (continued)**

the COVID-19 special memorandum items of the Joint Health Accounts Questionnaire and WHO Health Accounts Questionnaire (see Figure 3.4 and 3.5 in the main text). Under preventive care, most health spending on COVID-19 by these countries went to information and communication (HC.6.1 in SHA 2011, 14% of COVID-19 health spending on average), epidemiological surveillance and risk and disease control programmes (HC.6.5, 11%) and preparing for disaster and emergency response programmes (HC.6.6, 6%). Because the COVID-19 vaccine rollout occurred in 2021 in most countries, spending on COVID-19 vaccination, also counted under preventive care (HC.6.2 in SHA 2011), was not reported in 2020 in these 16 countries, except in the United Arab Emirates.

**BOX FIGURE More granularity in the data for countries using the WHO Health Accounts Production Tool**

Average share of health spending on COVID-19, by System of Health Accounts 2011 health care function, 2020 (%)

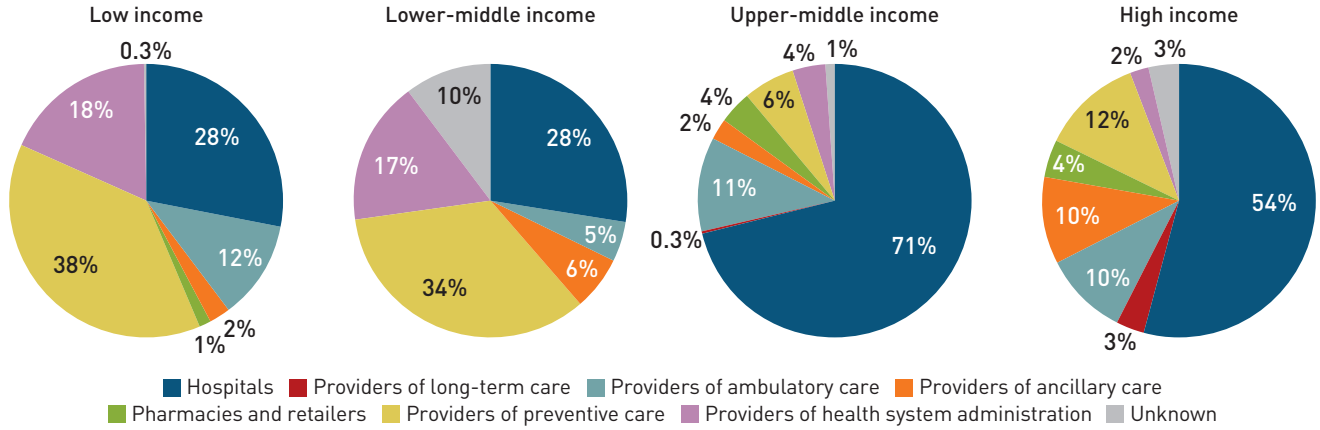



**Note:** Average calculated from data for 16 countries that used the HAPT to report health accounts results to WHO: Afghanistan, Burkina Faso, Congo, Democratic Republic of the Congo, Ethiopia, Ghana, Nepal, Niger, Nigeria, North Macedonia, Paraguay, Senegal, Uganda, Ukraine, United Arab Emirates and Zimbabwe. Data for Ghana and Uganda are from a study on COVID-19 spending and do not include health spending on other diseases.
**Data source:** Global Health Expenditure Database data collection, 2022.

to a country's existing capacities and health spending distribution by function. As a result, in 18 upper-middle and high income countries with data, most health spending on COVID-19 went to hospitals (71% and 54%, respectively), whereas in 13 low and lower-middle income countries, most went to providers of preventive care, and hospitals accounted for less than 30% on average. Providers of health system governance and administration also represented a substantial share of health spending on COVID-19 in low and lower-middle income countries with data compared with upper-middle and high income countries (Figure 3.6).

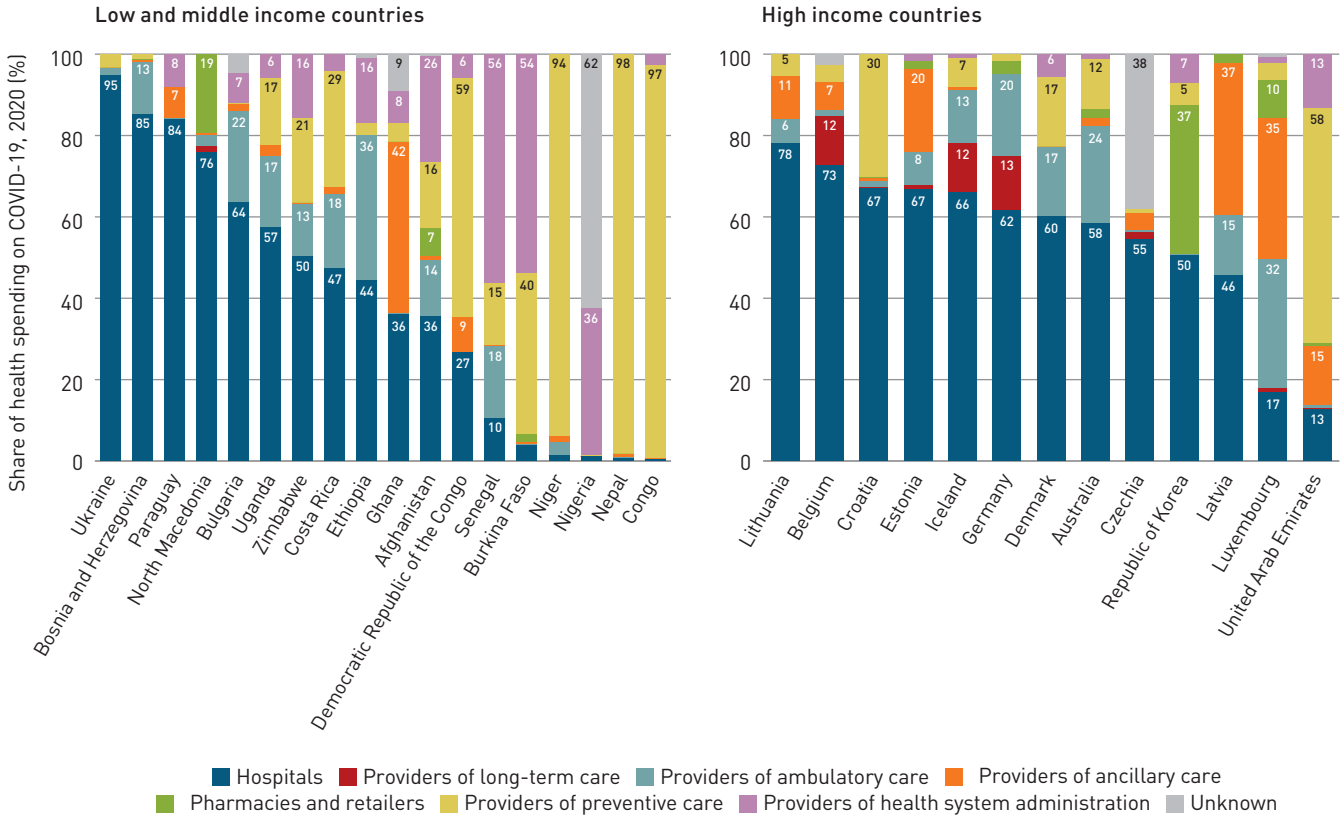
**FIGURE 3.6 In higher income countries with data, most health spending on COVID-19 in 2020 by providers went to hospitals, and in lower income countries, most went to providers of preventive care**

Average share of health spending on COVID-19, by income group and type of health care provider, 2020 (%)




**Note:** Includes data from 6 low income countries, 7 lower-middle income countries, 5 upper-middle income countries and 13 high income countries. Data issues can affect the distribution of health spending on COVID-19 by type of health care provider and limit comparability across countries. Of the 37 countries analysed in the chapter, Canada, El Salvador, Honduras, Ireland, Spain and Thailand are not included in the averages in this figure because those countries did not report health spending on COVID-19 by health care provider.
**Data source:** Global Health Expenditure Database data collection, 2022.

**FIGURE 3.7 The types of providers to which health spending on COVID-19 in 2020 was allocated varied across countries**




**Note:** Data issues can affect the distribution of health spending on COVID-19 by type of health care provider and limit comparability across countries.
**Data source:** Global Health Expenditure Database data collection, 2022.

The types of providers to which health spending on COVID-19 was allocated varied across countries. Hospitals received more than 50% of health spending on COVID-19 in more than half of the countries, whereas in five countries, less affected by the pandemic in 2020, most COVID-19 spending went to providers of preventive care, which include organizations that primarily provide collective preventive programmes and campaigns and public health programmes (Figure 3.7).

## Early data on health spending on COVID-19 in 2021

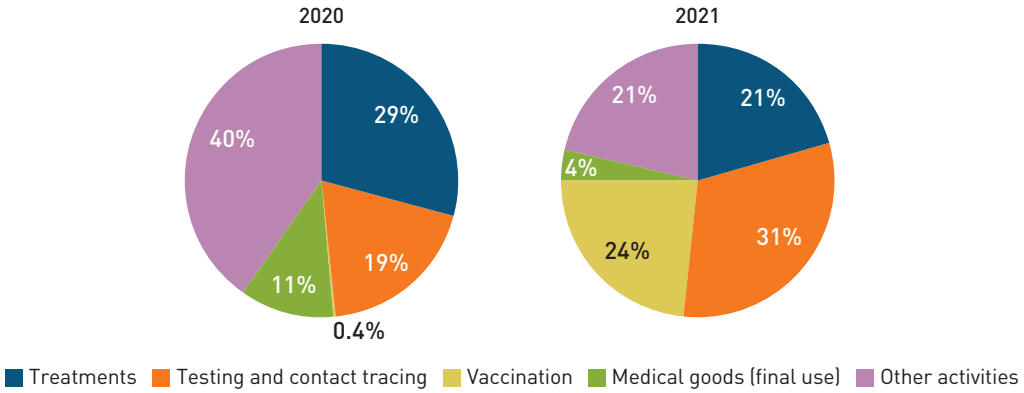
***Early data from seven countries, most of them high income, show that health spending on COVID-19 rose in 2021, driven by increased spending on vaccination and on testing and contact tracing.***

Seven countries, most of them high income, have already reported preliminary data on health spending on COVID-19 for 2021. Those reports show changes in the distribution of health spending on COVID-19 from government and compulsory insurance by type of service. With the introduction of COVID-19 vaccines, the share allocated to vaccination rose from less than 1% in 2020 to 23.5% in 2021 across the seven countries with data. The share allocated to testing and contact tracing also rose, from 19% to 31% in 2021 (Figure 3.8).

This change in distribution by type of service is associated, in this small set of countries, with an increase in per capita spending by government and compulsory insurance, from US$ 200 in 2020 to US$ 330 in 2021 on average and in six of the seven countries that reported health spending on COVID-19 for 2021 (Figure 3.9). While not representative of global trends, the evolution of the pandemic in 2021, in particular with the appearance of several SARS-CoV-2 variants of concern, and the evolution of health system responses with the generalized rollout of the COVID-19 vaccines, will likely show major changes in the distribution of health spending on COVID-19 in other countries in 2021.

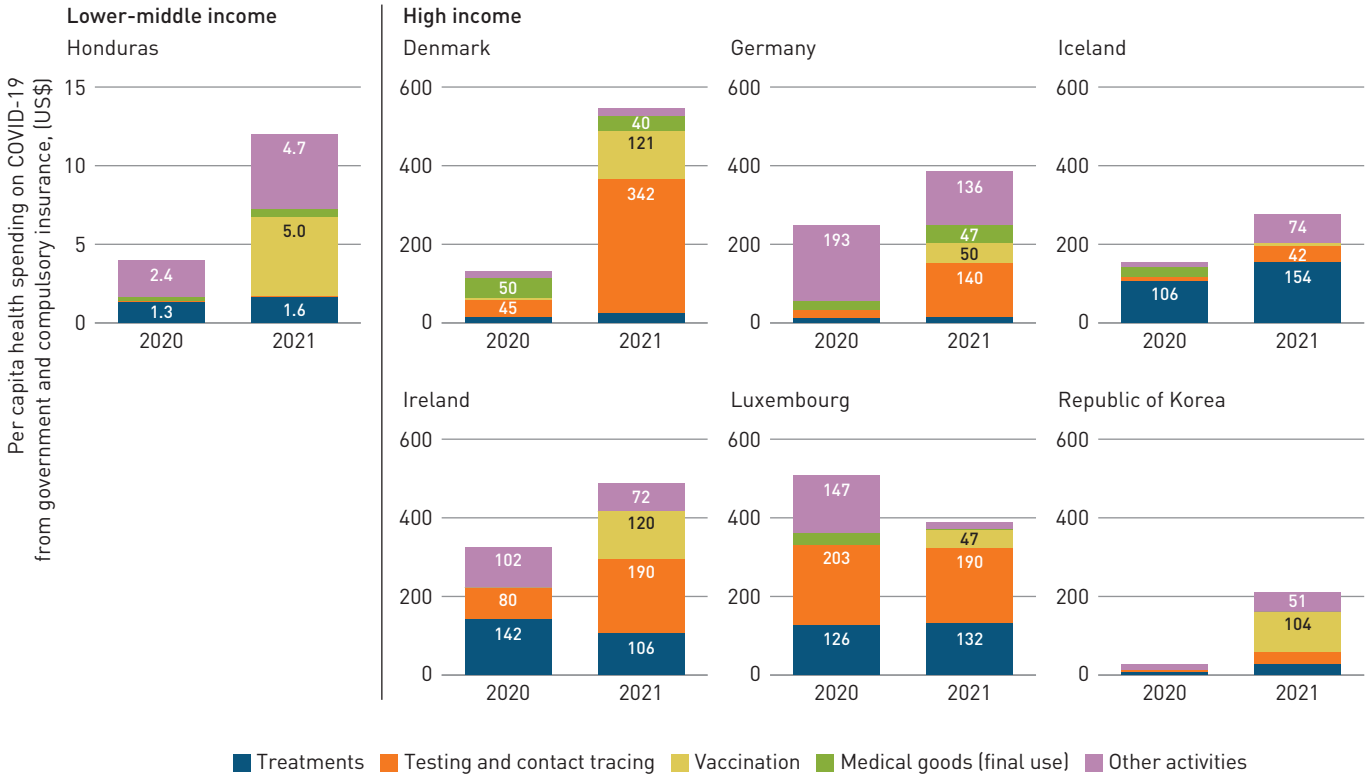
**FIGURE 3.8** **In seven countries with data, changes in the distribution of health spending on COVID-19 by type of activity between 2020 and 2021 were driven by increased spending on vaccination and testing**

Average share of health spending on COVID-19 from government and compulsory insurance, by type of services (%)




**Note:** Data are from Denmark, Germany, Honduras, Iceland, Ireland, Luxembourg and the Republic of Korea. Data for 2021 are preliminary and subject to revision.
**Data source:** WHO Global Health Expenditure Database, 2022.

