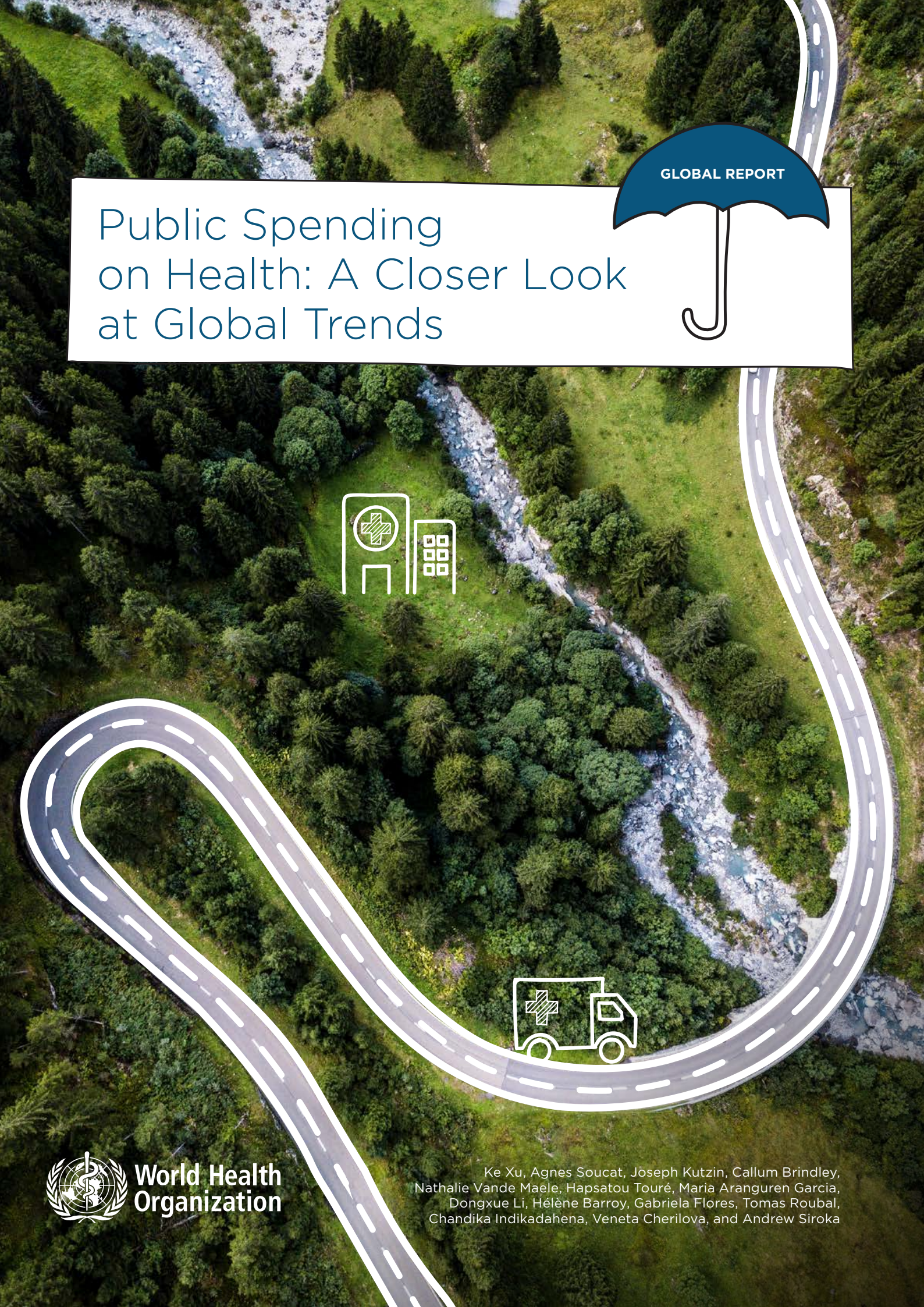


# Public Spending on Health: A Closer Look at Global Trends

World Health Organization

Ke Xu, Agnes Soucat, Joseph Kutzin, Callum Brindley, Nathalie Vande Maele, Hapsatou Touré, Maria Aranguren Garcia, Dongxue Li, Hélène Barroy, Gabriela Flores, Tomas Roubal, Chandika Indikadahena, Veneta Cherilova, and Andrew Siroka

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## Contents



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Girls
74
BEACH
& FUN

# Key Messages

## 1. Global trends in health spending confirm the transformation of the world's funding of health services

- Total health spending is growing faster than gross domestic product, increasing more rapidly in low and middle income countries (close to 6% on average) than in high income countries (4%).
- Health system resources are coming less from households paying out-of-pocket and more through pooled funds, in particular from domestic government sources.
- External funding (aid), represents less than 1% of global health expenditure and is a small and declining proportion of health spending in middle income countries, but it is increasing in low income countries.

## 2. Public spending on health is central to universal health coverage, but there is no clear trend of increased government priority for health

- Globally, public spending on health increased as country income grew, but low income countries are lagging behind.
- In middle income countries, average per capita public spending on health has doubled since 2000, as these countries progress in their transition to domestic funding.
- Governments in high income countries increased their allocations to health, even after the economic crisis of 2008–2009.

## 3. Primary health care is a priority for expenditure tracking

- This report contains the first-ever comparable measures of primary health care spending in low and middle income countries.
- Low and middle income countries devote more than half of health spending to primary health care.
- Public spending accounts for less than 40% of primary health care spending.