**FIGURE 3.9** **Health spending on COVID-19 rose in 2021 in six of seven countries with data**




**Note:** Data for 2021 are preliminary and subject to revision.
**Data source:** WHO Global Health Expenditure Database, 2022.

## Implications

In 2022, several countries collected and reported data on health spending on COVID-19 in 2020 to better understand how their health systems responded to the pandemic. These data suggest that COVID-19 response costs accounted for a large share of health spending from government and compulsory insurance in 2020 in some countries. Spending on treatment, on testing and in hospitals dominated in high income countries. In low income

countries, with less capacity for treatment and testing, most spending went to preventive measures and health system governance and administration, with external funding complementing domestic government funding. Data from a small set of countries, mostly high income, showed a further increase in health spending on COVID-19 in 2021 and changes in the pattern by type of service, driven by increased spending on vaccination and on testing and contact tracing.

Spending patterns varied widely, depending on the scale of the pandemic situation in each country in 2020, the availability of interventions and the approaches each country took for prevention, case detection, contact tracing and treatment. However, the large variations in health spending on COVID-19 across countries also raise questions about whether some of the differences are due to data gaps and countries' accounting practices. It was challenging for countries to clearly separate health spending on COVID-19 from other health spending, especially for countries that did not have an approach for completely distributing their health spending by diseases and conditions. There are also clear limitations in the identification of COVID-19 spending by type of activity, which affects the comparison between countries. Thus, more efforts are needed to identify data gaps, increase the granularity of the data, assess data quality, and refine and improve the application of methodological recommendations issued by WHO, the Organisation for Economic Co-operation and Development and Eurostat *[2, 5]*. In that sense, WHO will continue to support the implementation of the SHA framework with countries, and in particular the identification of spending by disease and condition, including COVID-19, for the Global Health Expenditure Database data collection in 2023.

Reliable spending data can contribute to the understanding of the pandemic response, but spending data alone will not provide the whole picture. It is important to know how countries mobilized the resources to respond to COVID-19 and the extent to which resources were mobilized by employing extrabudgetary means, reprioritizing the health budget or activating contingency funds. It is also critical to know how the funds were channelled, the most efficient way funds were mobilized during the pandemic response and the public financial management rules essential for effective implementation. Country-specific in-depth analysis could provide more valuable lessons and guide health system investment and public finance in order to better prepare for and increase resilience against future pandemics.

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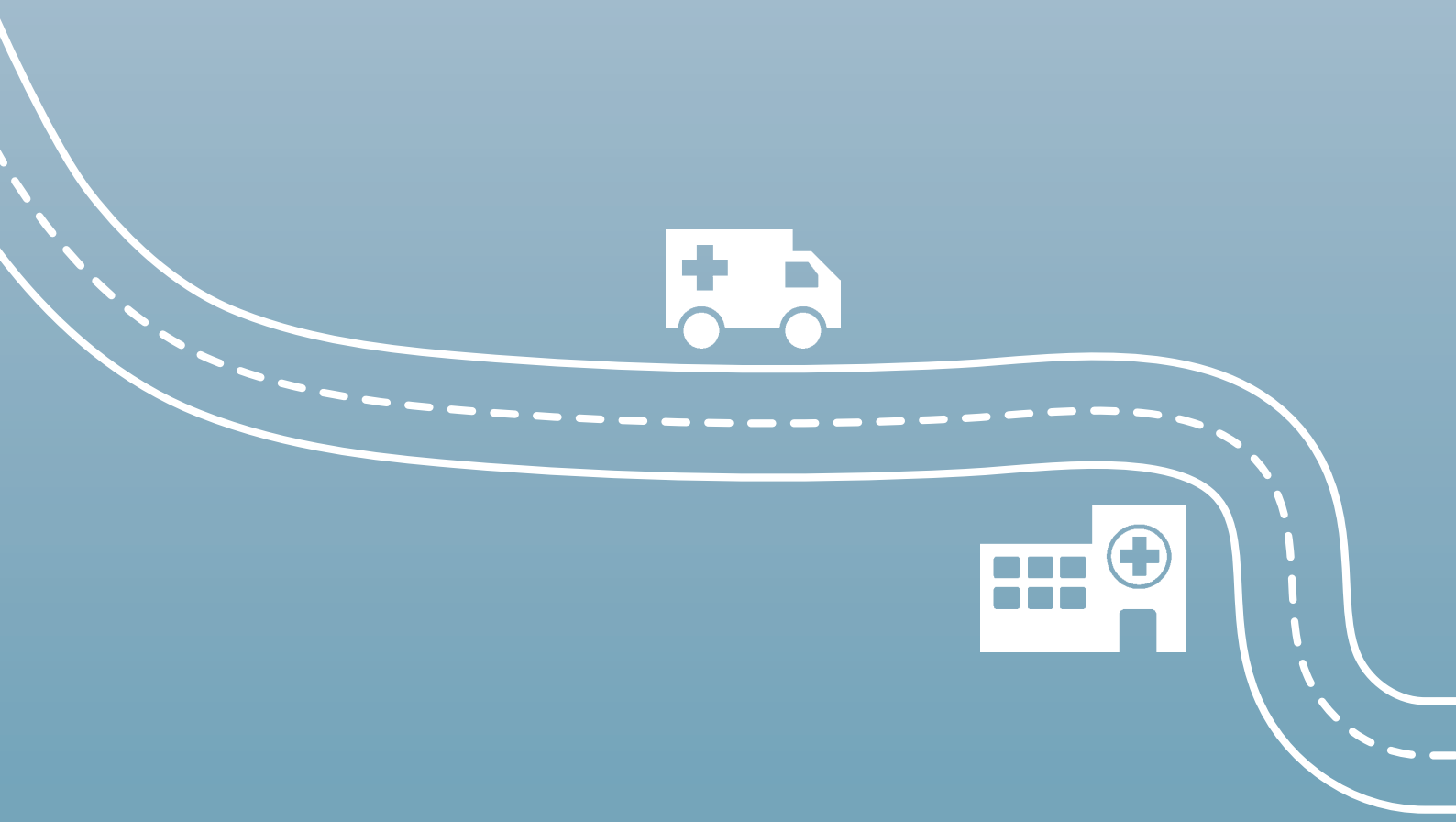


4

# Government spending on health in the context of social spending

## Key messages

- Government spending on health does not exist in a vacuum; health spending and health outcomes are also shaped by other social spending, particularly on education and social protection.
- Before the COVID-19 pandemic, the profile of social spending in countries reflected a combination of macro-fiscal and demographic factors, as well as the government's role in funding social services.
  - Higher income countries, which typically have ageing populations, allocated a larger share of public spending to health and social protection but a lower share to education than lower income countries did. However, there is considerable heterogeneity across countries.
  - Between 2000 and 2019, all three components of per capita social spending rose in real terms in high and upper-middle income countries. Health and education spending rose in lower-middle and low income countries. The trends in social protection spending in low and lower-middle income countries are unknown due to lack of data.
  - While some convergence across income groups occurred in government spending on education as a share of gross domestic product (GDP) between 2000 and 2019, government spending on health became more unequal, with low income countries falling much further behind.
  - A large proportion of high and upper-middle income countries reported rising health and social protection shares of government spending and declining education shares.
- During the first year of the COVID-19 pandemic, in high income countries, per capita health and social protection spending rose strongly, while education rose modestly. In upper-middle income countries, per capita health and social protection spending rose strongly while education spending fell. In lower-middle income countries, health spending rose strongly, while education spending remained flat. And in low income countries, both health and education spending rose strongly.
- The additional public debt accumulated across all income groups will present a further challenge to sustaining social spending.

***Government spending on health does not exist in a vacuum; health spending and health outcomes are also shaped by other social spending, particularly on education and social protection.***

Protecting and promoting the well-being of citizens are primary responsibilities of government. They are achieved partly through social spending—usually on a combination of health, education and social protection *[1]* (Box 4.1). Together, these components are an effective proxy for the size of a country's welfare state. However, they involve spending on discrete functions, such as essential services, public health functions, social assistance payments, social insurance and pension payments, among others.

Social spending plays a key role in supporting people's well-being. It helps people meet their basic day-to-day needs, develops and preserves their human capital and provides basic security in the face of economic and other shocks. Studies have found that higher health and social spending is correlated with lasting improvements in health *[2, 3, 4]*, better education outcomes and inclusive growth *[5]*. Additionally, by signalling a government's commitment to fairness and directly targeting underlying drivers of disadvantage, social spending can foster social cohesion and restore peace *[6]*.

By focusing on governments' social spending, this chapter applies a broader lens than is typical for this report. It does so to provide context to government spending on health and how it changes in response to shifting demographics and underlying macro-fiscal conditions, as well as to economic and other crises that suddenly increase demand for government spending.

The links between health spending and broader social spending, though not always straightforward, are important. Health and other categories of social speeding can be shaped by similar societal values, as well as by common drivers—for example, ageing, poverty and chronic illness *[7]*. In contrast, substitution effects mean that health spending and other categories of social spending can appear to work in opposite directions. For example, by improving the social dimensions of health, increasing healthy behaviours and promoting the well-being of the elderly, social spending can play an important preventive role and reduce health care utilization and spending *[5, 8, 9]*. Effective social spending can also help protect the community from public health threats. Knowing these dynamics is important for understanding whether health and social spending compete for limited budgetary resources or serve complementary purposes.

This chapter examines the level and prioritization of governments' social spending across income groups before the COVID-19 pandemic, focusing first on patterns in 2019 and then on growth between 2000 and 2019. The chapter then examines how governments' health and other social spending changed in 2020 in response to the pandemic. It also juxtaposes health spending with governments' debt servicing expenditures. By shedding light on the interplay between health and social spending, the chapter aims to better frame future research. The analysis is limited to 88 countries across all four income groups that met certain reporting criteria (see Box 4.1). However, data on social protection spending are available for only 40 high and upper-middle income countries, so the analysis of low and lower-middle income countries is limited to health and education spending.

The patchy nature of data on social protection spending means that, for the most part, this chapter examines each component of social spending separately rather than examining an amalgamated measure of social spending.

## The profile of social spending

***Before the COVID-19 pandemic, the profile of social spending in countries reflected a combination of macro-fiscal and demographic factors, as well as the government's role in funding social services.***

Per capita spending by governments on health, education and social protection is strongly positively correlated with income (as measured by GDP per capita; Figure 4.1a; see also Annex Table A3.1 in Annex 3).[1] Spending on these social sectors as a share of GDP is also positively correlated with income, though the relationship is weaker (Figure 4.1b).

High income countries were unique among income groups in spending more, on average, on health than on education in 2019. In high

1. Government spending on health has a higher ceiling and a lower floor than education spending. In 2019, average per capita government spending on health was US$ 4,844 for the 10 countries with the highest health spending and US$ 7.01 for the 10 countries with the lowest (a ratio of 691 to 1). In contrast, per capita government spending on education ranged from US$ 3,790 in the 10 countries with the highest education spending and US$ 18.90 for the 10 countries with the lowest (a ratio of 201 to 1).

**BOX 4.1**

## Data sources and variables

Government social spending includes three main components: health, education and social protection.

Government spending on health refers to domestic general government health expenditure, which is government spending from domestic financing sources. Data are from the WHO Global Health Expenditure Database, which publishes estimates for more than 190 countries according to the methodology of the System of Health Accounts 2011.

Government spending on education encompasses all levels of education combined, from early childhood to tertiary, including expenditure funded by transfers from external sources to government. Data are from the International Monetary Fund's (IMF) Government Finance Statistics database or the World Bank's World Development Indicators database, depending on which source had more complete data for a country. The IMF data are reported according to the Classification of the Functions of Government *[10]*. The World Bank data are collected by the United Nations Educational, Scientific and Cultural Organization Institute for Statistics *[11]*. All data are mapped to the International Standard Classification of Education to ensure comparability.

Government spending on social protection consists of cash and in-kind benefits provided to targeted individuals and households, including people with sickness and disability, survivors of a deceased person, households with dependent children and other socially excluded groups. It also includes transfers and services provided on a collective basis, including old-age pension schemes, unemployment insurance and housing. The data are from the IMF's Government Finance Statistics database, are reported according to the Classification of the Functions of Government and are limited to upper-middle and high income countries.

This chapter analyses health and education spending for 88 countries (36 high income, 22 upper-middle income, 20 lower-middle income and 10 low income) that met two inclusion criteria:

- Data available on health and education spending for at least two data points in 2000–2004 and two in 2015–2019.
- Data available on health and education spending for both 2019 and 2020.

From this sample, social protection spending is examined for a subset of 40 countries (31 high income and 9 upper-middle income). These countries had to have at least two data points in 2000–2004 and two in 2015–2019), as well as data for both 2019 and 2020.

For consistency with other chapters, the analysis excluded countries with a population below 600,000.

income countries, government spending on health accounted for 5.9% of GDP, with education accounting for 5%. Conversely, in low income countries, government spending on education as a share of GDP was more than double that on health (3.4% versus 1.4%). Similarly, government spending on education accounted for 4.3% of GDP in lower-middle income countries and 4.5% in upper-middle income countries, about 1 percentage point more than government spending on health in both groups. Health spending includes only domestic sources, while education spending includes external aid channelled through government.[2]

In 2019, high income countries also spent an average of US$ 6,788 per capita on social protection—8 times what upper-middle income countries spent (US$ 816). There is a considerable range in social protection spending per capita across high income countries, with Singapore (US$ 542) at the bottom and Luxembourg (US$ 22,188) at the top (see Figure 4.1a). Additionally, as a share of GDP, government spending on social protection was much larger in high income countries (15%) than in upper-middle income countries (10%).

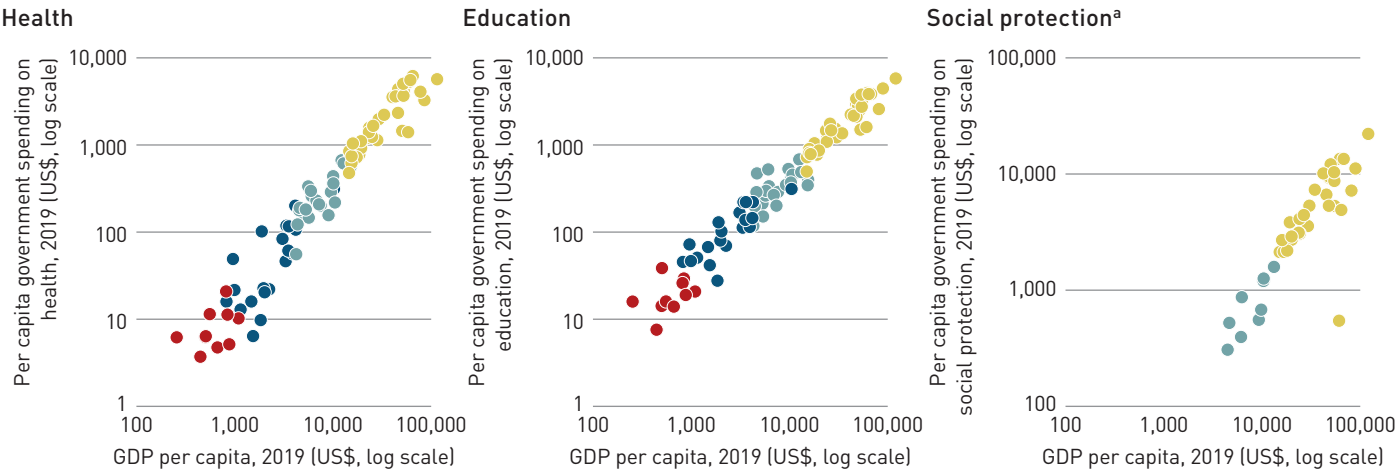
### *Higher income countries, which typically have ageing populations, allocated a larger share of public spending to health and social protection but a lower share to education than lower income countries did. However, there is considerable heterogeneity across countries.*

In addition to being a function of income, per capita government spending on health and other social sectors also depends on government spending as a share of GDP and the importance of each spending component within the fiscal envelope. With the role of government varying considerably across countries, this section focuses on the allocation of spending within government budgets.

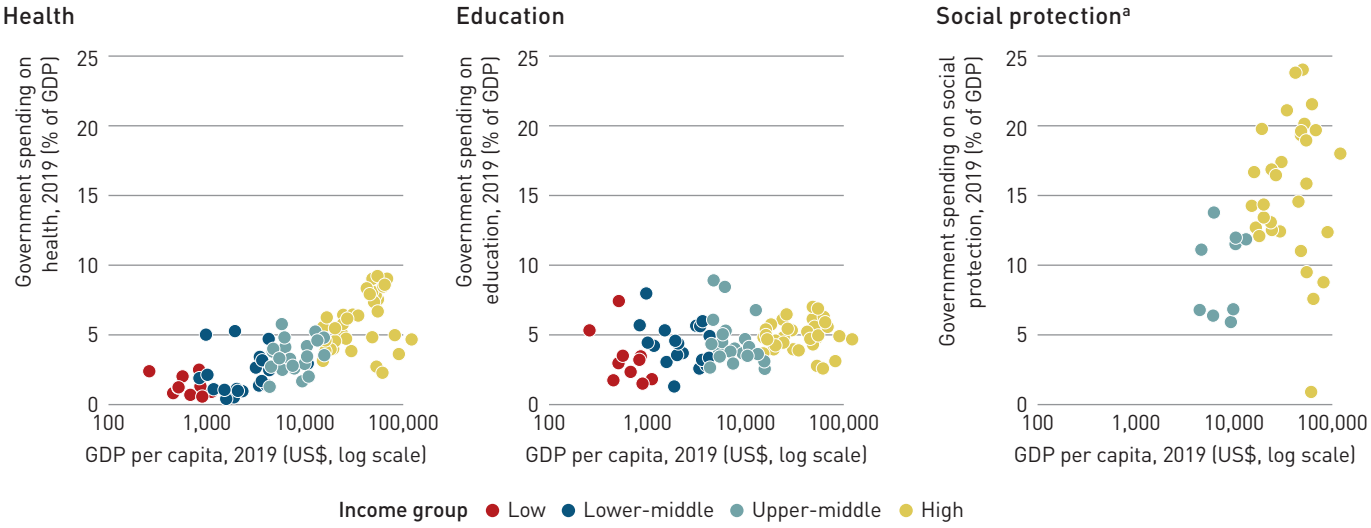
2. During 2010–2020, external aid to health was 1.5–2 times external aid to education *[12]*.

**FIGURE 4.1 High income countries spent more, on average, on health than on education, whereas in other income groups, education spending was higher than health spending in per capita terms and as a share of gross domestic product (GDP)**

a. Per capita government spending on health, education and social protection and GDP per capita




b. Government spending on health, education and social protection as a share of GDP and GDP per capita



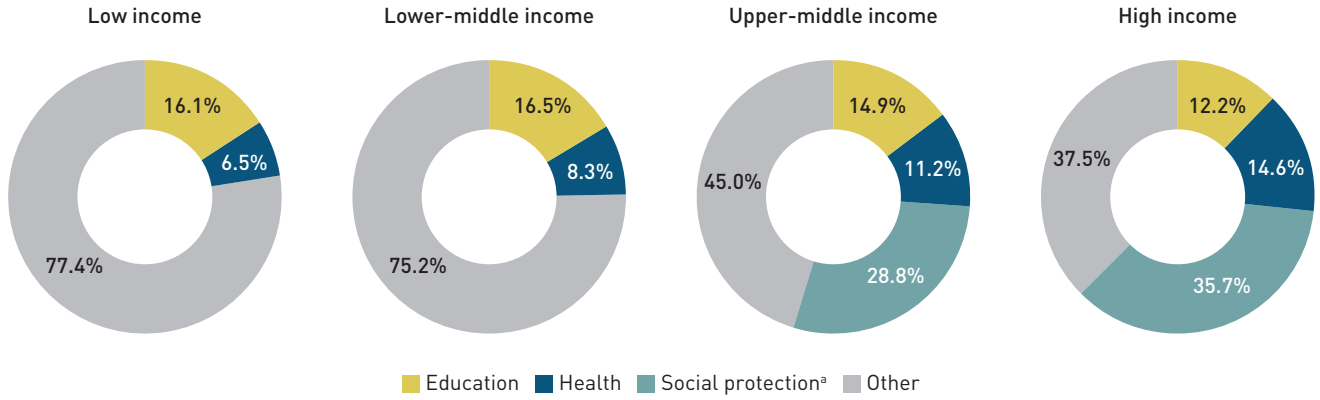

**a.** Includes a subset of 40 countries (31 high income and 9 upper-middle income).
**Data source:** WHO Global Health Expenditure Database, 2022; International Monetary Fund Government Finance Statistics database; World Bank World Development Indicators database.

In general, the components of social spending accounted for a substantial share of general government expenditure (Figure 4.2). The share of general government expenditure allocated to health and education in 2019 was 26.8% in high income countries, 26.1% in upper-middle income countries, 24.8% in lower-middle income countries and 22.6% in low income countries. The share allocated to social protection was 35.7% in high income countries and 28.8% in upper-middle income countries. Health, education and social protection combined accounted for 62.5% of general government expenditure in high income countries and 55.0% in upper-middle income countries.

On average, the shares of general government expenditure allocated to health and social protection in 2019 rose with income, with higher income countries having the largest shares. In contrast, the share of government spending allocated to education was largest in lower-middle and low income countries (Figure 4.3a). This pattern reflects a range of demographic and nondemographic factors that are correlated with income,

**FIGURE 4.2 The components of social spending accounted for a sizeable share of government spending in all income groups**

Share of general government expenditure, 2019 (%)




**a.** Includes a subset of 40 countries (31 high income and 9 upper-middle income).
**Note:** Includes only upper-middle and high income countries with data on all components of social spending (health, education and social protection).
**Data source:** WHO Global Health Expenditure Database, 2022; International Monetary Fund Government Finance Statistics database; World Bank World Development Indicators database.

including population age profile, the proportion of elderly people requiring long-term care, the number of children in school and university, technological progress and government's role in funding social services *[13]* (Box 4.2).

Key among these factors is the structural influence of demographics. The share of adults over age 65 in the population in 2019 was much larger in high income countries (17%) than in other income groups (Figure 4.3b). In contrast, populations skewed much

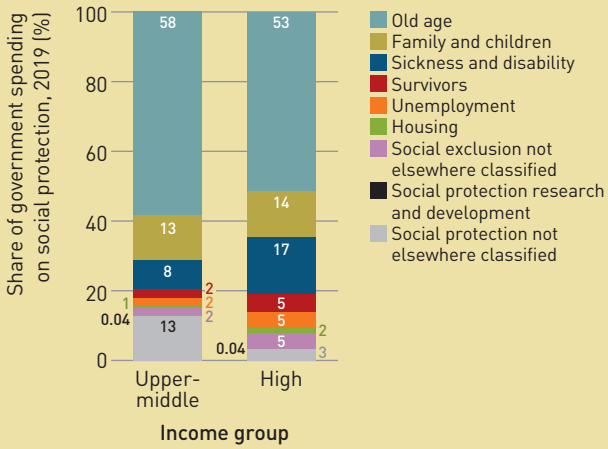
**BOX 4.2**

## Drivers of government social spending

Demographic factors and country welfare policies shape social spending by influencing population demands for and utilization of social services. The population age profile is one of the most important factors. As people age, they require more health care, long-term care and other social services; they also demand higher social protection spending.[1] Consequently, health costs and long-term care costs rise with age *[14]*. Payments by pension schemes—a major part of the social safety net and the largest component of social protection spending in upper-middle and high income countries (Box Figure)—generally depend on attaining the retirement age, which differs by country.

Some social assistance payments are also inherently age-related—for example, social assistance is a key part of helping the elderly pay for long-term care *[15]*. Longer life expectancies have implications for the demand for government spending on health and social protection.

**BOX FIGURE Payments by pension schemes are the largest component of social protection spending in upper-middle and high income countries**




**Data source:** International Monetary Fund Government Finance Statistics database.

*(continued)*

**BOX 4.2 (continued)**

Conversely, the demand for education is generally highest in people's earlier years and declines as they age. The key drivers of education spending, therefore, include the proportion of school-age children (primary and secondary) in the total population and the share of those children who are enrolled in school. Demand for postsecondary and tertiary education is also an important driver of education spending, though more so at higher income levels *[16]*.