## 4. Allocations across diseases and interventions differ between external and government sources

- Across a set of aid receiving countries, 46% of external funds for health and 20% of public spending on health went to combat HIV/ AIDS, malaria and tuberculosis.
- External funding to combat HIV/AIDS does not have a clear relationship with national prevalence or income level.
- Immunization spending still relies heavily on external sources of funding in most low income countries.

## 5. Performance of public spending on health can improve

- Service coverage is driven more by income than by the share of public spending in total health spending.
- A larger share of public spending on health in total health spending does not always improve equity in access to health services.
- A health system with higher public spending on health tends to improve financial protection for individuals.

# Overview

Three years after the international community adopted the Sustainable Development Goals at the 2015 UN General Assembly, the global health landscape has been transformed. In the journey towards realizing the ambitious goal of universal health coverage, more countries are expanding benefits, creating institutional arrangements and allocating public funds to expand health services coverage. Countries from all regions and at all levels of income are implementing health financing reforms to expand coverage. The health sector has become one of the main sectors of the global economy, linked to economic growth, demographic change and technological change. The demand for health sector jobs is expanding rapidly, and labour shortages are evident almost everywhere as the supply of health skills trails demand.(1) Now more than ever, this calls for strengthening public policy instruments to shape the expansion of the sector and achieve the goals of universality and equity in health. As more money is devoted to health, the question becomes one of better health for the money. Achieving this requires a clearer understanding of spending patterns in relation to the goal of universal health coverage.

This report, which builds on the WHO report New Perspectives on Global Health Spending for Universal Health Coverage,(2) analyses the latest data for 2016 and identifies issues of global relevance. Global spending on health is on a transformation trajectory, with increasing domestic public funding and declining external financing. This report also presents, for the first time, spending on primary health care and specific diseases and looks closely at the relationship between spending and service coverage.

## Confirmation of broad patterns and trends in global health spending

In 2016, the world spent US$ 7.5 trillion on health, representing close to 10% of global GDP. The average per capita health expenditure was US$ 1,000, but half of the world's countries spent less than US$ 350 per person. The patterns and trends identified in last year's report are confirmed by the 2016 data published in WHO's Global Health Expenditure Database. As described in section 1, health spending is growing faster than the overall economy globally as well as in most countries, particularly in low and middle income countries. Despite the growth in low income countries, the gap across country income groups remains wide. The share of spending from prepaid sources is also growing, with a concomitant smaller share coming from direct out-of-pocket payments made at the point of use—both welcome trends.

At the aggregate level, external aid is a small share (less than 1%) of global health spending, and it has declined as a percentage of health spending in middle income countries. However, its share of health spending in low income countries is increasing. As in last year's report, the data suggest fungibility between external aid and public spending on health from domestic sources, particularly in low income countries, where aid was considerable. While aid per capita for health more than doubled across low income countries over 2000–2016, from US$4 to US$10, public spending on health increased only slightly (by about US$3 per capita), and the share of health in overall domestic public spending declined.

As noted in section 2, public spending on health has been growing globally, both in level and as a share of the total health spending. This trend has been driven mainly by growth in real per capita GDP and an increase in overall public spending as a share of that increasing GDP. The prioritization of health in overall domestic public spending was less responsible for these changes, and growth patterns differed across income groups. In low income countries, this share was lower in 2016 (6.8% on average) than it was in 2000 (7.9%), with aid fungibility as a potential cause.

This decline in low income countries was an important contributor to the slower growth, on average, in their public spending on health relative to spending in other country income groups. There was a slight increase (about 1%) in domestic health prioritization in lower-middle income countries, a larger increase in upper-middle income countries (about 2%) and the largest increase in high income countries (3.3%). On average, public spending on health increased in high income countries

immediately after the economic crisis of 2008–2009 faster than overall public spending and certainly faster than GDP, suggesting that countercyclical spending policies were in effect. Of course, for this finding and the other points made above, the averages mask considerable cross-country variation.

## New insights from the report

For the first time, the report analyses data for a subset of countries not only on the sources of spending but also on how the money was used—in particular on primary health care and by specific disease priority and intervention category.

The analysis of primary health care spending (section 3) uses a common health expenditure tracking framework, based on the classifications in the System of Health Accounts 2011, to produce the first comparable and comprehensive tracking of these expenditures derived from actual country data for low and middle income countries. Expenditure tracking for primary health care was a high priority in the context of the 40th anniversary of the Alma Ata Declaration at the International Conference on Primary Health Care and of growing recognition of the importance of strengthening primary health care in achieving universal health coverage.

There were many obstacles to generating these estimates. Perhaps most notable is that countries organize primary health care in different ways, and the System of Health Accounts 2011 classifications do not classify primary health care as such. To get around this problem, the classification of spending by health service function (such as inpatient care, outpatient care and preventive care) was used to construct a methodology for mapping these functions to primary health care.

With the obstacles in mind, and the limitations of having data from only 46 countries acknowledged, the data suggest that more than half of health spending in low income countries goes to primary health care. In addition, less than 40% of this spending is from domestic government sources. This average masks large variation across countries, however.

Section 4 presents estimates of expenditure by disease and specific intervention categories, based on data from 40 countries, 29 of them in the WHO African Region. Sixteen are low income countries, and 24 middle income countries. Given this subset of countries, and as for the primary health care spending estimates, the findings should be treated as preliminary.