Nondemographic factors—such as technological progress, growing relative prices and rising demand for better services—also drive social spending through their impact on costs *[17, 18, 19]*. This is particularly relevant for health spending, given the open-ended and demand-driven nature of most health services.

Also driving social spending is the important countercyclical role of social protection spending. Social protection spending is an important automatic stabilizer in the budget, with certain payments (such as unemployment insurance) tied to fluctuations in labour market conditions (rising as conditions deteriorate and falling as they improve). Social protection spending is also an important policy tool during economic crises, given the targeted nature of payments (such as cash transfers) on tackling poverty and inequality.

Moreover, social spending can be influenced by social values and a country's general view of government's role in providing welfare regimes. Understanding countries' political regimes and historical and ideological foundations is therefore also important.

**Note**

1. In many Organisation for Economic Co-operation and Development countries, long-term care is partly accounted for under the social protection category in the Classification of the Functions of Government.

younger among countries with lower incomes: the share of the school-age population (ages 0–14) was substantially larger in low income countries (45%) and lower-middle income countries (32%) than elsewhere.

Despite the general patterns of government prioritization of health, education and social protection spending, aggregates mask the considerable variation in the configuration of social spending in fiscal envelopes across income groups (Figure 4.4). Within each income group and across each spending component, there is a wide range in the share of general government expenditure. In high income countries, the range in 2019 was 14 percentage points for health (from 8% to 22%), 10 percentage points for education (from 8% to 18%) and nearly 40 percentage points for social protection (from 6% to 45%). Similarly wide ranges are evident in other income groups (see Annex Table A3.2 in Annex 3).

To some extent, the heterogeneity in the profile of government social spending reveals differences in welfare systems and policy settings. When the analysis is limited to the 31 high income countries with a complete set of social spending data, only three countries (Denmark, Ireland and Sweden) allocated an above-average share of public spending in 2019 to all three social spending components (Table 4.1).[3] Additionally, several countries allocated an above-average share of government spending to both health and social protection. Collectively, these spending patterns are characteristic of welfare institutions, common in Western Europe and Scandinavia, that centre on universal social security and social services *[20]*.

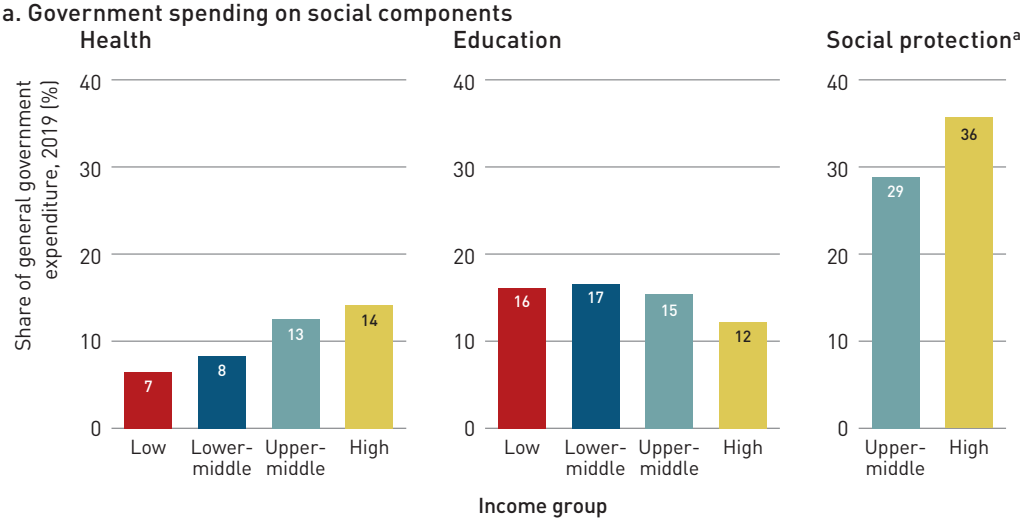
In contrast, the United States of America had an above-average share of health and education spending in general government expenditure for its income group but a low share of social protection spending. This is characteristic of the US model of welfare in which social benefits and social insurance are limited and tightly means-tested, combined with mixed public and private provision of social services.

The relationship between shares of social spending and health outcomes is not linear. The components of social spending target social determinants of health and reflect unique demographic and nondemographic contextual factors. Hence, an optimal mix of the components of social spending is not evident from these data. What matters is whether the mix is effective and sustainable in the local context and consistent with population preferences and with the amount and share of GDP of overall government spending, including both social and nonsocial sectors.

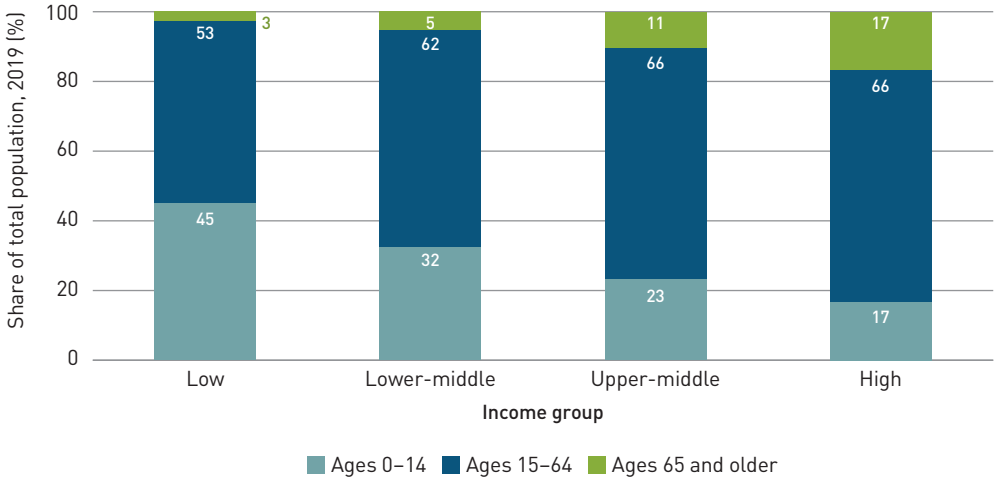
3. Among the 9 upper-middle income countries, only the Republic of Moldova allocated an above-average share of public spending to all three social spending components, while only Georgia allocated a below-average share to all components.

**FIGURE 4.3 The profile of social spending is driven by a combination of demographic and nondemographic factors that are correlated with income**

a. Government spending on social components




b. Demographic composition




**a.** Includes a subset of 40 countries (31 high income and 9 upper-middle income).
**Data source:** WHO Global Health Expenditure Database, 2022; International Monetary Fund Government Finance Statistics database; World Bank World Development Indicators database; and United Nations, *World Population Prospects*, 2022 revision.

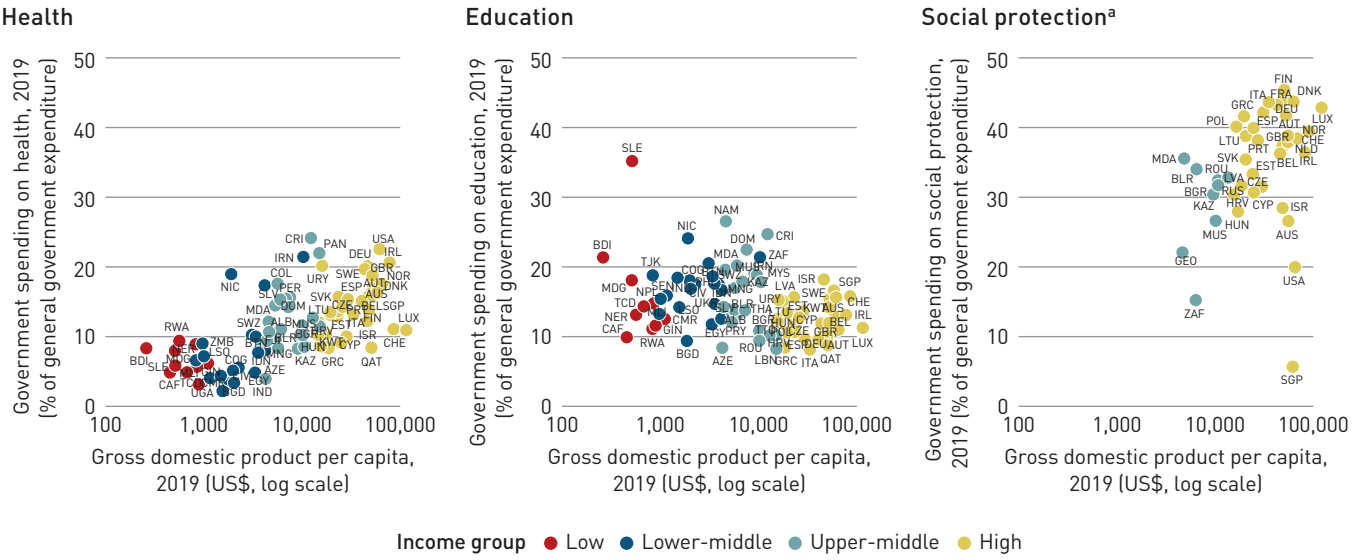
***Between 2000 and 2019, all three components of per capita social spending rose in real terms in high and upper-middle income countries. Health and education spending rose in lower-middle and low income countries. The trends in social protection spending in low and lower-middle income countries are unknown due to lack of data.***

This section examines growth in the components of per capita government social spending between 2000 and 2019—that is, prior to the COVID-19 pandemic. Growth in government spending is driven by a combination of economic growth (GDP), changes in fiscal capacity (total general government expenditure as a share of GDP) and changes in the share of each spending component in general government expenditure. These factors can play different roles depending on the country and the period being analysed.

When average spending in 2000–2004 and 2014–2019 is compared,[4] the fastest growth in both per capita health and education spending was in upper-middle and lower-middle income countries. This coincided with their faster income growth between

4. Five-year averages are used to account for patchy data, particularly in education spending, and to abstract from year-to-year volatility.

**FIGURE 4.4 The allocation of social spending components within general government expenditure varied considerably in 2019**




**a.** Includes a subset of 40 countries (31 high income and 9 upper-middle income).
**Data source:** WHO Global Health Expenditure Database, 2022; International Monetary Fund Government Finance Statistics database; World Bank World Development Indicators database.

**TABLE 4.1 High income countries that allocated an above-average share of general government expenditure to multiple components of social spending, 2019**

| All three components | Health and social protection | Health and education | Education and social protection | No components |
|---|---|---|---|---|
| Denmark | Austria | Australia | Lithuania | Croatia |
| Ireland | Belgium | United States of America | Slovenia | Hungary |
| Sweden | France | | Switzerland | Slovakia |
| | Germany | | | |
| | Netherlands | | | |
| | Norway | | | |
| | Spain | | | |
| | United Kingdom | | | |

**Data source:** WHO Global Health Expenditure Database, 2022; International Monetary Fund Government Finance Statistics database; World Bank World Development Indicators database.

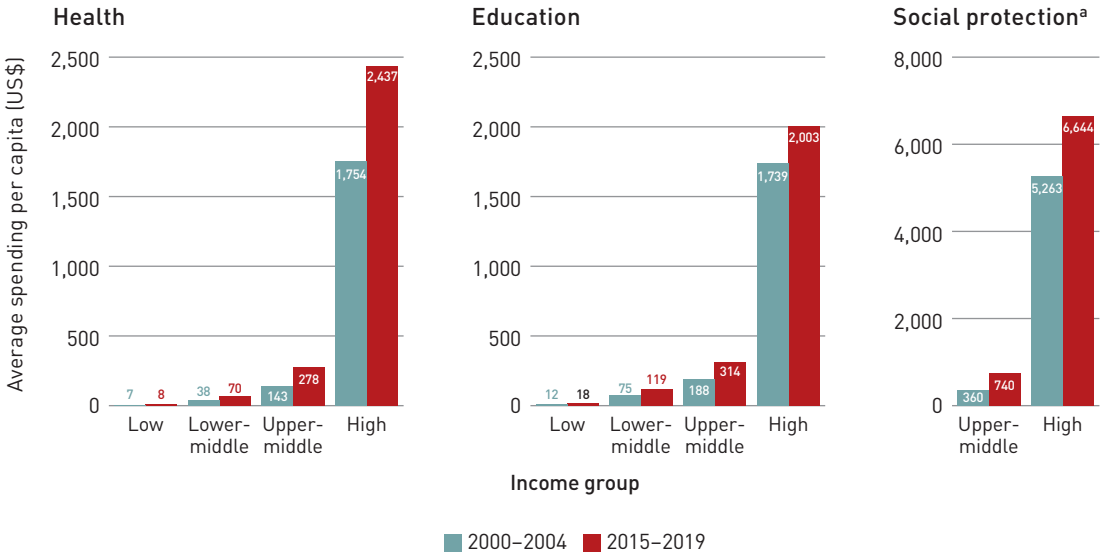
the two periods.[5] Per capita health spending nearly doubled in real terms in upper-middle income countries, from US$ 143 to US$ 278, and in lower-middle income countries, from US$ 38 to US$ 70 (Figure 4.5). These two income groups also recorded the fastest growth in per capita education spending: 72% in upper-middle income countries and 52% in lower-middle income countries. Growth in per capita social protection spending in upper-middle income countries was also brisk, more than doubling to US$ 740.

The absolute change in per capita government spending over the two decades preceding 2019 was greatest in high income countries. However, this reflects base effects, with per capita health spending rising US$ 683 in real terms (39%), education spending rising US $264 (15%) and social protection rising US$ 1,381 (26%). The absolute change and growth rates were smallest in low income countries, with health spending rising less than US$ 1 per capita in real terms (13%), from US$ 6.90 to US$ 7.80, and education spending rising US$ 6 per capita (46%). Again, only domestic sources of government health spending are included.

Across the whole sample of 88 countries the average income elasticity of growth (the ratio of growth in spending to growth in income) between 2000 and 2019 was stronger for health (1.5) than for education (1.2; Figure 4.6). However, this was not the case for all income groups.

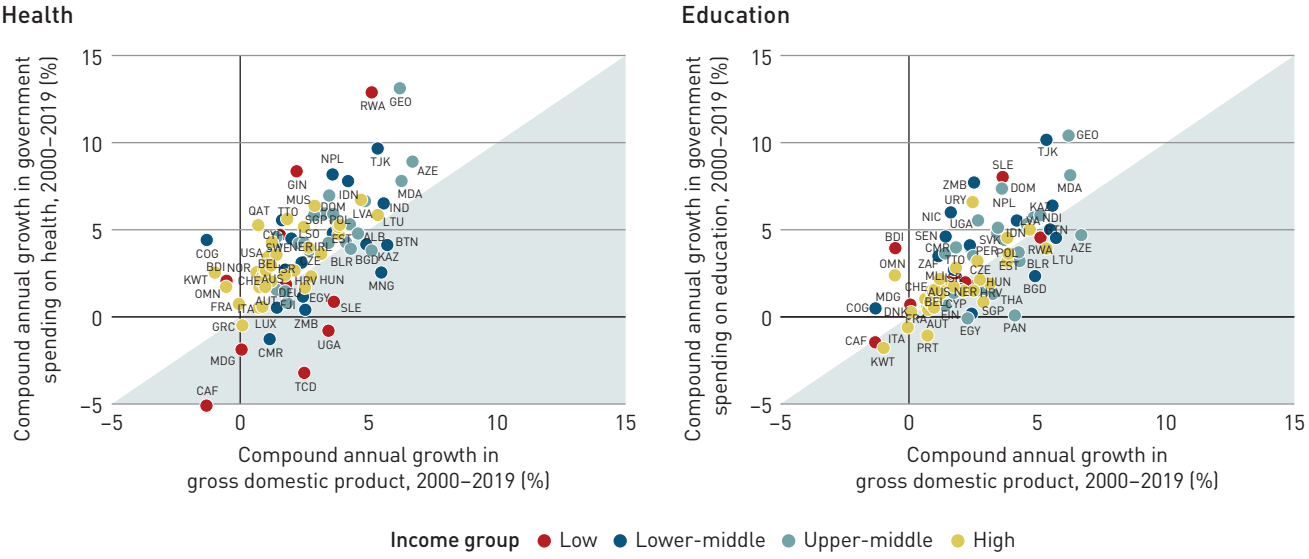
5. Across the 88 countries, growth in GDP per capita between 2000–2004 and 2014–2019 in upper-middle income countries (68%) and lower-middle income countries (46%) outpaced growth in low income countries (30%) and high income countries (20%).

**FIGURE 4.5 Between 2000 and 2019, upper-middle and lower-middle income countries recorded the fastest growth in social spending; high income countries recorded the largest rises in absolute terms**




**a.** Includes a subset of 40 countries (31 high income and 9 upper-middle income).
**Data source:** WHO Global Health Expenditure Database, 2022; International Monetary Fund Government Finance Statistics database; World Bank World Development Indicators database.

**FIGURE 4.6 The ratio of growth in spending to growth in income from 2000 to 2019 was higher for health than for education—but not at all income levels**




**Data source:** WHO Global Health Expenditure Database, 2022; International Monetary Fund Government Finance Statistics database; World Bank World Development Indicators database.

For health, all income groups had a positive income elasticity on average, with the highest elasticity in high income countries (1.9) and the lowest in low income countries (1.0). Among low income countries in particular, there were a wide range of growth rates for health spending and some notably large drops in spending.

In contrast, education spending grew faster than income only in lower-middle income countries (elasticity of 1.6) and upper-middle income countries (1.2; see Figure 4.6). In both high and low income countries, average growth in education spending did not keep pace with average growth in income. As indicated in

chapter 1, donor spending on health plays an important role in filling the funding gap.

In both high income and upper-middle income countries, average growth in social protection spending also exceeded growth in income. The average income elasticity of growth in social protection spending was higher in upper-middle income countries (1.7) than in high income countries (1.4).[6]

***While some convergence across income groups occurred in government spending on education as a share of GDP between 2000 and 2019, government spending on health became more unequal, with low income countries falling much further behind.***

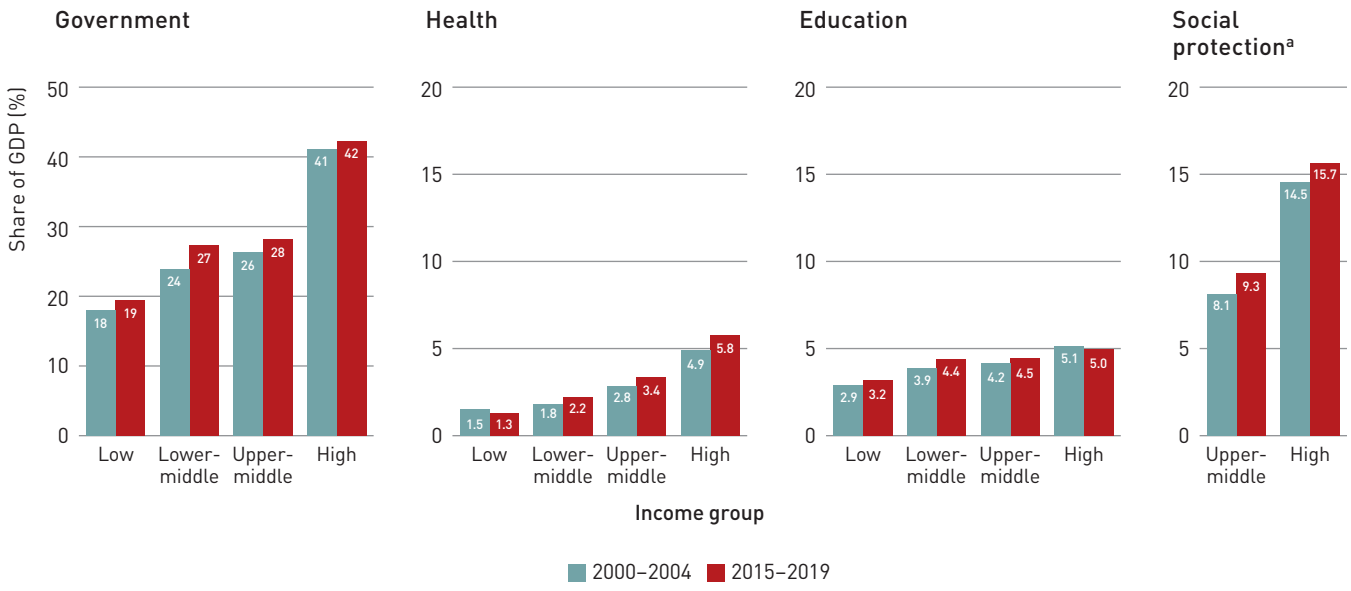
Between 2000 and 2019, fiscal capacity (total government spending as a share of GDP) increased marginally in all income groups.

Lower-middle income countries recorded the largest expansion in government spending as a share of GDP, nearly 4 percentage points on average, compared with 2 percentage points for low income countries. There was still a huge difference between high income countries and the other income groups. In high income countries, fiscal capacity was over 40% of GDP, compared with 20%–30% in lower-middle and upper-middle income countries (Figure 4.7). In low income countries, it was less than 20%.

Over the same period, the difference in education spending as a share of GDP between high income countries and other income groups narrowed. The largest improvements occurred in lower-middle income countries, where the gap was halved from 1.2 percentage points to 0.6. Lower-middle income countries also narrowed the gap with upper-middle income countries. In contrast, low income countries slightly narrowed the gap with high income countries but fell further behind lower-middle income countries and had no change in their relative position with upper-middle income countries (see Figure 4.7).[7]

In contrast to education, health spending became more unequal between 2000 and

**FIGURE 4.7 Between 2000 and 2019, the gap in education spending as a share of gross domestic product (GDP) narrowed between income groups, whereas the gap in health spending as a share of GDP widened**




**a.** Includes a subset of 40 countries (31 high income and 9 upper-middle income).
**Data source:** WHO Global Health Expenditure Database, 2022; International Monetary Fund Government Finance Statistics database; World Bank, World Development Indicators database.

6. Empirical evidence on the income elasticity of long-term care is inconclusive. While there may be some excess cost of care as income rises, in most scenarios, it is presumed to be zero *[14]*. Accordingly, the faster growth in social protection spending than in income may be explained by parameter variations in other components of social protection spending outside non–long term care components, policy choices or some combination therein. Given that between 2000 and 2019, social protection spending appears to have grown much faster than income across a subset of high and upper-middle income countries, further research on this issue would be valuable

7. While education spending as a share of GDP may have narrowed in some instances, the gap in the level of per capita spending widened between all income groups.

2019. The difference in health spending, both in per capita terms and as a share of GDP, widened between high income countries and all other income groups. Indeed, these gaps widened between all income groups, with upper-middle income countries pulling away from lower-middle income countries and lower-middle income countries pulling away from low income countries. The growing inequality in health spending as a share of GDP across income groups was also reflected in widening gaps in spending per capita.

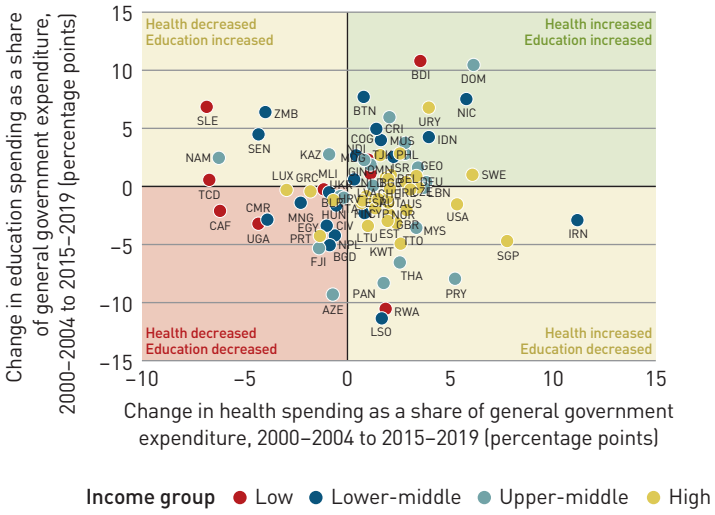
Importantly, the stagnation of health spending per capita between 2000 and 2019 in low income countries means that they have on average fallen much further behind in government spending on health than they were at the turn of the century. This highlights the fundamental importance of external support to low income countries, where governments' capacity for spending on health is low and falling behind.[8]

### *A large proportion of high and upper-middle income countries reported rising health and social protection shares of government spending and declining education shares.*

The priority of social spending within fiscal envelopes varied across income groups. Between 2000 and 2019, health spending as a share of government spending rose 2 percentage points on average in high income countries and 1.6 percentage points in upper-middle income countries.[9] Growth in social protection spending was also generally faster than growth in total government spending in these income groups, rising 2.6 percentage points on average as a share of government spending in high income countries and 2.7 percentage points in upper-middle income countries.

In contrast to health and social protection spending, education spending declined as a share of general government expenditure in high income countries (by an average of 0.7 percentage point) and in upper-middle income countries (by an average 0.5 percentage point). A possible explanation for the respective shifts in the prioritization of health, education and social protection was changing demographics, with ageing populations demanding greater public health and social protection spending and less education spending from governments.

**FIGURE 4.8 In upper-middle and high income countries, education spending as a share of total government spending declined between 2000 and 2019, moving in the oppositive direction that health and social protection spending did; in other income groups, the relationship was less clear**




**Note:** The high growth in health spending in Sweden might be a combination of the increase in and the inclusion of the health part of long-term care spending in recent years.
**Data source:** WHO Global Health Expenditure Database, 2022; International Monetary Fund Government Finance Statistics database; World Bank World Development Indicators database.

In lower-middle and low income countries, trends in health spending were less clear. Lower-middle income countries were evenly split between countries where the share of health spending increased and countries where it decreased, with an average change an increase of 0.6 percentage point (Figure 4.8). In low income countries, health spending as a share of total government spending declined 1.8 percentage points on average, despite nearly half of the countries reporting an increase. Education spending as a share of general government expenditure rose in both lower-middle income countries (0.4 percentage point) and low income countries (0.5 percentage point).