The data indicate that nearly half of donor funds for health and about 20% of public spending on health went to combat HIV/AIDS, malaria and tuberculosis. Further, the external funding for HIV/AIDS interventions does not show a clear relationship with national prevalence or income level. About one-third of domestic public spending went towards injuries and noncommunicable diseases, which received comparatively little external funds. The shares of external and domestic sources of health spending for reproductive health were very similar. In contrast, and particularly in low income countries, immunization spending relied heavily on external sources.

Section 5 explores the relationship between health spending patterns and universal health coverage indicators and tracers. This required combining the health spending data with data from the 2017 Global Monitoring Report on tracking universal health coverage. The data show clearly that country per capita income is a key driver of health service use, which is in turn a prerequisite for service coverage. Notably, the analysis suggests that total current health expenditure, not just public spending, is paramount in health service use. This makes intuitive sense, given that out-of-pocket spending is observed only at the point of use. As incomes grow, individuals spend more on health services. However, the extent of financial protection of individuals is closely associated with public spending on health. In each case, the variations around the general trend, particularly at similar levels of income and health spending, support the interpretation that efficiency and, more generally, effective policies make a difference. The universal health coverage outcomes that any country attains are not the inevitable result of simple accounting.

# Chapter 1
# Global trends in health spending confirm the transformation of the world's funding of health services

- Total health spending[1] is growing faster than gross domestic product, increasing more rapidly in low and middle income countries (close to 6% on average) than in high income countries (4%).
- Health system resources are coming less from households paying out of pocket and more through pooled funds, in particular from domestic government sources.
- External funding (aid) represents less than 1% of global health expenditure and is a small and declining proportion of health spending in middle income countries, but it is increasing in low income countries.

[1] Total health spending in this report refers to total current health expenditure; capital expenditure is excluded.

## Total health spending is growing faster than gross domestic product (GDP) and is increasing more rapidly in low and middle income countries (close to 6% on average) than in high income countries (4%)

In 2016, the world spent US$ 7.5 trillion on health, representing close to 10% of global GDP. Health's share of GDP is greatest in high income countries, at around 8.2% on average. For both low and middle income countries, health expenditure is approximately 6.3% of GDP.[2]

Between 2000 and 2016, global spending on health increased every year, growing in real terms at an average annual rate of 4.0%, faster than the 2.8% annual growth of the global economy. Health spending has increased most rapidly in low and middle income countries, at around 6% or more annually on average (Fig. 1.1).[3]

The distribution of health spending globally remains highly unequal. Despite GDP and health spending growing fastest in low and middle income countries, a large gap persists between rich and poor countries. In 2016, median per capita health spending was over US$ 2,000 in high income countries but just a fifth of that (US$ 400) in upper-middle income and one-twentieth of that (US$ 100) in low and lower-middle income countries.

This inequity in health spending is also illustrated by the imbalance between health spending and population. Only 20% of the world's population live in high income countries, and yet these countries account for close to 80% of global health spending (Fig. 1.2). Whereas the top 10 countries spent US$ 5,000 or more per person in 2016, the bottom 10 countries spent less than US$ 30 per person. This inequity has not shown any signs of significant change since 2000.

Figure 1.1: Health spending is growing fastest in low and middle income countries

Average of real growth rate by country income group, 2000–2016

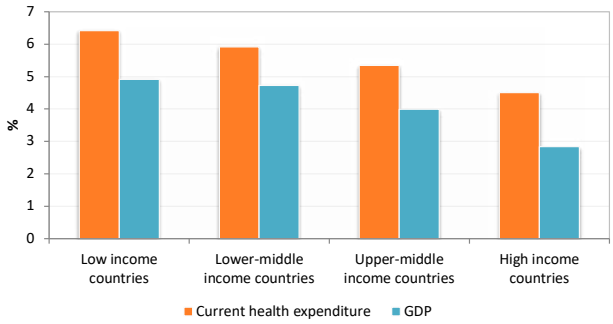
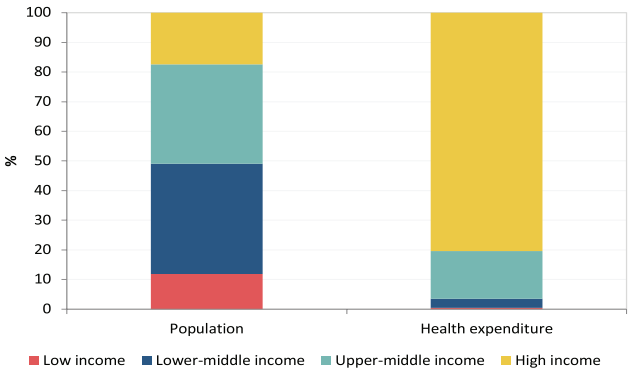



Figure 1.2: More than 80% of the world's population live in low and middle income countries but account for only 20% of global health spending in 2016

Global population and health expenditure distributed by country income group, 2016




## Health spending is coming less from households paying out of pocket and more from domestic government sources

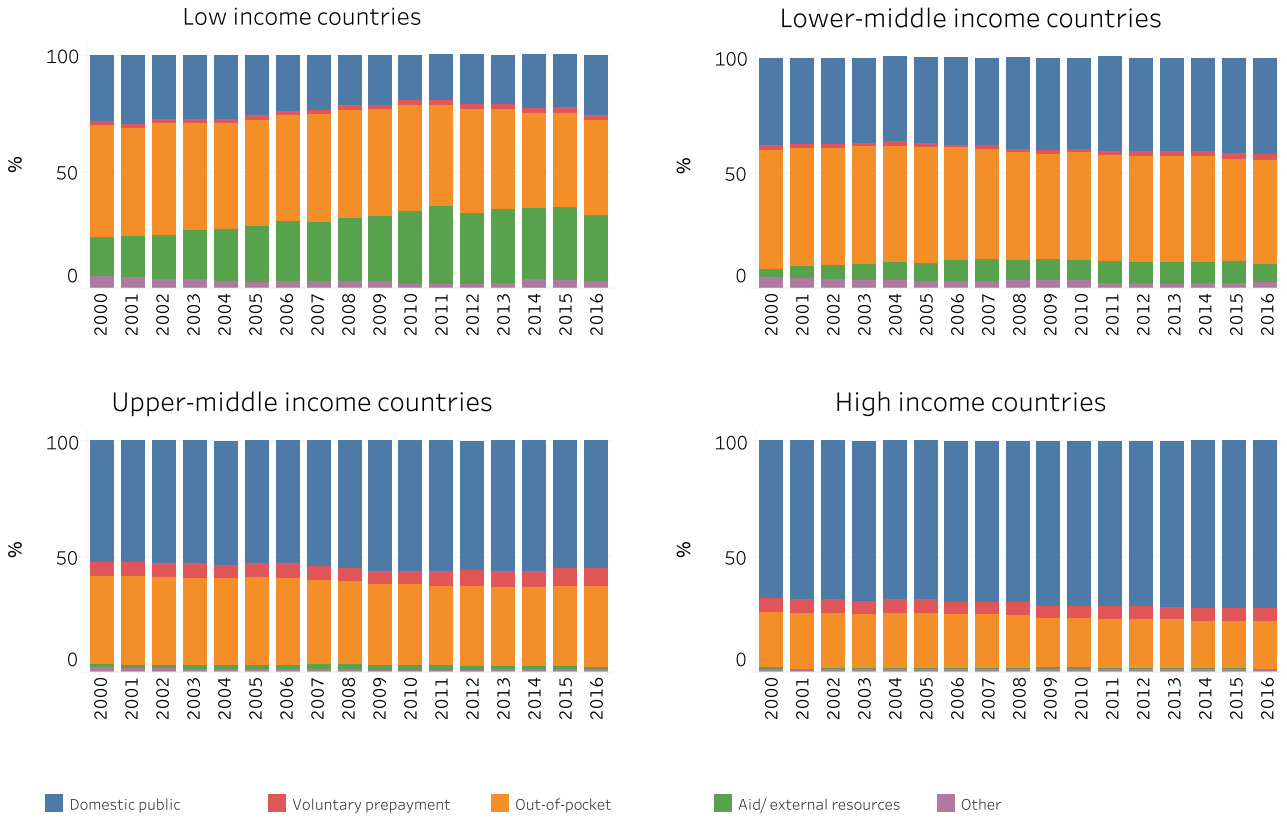
The second trend in the transformation of health spending is the increasing reliance on public funding. This is observable regionally and in middle and high income countries in particular (Fig. 1.3). This trend is a positive development because public

[2] Unless otherwise indicated, unweighted averages are used in this report (i.e., the sum of country values divided by the number of countries) to reflect the country as the core unit of comparison. Countries with a population of less than 600,000, which tend to have unique characteristics that make them outliers, are also excluded from the analysis unless otherwise stated.

[3] Based on compounded annual real growth (CARG) from 2000 to 2016.

Figure 1.3: Countries are relying more on public spending from domestic sources to finance health

Components of health expenditure by sources, 2000–2016




funding sources (taxes, typically) enable revenues to be pooled and spent more equitably and efficiently to meet health needs and reduce the reliance on out-of-pocket spending.

At the same time, reliance on out-of-pocket spending is trending downward globally and in most regions (Fig. 1.4). Dropping from an average of 56% in 2000 to 44% in 2016, out-of-pocket spending as a share of total current health expenditure shows the largest decline in the South-East Asian Region, which includes 11 countries accounting for around 25% of the world's population. The share also declined notably, from 46% to 37%, in the African Region, which includes 47 countries and accounts for almost 15% of the global population. In all regions, the declines were driven by the faster relative increase in spending from other sources rather than by a decline in out-of-pocket spending per person.