## Social spending during the COVID-19 pandemic

In 2020, the size and scope of government spending shifted considerably across the world in response to the onset of the COVID-19 pandemic. Across the 88 countries analysed in this chapter, per capita government

8. External support from donors (beyond the scope of this chapter), which is targeted towards lower income countries, will help close some of the gap in health spending.

9. A majority of upper-middle income countries (16 of 22) and high income countries (32 of 36) reported faster growth in health spending than in total government spending. A majority (7 of 9 upper-middle income countries and 24 of 31 high income countries) also reported faster growth in social protection spending than in total government spending.

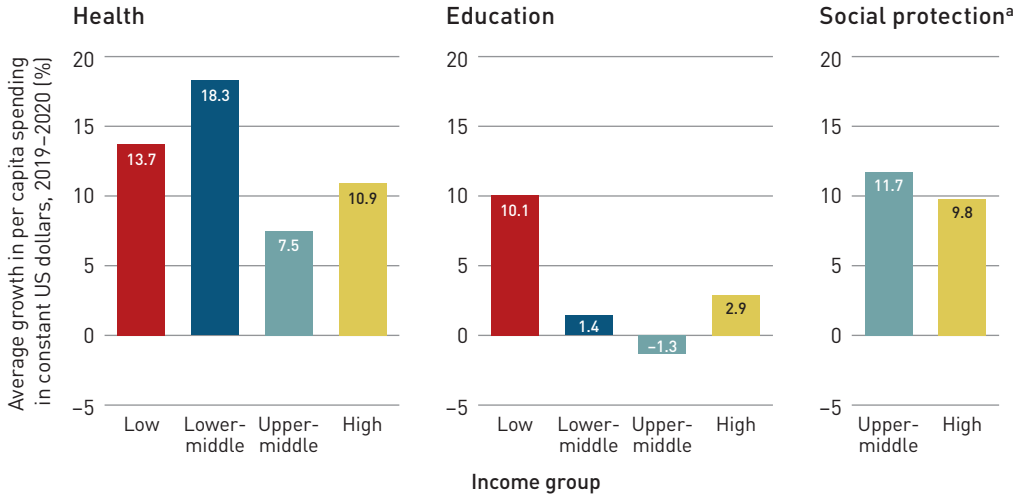
spending increased an average of 13% in 2020. When combined with falling incomes, this rise meant that governments played a much larger role in economies, with an increase in government spending as a share of GDP ranging from 0.9 percentage point in high income countries to 4.6 percentage points in lower-middle income countries.

***During the first year of the COVID-19 pandemic, in high income countries, per capita health and social protection spending rose strongly, while education spending rose modestly. In upper-middle income countries, health and social protection spending rose strongly, while education spending fell. In lower-middle income countries, health spending rose strongly, while education spending remained flat. And in low income countries, both health and education spending rose strongly.***

Central to the large fiscal response in all income groups was a sharp rise in health spending (Figure 4.9; see Chapter 3). In all income groups, the rise in 2020 was considerably larger than the average over the previous five years. In upper-middle, lower-middle and low income countries, the sharp increase in health spending was driven by a combination of the large increase in government spending as a share of GDP and the greater priority given to health within fiscal envelopes. In contrast, in high income countries, the increase was due primarily to higher overall government spending. To facilitate the additional health spending, governments in many countries implemented extrabudgetary arrangements to streamline funding flows to where they were needed, coordinate partners and ensure flexibility in how funds were spent *[21]*.

Consistent with what might be anticipated during a severe economic shock as labour market conditions deteriorate and poverty and inequality increase, governments also sharply increased social protection spending in 2020. Social protection spending rose 11.7% in upper-middle income countries and 9.8% in high income countries (see Figure 4.9). A similar surge in social protection spending occurred in high and upper-middle income countries during the 2008–2009 financial crisis, which led to sharp contractions in economic output, particularly in high income countries (Figure 4.10).[10] In both income groups, however, the average increase in social protection spending during the first year of the pandemic was larger than the initial response to the financial crisis. Indeed, in addition to the coincident rises in health and social protection spending in upper-middle

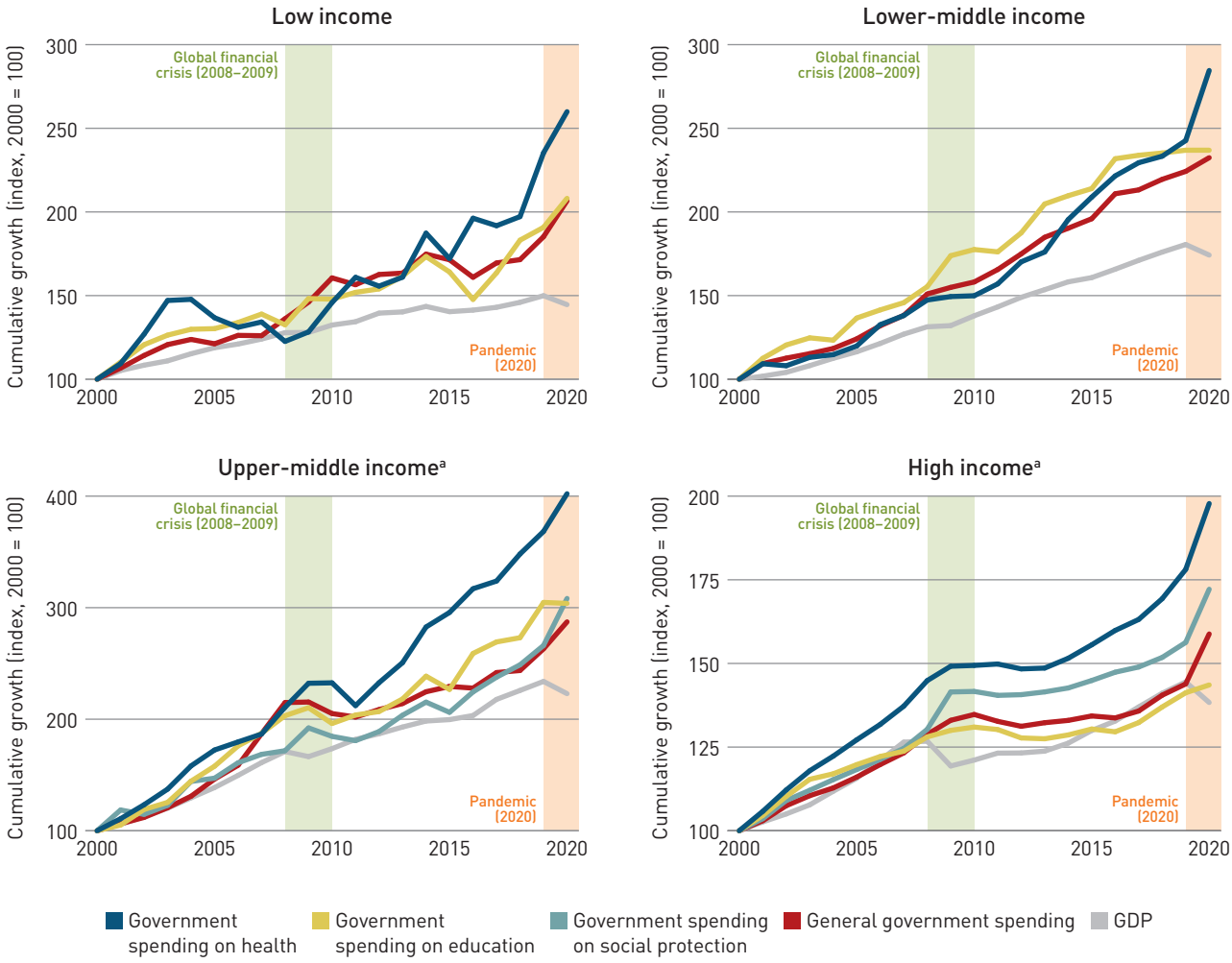
**FIGURE 4.9 Health and social protection spending substantially increased in the first year of the COVID-19 pandemic**




**a.** Includes a subset of 39 countries (30 high income and 9 upper-middle income). Singapore was excluded from the social protection average because its data for 2020 need to be validated.
**Data source:** WHO Global Health Expenditure Database, 2022; International Monetary Fund Government Finance Statistics database; World Bank World Development Indicators database.

10. Indeed, for all income groups, the fiscal response during the first year of the pandemic—measured as the rise in real per capita government spending—was larger than the initial response to the financial crisis in 2009.

**FIGURE 4.10 In the first year of the COVID-19 pandemic, both health and social protection spending rose sharply in all income groups as part of a strong fiscal response**




**a.** Includes only upper-middle and high income countries with all components of social spending (health, education and social protection). Singapore was excluded from the averages because its 2020 data on social protection spending need to be validated.
**Note:** Cumulative growth was calculated using spending in constant (2020) national currency units. The conversion from current values to constant values was made using the gross domestic product deflator.
**Data source:** WHO Global Health Expenditure Database, 2022; International Monetary Fund Government Finance Statistics database; World Bank World Development Indicators database.

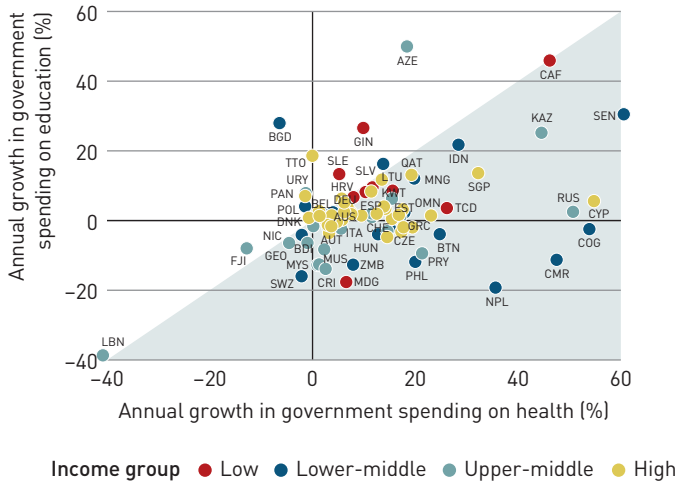
income countries, the fiscal response to the pandemic in many countries was notable for the coordinated nature of social spending, as governments used social protection measures to bolster their pandemic response.[11]

In contrast to health and social protection spending, growth in education spending in 2020 was more subdued. This was widespread, with per capita health spending increasing more than per capita education spending in 77 of 88 countries analysed (see countries in the shaded area of Figure 4.11). Only in low income countries did per capita education spending increase substantially, by 17.3%, which was still less than the rise in health spending (24.6%).[12] In upper-middle

11. Aspects of the welfare system, such as wage subsidies and other income support, were used to address the economic effects of job and income losses and to support stay-at-home rules and other nonpharmaceutical interventions to stop the spread of the virus. Importantly, some aspects of the broader fiscal response to the economic dislocation of COVID-19 (on businesses, for example) will not be captured in the social protection spending measure, meaning that it provides only a partial view of the way governments responded to the challenges in the first year of the pandemic.

12. The large increase in education spending in low income countries was driven by two large outliers: Central African Republic and Guinea. Excluding them reduces the average increase for low income countries to 8.6%, which is still well above the average of the previous five years.

**FIGURE 4.11 Per capita health spending rose more than per capita education spending from 2019 to 2020 in all income groups**




**Note:** In countries in the shaded area, per capita health spending increased more than per capita education spending; in countries in the unshaded area, per capita education spending increased more.
**Data source:** WHO Global Health Expenditure Database, 2022; International Monetary Fund Government Finance Statistics database; World Bank, World Development Indicators database.

income countries, per capita education spending fell 1.3%.[13]

The different patterns of public education spending in 2020 may reflect the more ambiguous link between the pandemic and education services, with rises or falls in spending possible depending on the measures that countries took during the pandemic. School closures and the shift to remote learning may have reduced the variable costs of providing education (such as food, transport and utilities), but new spending to support alternative forms of learning (such as remote instruction) may have increased public spending on education.

While the pandemic shock is distinct from the 2008–2009 financial crisis—the financial crisis was an economic shock centred mainly on high income countries, and the pandemic was a global health and economic shock—the evolution of the fiscal response during the previous crisis and its aftermath nonetheless offers insights for sustaining health and social spending in the aftermath of the pandemic. In upper-middle income countries health spending rose sharply in 2009 at the outset of the financial crisis—faster than at the start of the pandemic. However, health spending subsequently fell sharply in upper-middle income countries between 2009 and 2011, in line with contracting budgets (see Figure 4.10). This boom-bust cyclicality in health spending in the aftermath of the financial crisis was generally avoided by high income countries because health spending was ring-fenced from the broader fiscal consolidation as economies gradually returned to growth *[22]*. This was a remarkable achievement and provides an example for how other countries can maintain essential services and public heath functions when pandemic stimulus is inevitably unwound.