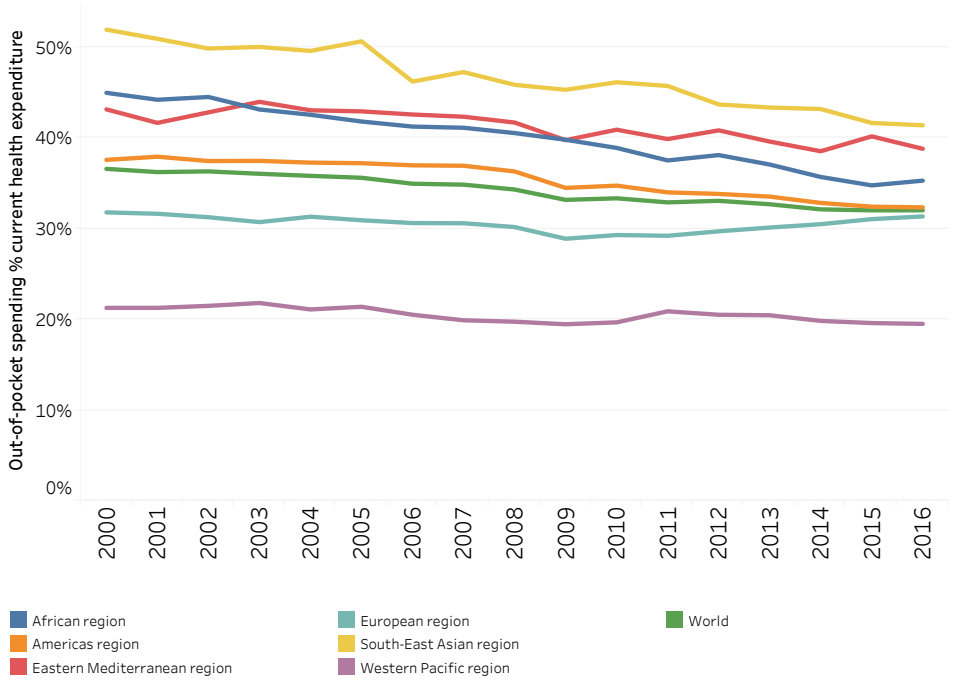
## External funding (aid) represents less than 1% of global health spending and is a small and declining proportion of health spending in middle income countries, but it is increasing in low income countries

The third trend evident in the latest data is external aid's small and declining proportion of health spending for many lower and upper-middle income countries (Fig. 1.5). In 2016, development assistance for health declined and represents less than 1% of all global health spending.

While aid's share of total spending is declining in many middle income countries, it is still increasing in absolute terms in most low income countries. Evidence of fungibility is confirmed, as the data suggest that while aid has resulted in

Figure 1.4: Reliance on out-of-pocket spending is slowly declining across all WHO regions as a share of current health expenditure

Out-of-pocket spending as a percentage of current health expenditure, 2000–2016



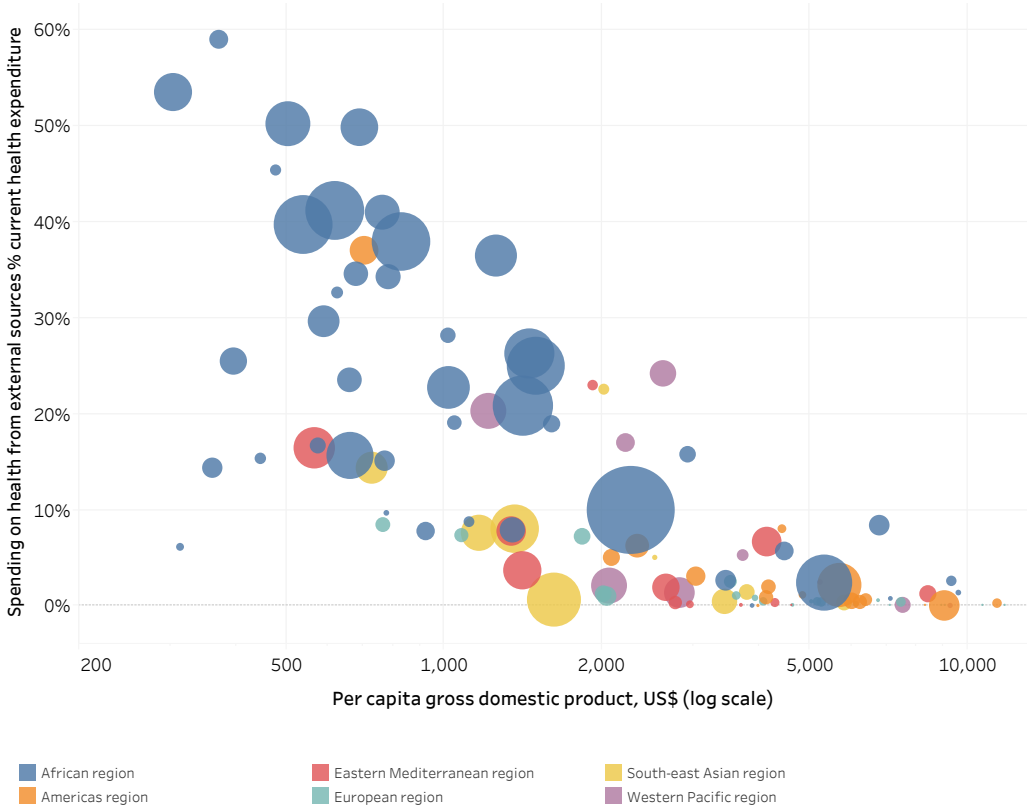

increased health spending, it has also been associated with a reduction in the share of domestic government revenues allocated to health. In low income countries, as the median per capita value of spending on health from external sources increased from US$ 5 in 2005 to US$ 9 in 2016 (Fig. 1.6) the median value of public spending on health as a share of general public spending (indicating prioritization of health) dropped from 7% to 5% (Fig. 1.6).

While the underlying causes for this require country-specific analysis, it is consistent with a review of experience with earmarked tax revenues for the health sector. In particular, where earmarked revenues are large, fungibility (i.e., offsetting declines in allocations from discretionary public revenues) is greater.(3) Notably, fungibility is not observed as a general pattern in middle income countries, where aid is a much lower share of health spending on average (Fig. 1.7).

Finally, the total amount of aid that middle income countries receive does not appear to have fallen as quickly as aid per capita or as aid as a share of health spending. In 2016, lower and upper-middle income countries still received close to 57% of global aid, and certain middle income countries still received large amounts of aid in absolute terms (Fig. 1.8). Therefore, while there is a clear inverse relation between country income levels and the share of external aid as a health funding source, over half of the global allocation of aid for health flows to middle income countries. This suggests that there are factors other than per capita GDP that drive donor decisions.

Figure 1.5: External aid is declining as a share of health spending for many lower and upper-middle income countries, though some still receive large amounts in absolute terms

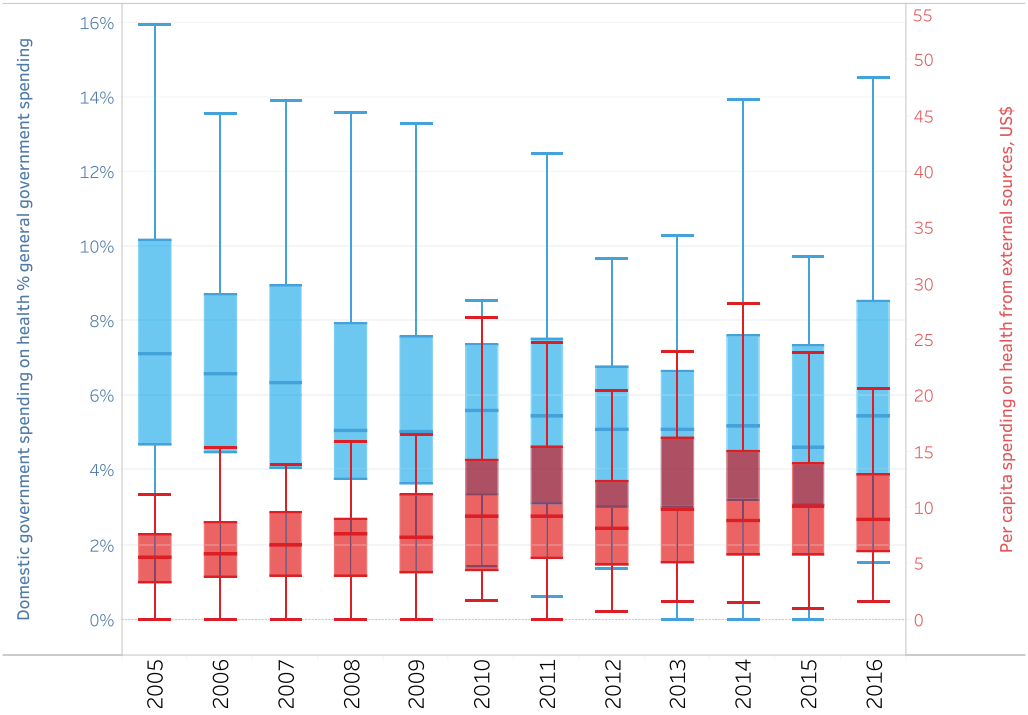
Share of external sources in total health spending and per capita GDP, 2016




Note: Bubble size reflects the total amount of aid to the country in 2016 dollars.

## Figure 1.6: In low-income countries, increasing aid can crowd out public spending on health

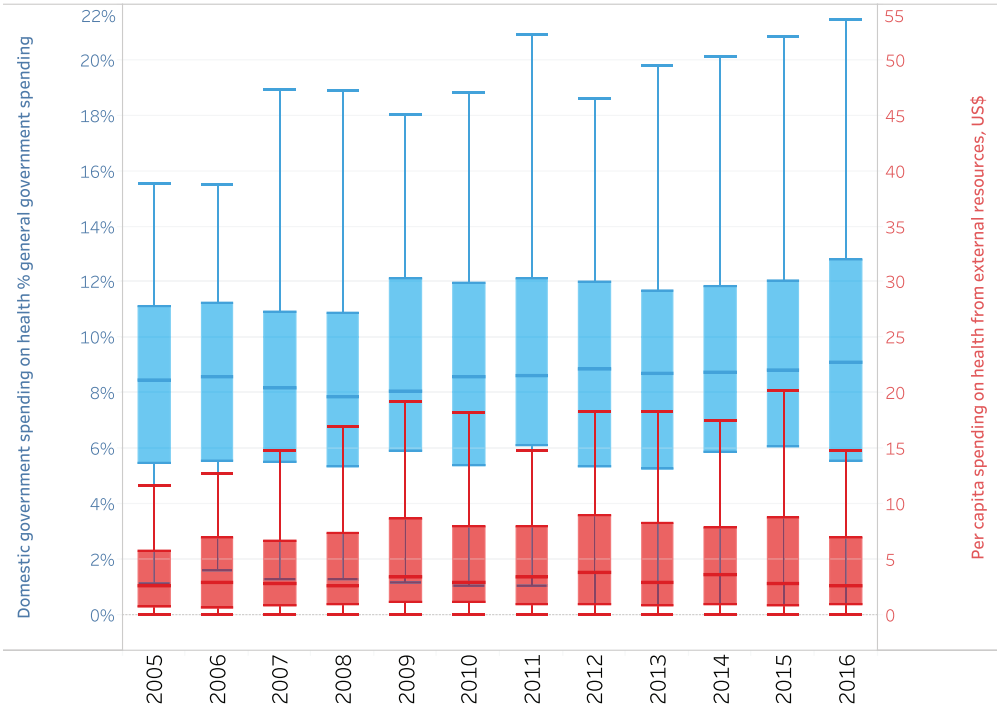
Share of health in total government spending and per capita external aid in low income countries, 2005–2016




Note: Boxplots show the interquartile range (25th–75th percentile) of values with the median marked by a line inside the bar. The lines from the bars extend to the maximum and minimum values with outliers excluded.