### *The additional public debt accumulated across all income groups will present a further challenge to sustaining social spending.*

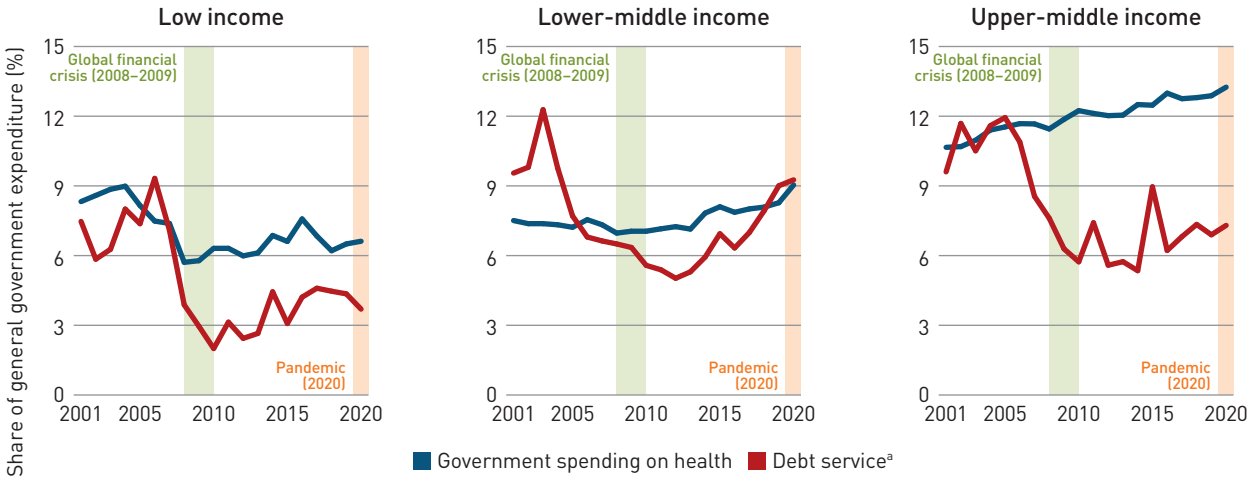
An important dynamic of the global response to the COVID-19 pandemic is the sharp increase in public debt. Across both advanced and emerging economies, gross debt as a share of GDP rose 10–20 percentage points, on average, in 2020, adding to already high debt stocks, according to data from the International Monetary Fund. This sharp rise in debt burdens could have important implications—limiting governments' ability to borrow more and creating additional debt servicing obligations, which would narrow available budget space and affect their ability to maintain (and increase) health and other social spending.[14]

While all income groups are likely to face challenges from the additional debt servicing obligations, the challenge is likely to be particularly acute in low and lower-middle income countries. Debt servicing in these countries has been steadily trending upward since the end of the 2008–2009 financial crisis, in line with the growth in debt (Figure 4.12). In 2019, debt servicing in lower-middle income countries (9.0% of general government expenditure) had already exceeded government spending on health (8.3%). In low income countries, debt servicing absorbed 4.4% of general government expenditure in 2019—nearly two-thirds of the share absorbed by health (6.5%).

13. The result was not driven by a few outliers: 13 of 22 countries reported a drop in per capita education spending.

14. Previous debt incurred by the government must be serviced before government spending can be allocated to other priorities. Formally, this is reflected in the difference between the current fiscal balance, which measures the difference between current revenues and current expenditures, and the primary fiscal balance, which excludes interest payments and is an indicator of current fiscal effort, since interest payments are predetermined by the size of previous deficits *[23]*. Debt obligations are, in turn, shaped by the stock of public debt and the interest rate applied.

**FIGURE 4.12 Additional public debt accumulated during the COVID-19 pandemic will likely place upward pressure on debt servicing obligations**




**a.** Refers to debt service on external debt from the general government sector. Includes only countries with data on debt service.
**Data source:** WHO Global Health Expenditure Database, 2022; World Bank, International Debt Statistics.

In low and lower-middle income countries, the growth in debt servicing between 2010 and 2019 exceeded growth in both general government expenditure and government spending on health, resulting in a rapid increase in the ratio of debt servicing to general government expenditure and to government spending on health.[15]

## Implications

This chapter has shown government spending on health in the context of other components of government social spending: education and social protection. Combined, these sectors account for a substantial and growing share of government budgets, though different country demographic and nondemographic factors shape the relative importance of each type of spending within budgets.

A broad focus on health and social spending is essential to better understand the dynamics of public spending and its impact. When working in concert, health and social spending can impact people's lives in a mutually reinforcing and positive way. They target the social and economic determinants of health and can promote inclusive growth. Health and social protection spending were also central to the pandemic response in upper-middle and high income countries. However, complementarities between health and social spending might not be realized if sectors compete for funding and are not well coordinated.

Data limitations meant that a complete view of social spending was not available for lower-middle and low income countries. Social protection spending has a large role in addressing the economic consequences of the COVID-19 pandemic, so improving the production and availability of national and global data is an urgent priority.

By revealing the shifting patterns of social spending in the prepandemic period and the nature of the fiscal response to the health and economic challenges of the pandemic, this chapter has shown important links between health and other categories of social spending. These links are only likely to become more important over time. For example, nearly all countries are expected to experience an increase in the share of the population over age 60 by 2050, which will place additional demands on health and other social services. Education will remain key to inclusive growth.

However, countries will likely face considerable challenges in sustaining health and other social spending. The economic crisis triggered by the COVID-19 pandemic adds further pressure on governments to increase overall social spending while undermining

15. In low income countries, debt servicing doubled between 2010 and 2019, while general government expenditure increased 15% and health spending increased 61%. In lower-middle income countries, debt servicing increased 83%, much more than the increase in general government expenditure (42%) and health spending (62%).

revenues. Ageing populations are also likely to erode the revenue base for some countries, particularly those that depend on contributory mechanisms to finance health and other social services *[23]*. In addition to the challenge of funding domestic welfare requirements is the need to fund external assistance. For low and lower-middle income countries, external aid will continue to play an essential role in filling the funding gap in social sectors.

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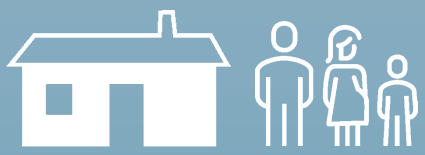


# Annexes

## 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 (2020) |
|---|---|---|---|
| Afghanistan | 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 | 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 | BLR | Europe | Upper-middle |
| Belgium | BEL | Europe | High |
| Belize* | BLZ | Americas | Lower-middle |
| Benin | BEN | Africa | Lower-middle |
| Bhutan | BTN | South-East Asia | Lower-middle |
| Bolivia Plurinational States of | BOL | Americas | Lower-middle |
| Bosnia and Herzegovina | BIH | Europe | Upper-middle |
| Botswana | BWA | Africa | Upper-middle |
| Brazil | BRA | Americas | Upper-middle |
| Brunei Darussalam* | BRN | Western Pacific | High |

| Country name | ISO-3 code | WHO region | World Bank income group (2020) |
|---|---|---|---|
| Bulgaria | BGR | Europe | Upper-middle |
| Burkina Faso | BFA | Africa | Low |
| Burundi | BDI | Africa | Low |
| Cabo Verde Republic of* | CPV | Africa | Lower-middle |
| Cambodia | KHM | Western Pacific | Lower-middle |
| Cameroon | CMR | Africa | Lower-middle |
| Canada | CAN | Americas | High |
| Central African Republic | CAF | Africa | Low |
| Chad | TCD | Africa | Low |
| Chile | CHL | Americas | High |
| China | CHN | Western Pacific | Upper-middle |
| Colombia | COL | Americas | Upper-middle |
| Comoros | COM | Africa | Lower-middle |
| Congo | COG | Africa | Lower-middle |
| Cook Islands* | COK | Western Pacific | High |
| Costa Rica | CRI | Americas | Upper-middle |
| Croatia | HRV | Europe | High |
| Cuba | CUB | Americas | Upper-middle |
| Cyprus | CYP | Europe | High |
| Czech Republic | CZE | Europe | High |
| Côte d'Ivoire | CIV | Africa | Lower-middle |
| Democratic Republic of the Congo | 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 | SWZ | Africa | Lower-middle |
| Ethiopia | ETH | Africa | Low |
| Fiji | FJI | Western Pacific | Upper-middle |
| Finland | FIN | Europe | High |
| France | FRA | Europe | High |
| Gabon | GAB | Africa | Upper-middle |
| Gambia | GMB | Africa | Low |
| Georgia | GEO | Europe | Upper-middle |
| Germany | DEU | Europe | High |
| Ghana | GHA | Africa | Lower-middle |
| Greece | GRC | Europe | High |
| Grenada* | GRD | Americas | Upper-middle |
| Guatemala | GTM | Americas | Upper-middle |
| Guinea | GIN | Africa | Low |
| Guinea-Bissau | GNB | Africa | Low |
| Guyana | GUY | Americas | Upper-middle |

| Country name | ISO-3 code | WHO region | World Bank income group (2020) |
|---|---|---|---|
| Haiti | HTI | Americas | Lower-middle |
| 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 | Lower-middle |
| Iran | IRN | Eastern Mediterranean | Lower-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 | KEN | Africa | Lower-middle |
| Kiribati* | KIR | Western Pacific | Lower-middle |
| Kuwait | KWT | Eastern Mediterranean | High |
| Kyrgyzstan | KGZ | Europe | Lower-middle |
| Lao People's Democratic Republic | LAO | Western Pacific | Lower-middle |
| Latvia | LVA | Europe | High |
| Lebanon | LBN | Eastern Mediterranean | Upper-middle |
| Lesotho | LSO | Africa | Lower-middle |
| Liberia | LBR | Africa | Low |
| Lithuania | LTU | Europe | High |
| Luxembourg | LUX | Europe | High |
| Madagascar | MDG | Africa | Low |
| Malawi | MWI | Africa | Low |
| Malaysia | MYS | Western Pacific | Upper-middle |
| Maldives* | MDV | South-East Asia | Upper-middle |
| Mali | MLI | Africa | Low |
| Malta* | MLT | Europe | High |
| Marshall Islands* | MHL | Western Pacific | Upper-middle |
| Mauritania | MRT | Africa | Lower-middle |
| Mauritius | MUS | Africa | Upper-middle |
| Mexico | MEX | Americas | Upper-middle |
| Micronesia (Federated States of)* | 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 | MOZ | Africa | Low |
| Myanmar | MMR | South-East Asia | Lower-middle |
| Namibia | NAM | Africa | Upper-middle |
| Nauru* | NRU | Western Pacific | High |
| Nepal | 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 (2020) |
|---|---|---|---|
| Nicaragua | NIC | Americas | Lower-middle |
| Niger | NER | Africa | Low |
| Nigeria | 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 | Upper-middle |
| 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 | MDA | Europe | Upper-middle |
| Romania | ROU | Europe | Upper-middle |
| 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 | Lower-middle |
| San Marino* | SMR | Europe | High |
| Sao Tome and Principe* | STP | Africa | Lower-middle |
| Senegal | SEN | Africa | Lower-middle |
| Serbia | SRB | Europe | Upper-middle |
| Seychelles* | SYC | Africa | High |
| Sierra Leone | SLE | Africa | Low |
| Singapore | SGP | Western Pacific | High |
| Slovakia | SVK | Europe | High |
| Slovenia | SVN | Europe | High |
| Solomon Islands | SLB | Western Pacific | Lower-middle |
| South Africa | ZAF | Africa | Upper-middle |
| South Sudan | SSD | Africa | Low |
| Spain | ESP | Europe | High |
| Sri Lanka | LKA | South-East Asia | Lower-middle |
| Sudan | SDN | Eastern Mediterranean | Low |
| Suriname | SUR | Americas | Upper-middle |
| Sweden | SWE | Europe | High |
| Switzerland | CHE | Europe | High |
| Tajikistan | TJK | Europe | Lower-middle |
| Thailand | THA | South-East Asia | Upper-middle |
| The Republic of North Macedonia | MKD | Europe | Upper-middle |
| Timor-Leste | TLS | South-East Asia | Lower-middle |
| Togo | TGO | Africa | Low |

| Country name | ISO-3 code | WHO region | World Bank income group (2020) |
|---|---|---|---|
| Tonga* | TON | Western Pacific | Upper-middle |
| Trinidad and Tobago | TTO | Americas | High |
| Tunisia | TUN | Eastern Mediterranean | Lower-middle |
| Turkmenistan | TKM | Europe | Upper-middle |
| Tuvalu* | TUV | Western Pacific | Upper-middle |
| Türkiye | TUR | Europe | Upper-middle |
| Uganda | UGA | Africa | Low |
| Ukraine | UKR | Europe | Lower-middle |
| United Arab Emirates | ARE | Eastern Mediterranean | High |
| United Kingdom | GBR | Europe | High |
| United Republic of Tanzania | TZA | Africa | Lower-middle |
| United States of America | USA | Americas | High |
| Uruguay | URY | Americas | High |
| Uzbekistan | UZB | Europe | Lower-middle |
| Vanuatu* | VUT | Western Pacific | Lower-middle |
| Venezuela (Bolivarian Republic of) | VEN | Americas | Not available |
| Viet Nam | VNM | Western Pacific | Lower-middle |
| Zambia | ZMB | Africa | Lower-middle |
| Zimbabwe | ZWE | Africa | Lower-middle |

* Population of less than 600,000 in 2020. Population data used in the report are from United Nations, *World Population Prospects*, 2022 revision.