## Figure 1.7: Fungibility of health spending is less evident in middle income countries, which rely less on aid

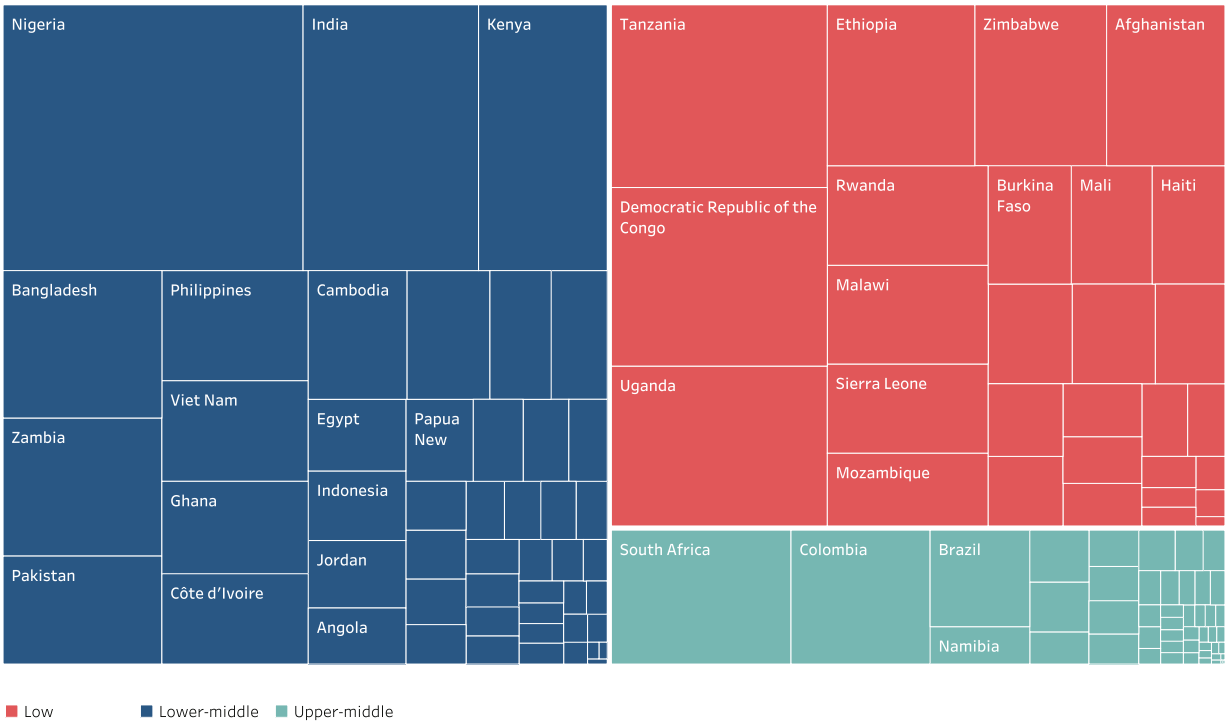
Share of health in total government spending and per capita external aid in middle income countries, 2005–2016




Note: Boxplots show the interquartile range of values with the median marked by a line inside the bar. The lines from the bars extend to the maximum and minimum values with outliers excluded.

Figure 1.8: Middle income countries rely less on aid, but some still receive large amounts in absolute terms, 2016

Relative share of aid by country and income group



# Chapter 2
# Public spending on health is central to universal health coverage, but there is no clear trend of increased government priority for health

- Globally, public spending on health increased as country income grew, but low income countries lagged behind.
- In middle income countries, average per capita public spending on health has doubled since 2000, as these countries progress in their transition to domestic funding.
- Governments in high income countries increased their allocations to health, even after the economic crisis of 2008–2009.

## Globally, public spending on health increased as country income grew, but low income countries lagged behind

Globally, public spending on health from domestic sources[1] increased between 2015 and 2016, following the positive trend observed since the early 2000s. In 2016, public spending on health totalled US$ 5.6 trillion, an increase of 2% in real terms relative to 2015. In per capita terms, public spending on health increased in all country income groups[2] between 2000 and 2016 (Fig. 2.1). However, inequality in public spending on health as a share of GDP remained unchanged across income groups (Fig. 2.2).

In high income countries, public spending on health per capita[3] went from an average of US$ 1,357 in 2000 to US$ 2,257 in 2016, a 66% increase (Fig. 2.1). Middle income countries experienced an even greater rate of increase. In upper-middle income countries, public spending on health per capita in real terms doubled from approximately US$ 130 in 2000 to US$ 270 in 2016. Similarly, in lower-middle income countries, public spending on health per capita rose from US$ 30 to US$ 58 over the same period. However, there are important variations across countries in all income groups. For instance, among middle income countries, 14 countries tripled their public spending on health per capita in real terms over 2000–2016, 28 countries doubled it, and three countries lowered it.