## Annex 2

### Collection of data on health spending on COVID-19 in 2022 and list of countries analysed in chapter 3

Some 53 countries, 29 of them low and middle income, have produced, at least partially, and reported to WHO data on health spending on COVID-19 for 2020 following the System of Health Accounts (SHA) 2011 framework:

- 15 countries,[1] most of them low income and middle income, used the WHO Health Accounts Production Tool to report a complete disaggregation of 2020 health spending by disease and condition, including spending on COVID-19 crossed with other SHA 2011 classifications (financing schemes, sources of revenue, functions, providers, factors of provision and the like). These countries did not report spending by special COVID-19 reporting item, but WHO estimated these aggregates using the health accounts cross table by disease and health care function.[2]
- 34 countries,[3] most of them upper-middle income and high income, reported health spending on COVID-19 using SHA 2011 Joint Health Accounts Questionnaire/Health Accounts Questionnaire special reporting items but did not report spending on other diseases and conditions. Spending on COVID-19 for these countries is available mainly by financing scheme and in some cases by source of revenue and by provider. For most of these countries, reported data are only for government and compulsory insurance financing arrangements.
- 4 countries[4] reported health spending on COVID-19 crossed with all other SHA 2011 classifications (financing schemes, sources of revenue, functions, providers, factors of provision and the like) using the Health Accounts Production Tool but did not report spending on other diseases or special COVID-19 reporting items.

The analysis in this chapter is limited to the 37 countries with comprehensive data on spending from government and compulsory insurance for 2020 and for which treatment, testing and other spending (including governance, surveillance and prevention costs) are reported. Data for the 16 countries not analysed in this chapter are available in the Global Health Expenditure Database (https://apps.who.int/nha/database).

1. Afghanistan, Belarus, Burkina Faso, Congo, Democratic Republic of the Congo, Ethiopia, Montenegro, Nepal, Niger, Nigeria, North Macedonia, Philippines, Senegal, Ukraine and Zimbabwe.

2. WHO made a crosswalk mapping between COVID-19 special reporting items (HC.COV) and spending on COVID-19 by health care function (HC)—for example, spending on COVID-19 in functions HC.4.1 (laboratory services) and HC.6.3 (early disease detection programmes) were mapped to HC.COV.2 (COVID-19 testing and contact tracing). The complete crosswalk is detailed in section 4.1.3 of the COVID-19 spending technical note *[1]*.

3. Australia, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Canada, Chile, Colombia, Costa Rica, Croatia, Cyprus, Czechia, Denmark, El Salvador, Estonia, Finland, France, Germany, Guatemala, Honduras, Hungary, Iceland, Ireland, Kazakhstan, Latvia, Lithuania, Luxembourg, Malaysia, Republic of Korea, Republic of Moldova, Spain, Thailand, United Kingdom and Uruguay.

4. Ghana, Paraguay, Uganda and United Arab Emirates.

## ANNEX TABLE A2.1 Countries analysed in chapter 3

| Country | ISO-3 code | WHO region | World Bank income group (2020) | COVID-19 spending data submission format | Per capita health spending on COVID-19 from government and compulsory insurance, 2020 (US$) |
|---|---|---|---|---|---|
| Afghanistan | AFG | Eastern Mediterranean | Low | HAPT | 1.60 |
| Australia | AUS | Western Pacific | High | JHAQ | 156 |
| Belgium | BEL | Europe | High | JHAQ | 352 |
| Bosnia and Herzegovina | BIH | Europe | Upper-middle | JHAQ | 22 |
| Bulgaria | BGR | Europe | Upper-middle | JHAQ | 47 |
| Burkina Faso | BFA | Africa | Low | HAPT | 2 |
| Canada | CAN | Americas | High | JHAQ | 436 |
| Congo | COG | Africa | Lower-middle | HAPT | 5.90 |
| Costa Rica | CRI | Americas | Upper-middle | JHAQ | 55 |
| Croatia | HRV | Europe | High | JHAQ | 68 |
| Czechia | CZE | Europe | High | JHAQ | 199 |
| Democratic Republic of the Congo | COD | Africa | Low | HAPT | 0.30 |
| Denmark | DNK | Europe | High | JHAQ | 132 |
| El Salvador | SLV | Americas | Lower-middle | HAQ | 29 |
| Estonia | EST | Europe | High | JHAQ | 143 |
| Ethiopia | ETH | Africa | Low | HAPT | 1 |
| Germany | DEU | Europe | High | JHAQ | 249 |
| Ghana | GHA | Africa | Lower-middle | HAPT (only COVID-19) | 31 |
| Honduras | HND | Americas | Lower-middle | HAQ | 4 |
| Iceland | ISL | Europe | High | JHAQ | 156 |
| Ireland | IRL | Europe | High | JHAQ | 324 |
| Latvia | LVA | Europe | High | JHAQ | 44 |
| Lithuania | LTU | Europe | High | JHAQ | 53 |
| Luxembourg | LUX | Europe | High | JHAQ | 507 |
| Nepal | NPL | South-East Asia | Lower-middle | HAPT | 0.60 |
| Niger | NER | Africa | Low | HAPT | 0.10 |
| Nigeria | NGA | Africa | Lower-middle | HAPT | 0.40 |
| Paraguay | PRY | Americas | Upper-middle | HAPT (only COVID-19) | 19 |
| Republic of Korea | KOR | Western Pacific | High | JHAQ | 28 |
| Republic of North Macedonia | MKD | Europe | Upper-middle | HAPT | 19 |
| Senegal | SEN | Africa | Lower-middle | HAPT | 9.80 |
| Spain | ESP | Europe | High | JHAQ | 191 |
| Thailand | THA | South-East Asia | Upper-middle | HAQ | 4.60 |
| Uganda | UGA | Africa | Low | HAPT (only COVID-19) | 9.60 |
| Ukraine | UKR | Europe | Lower-middle | HAPT | 21 |
| United Arab Emirates | ARE | Eastern Mediterranean | High | HAPT (only COVID-19) | 354 |
| Zimbabwe | ZWE | Africa | Lower-middle | HAPT | 0.80 |

HAPT is the WHO Health Accounts Production Tool. JHAQ is the Joint Health Accounts Questionnaire of the Organisation for Economic Co-operation and Development, Eurostat and WHO. HAQ is the WHO Health Accounts Questionnaire.

## Annex 3

### ANNEX TABLE A3.1 Average spending per capita and as a share of gross domestic product (GDP) on components of social spending, by income group, 2019

| | Per capita (constant 2020 US$) | | | Share of GDP (%) | | |
|---|---|---|---|---|---|---|
| Income group | Health | Education | Social protection[a] | Health | Education | Social protection[a] |
| Low | 9 | 20 | — | 1.4 | 3.4 | — |
| Lower-middle | 70 | 119 | — | 2.2 | 4.3 | — |
| Upper-middle | 300 | 346 | 816 | 3.5 | 4.5 | 10.0 |
| High | 2,551 | 2,069 | 6,788 | 5.9 | 5.0 | 15.0 |

**a.** Includes only countries with data on social protection spending.
**Note:** Results are from the 88 countries included in chapter 4.
**Data source:** WHO Global Health Expenditure Database, 2022; International Monetary Fund Government Finance Statistics database; World Bank World Development Indicators database.

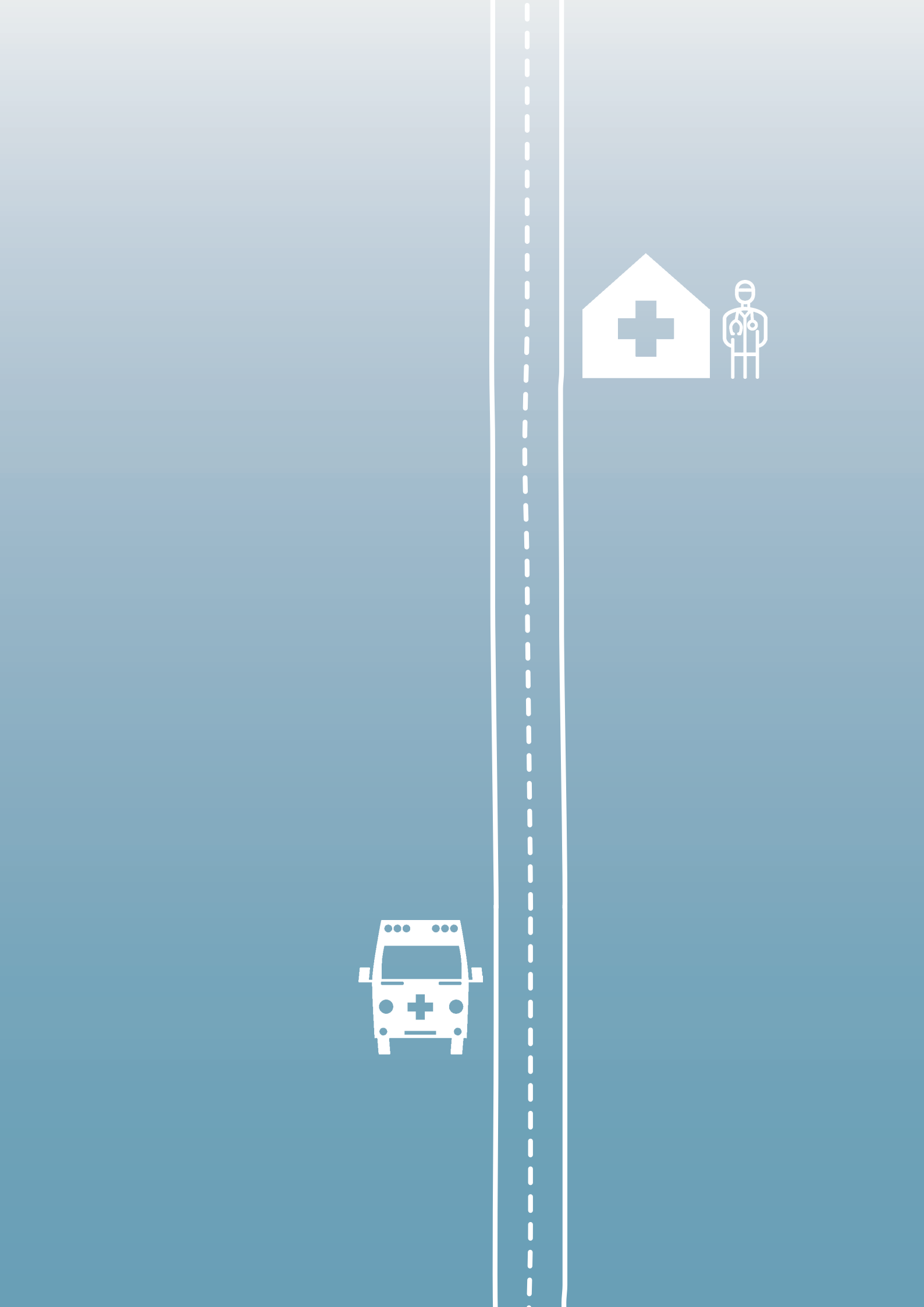
### ANNEX TABLE A3.2 Social spending as a share of general government expenditure, by component and income group, 2019 (%)

| Social spending component | Income group | Average | Maximum | Minimum | Standard deviation | Coefficient of variation (standard deviation/mean) |
|---|---|---|---|---|---|---|
| Health | Low | 6.5 | 9.4 | 3.1 | 2.04 | 0.31 |
| | Lower-middle | 8.3 | 21.4 | 2.2 | 5.27 | 0.64 |
| | Upper-middle | 12.6 | 24.1 | 3.9 | 4.58 | 0.36 |
| | High | 14.2 | 22.5 | 8.4 | 3.84 | 0.27 |
| | Total | 11.6 | 24.1 | 2.2 | 5.10 | 0.44 |
| Education | Low | 16.1 | 35.0 | 9.8 | 7.48 | 0.47 |
| | Lower-middle | 16.5 | 24.0 | 9.3 | 3.44 | 0.21 |
| | Upper-middle | 15.4 | 26.4 | 8.1 | 5.23 | 0.34 |
| | High | 12.2 | 18.1 | 8.0 | 2.47 | 0.20 |
| | Total | 14.4 | 35.0 | 8.0 | 4.59 | 0.32 |
| Social protection[a] | Upper-middle | 28.8 | 35.4 | 15.1 | 6.57 | 0.23 |
| | High | 35.7 | 45.2 | 5.6 | 8.22 | 0.23 |
| | Total | 34.1 | 45.2 | 5.6 | 8.32 | 0.24 |

**a.** Includes only countries with data on social protection spending.
**Note:** Results are from the 88 countries included in chapter 4.
**Data source:** WHO Global Health Expenditure Database, 2022; International Monetary Fund Government Finance Statistics database; World Bank World Development Indicators database.

## Reference

1. WHO. Tracking COVID-19 health expenditure using the System of Health Accounts Framework. Technical note, version June 2022. Available from: https://apps.who.int/nha/database/DocumentationCentre/GetFile/59926621/en



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