The spending pattern is, however, different in low income countries. In these countries, public spending on health per capita in real terms fluctuated considerably, increased over 2000–2004, decreased over 2004–2012 and began to grow again in 2013. By 2016, public spending on health per capita was about US$ 9 on average, only US$ 2 higher than in 2000 (Fig. 2.1). Public spending on health as a share of GDP also decreased between 2004 and 2015 (Fig. 2.2). The good news is that public spending on health rose in 2016, but it is still too soon to determine whether this pattern will continue.

## In low income countries, economic growth and increased general public spending have not been accompanied by an increased share of public spending on health

Although higher income of countries is typically associated with more fiscal capacity and higher priority, there is no clear pattern across and within country income groups in what drives budget prioritization of the health sector (Fig. 2.3). As countries get richer, the social sectors, including health, typically rise in public spending priority[4] (public spending on health as a share of general public spending).(4) However, this relation does not occur everywhere. Higher income or higher general government revenue and spending do not necessarily imply higher priority on health. Prioritization is largely a collective choice made by societies, generally expressed by politicians empowered by their citizens.

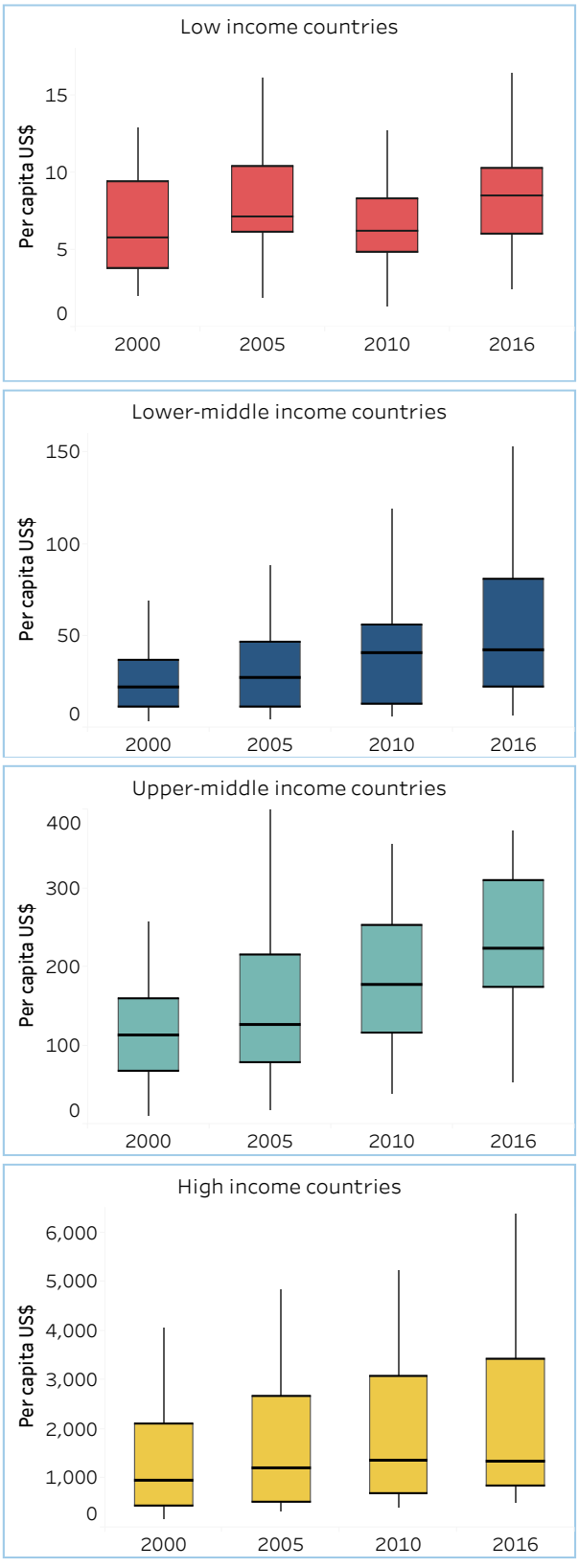
In high income countries, public spending on health over 2000–2016 grew more rapidly than GDP and general public spending (Fig. 2.4), likely responding to higher demand for health care services, ageing populations and technology advances. Public spending on health as a share of GDP rose from 4.5% in 2000 to 6.1% in 2016, while prioritization of health rose from 11.6% in 2000 to 14.9% in 2016. This may also be partially explained by countercyclical policies, particularly after the 2008 financial crisis, when governments tended to prioritize health spending in budgets. This rapid increase in public spending on health brings important challenges related to fiscal sustainability.(5)

In middle income countries, increases in public spending on health per capita tended to follow trends in GDP growth and public spending (Fig. 2.4). In lower-middle income countries, health spending as a share of general government

[1] In this report, *public spending* refers to government spending from domestic sources, including transfers from government domestic revenue (allocated to health purposes) and social insurance contributions.
[2] Based on World Bank income classification in 2016.
[3] Per capita in this chapter refers to per capita in 2016 constant US$.
[4] *Prioritization of health* or *priority to health* refer to public spending on health as a share of general public spending.

## Figure 2.1: Public spending on health increased overall except in low income countries

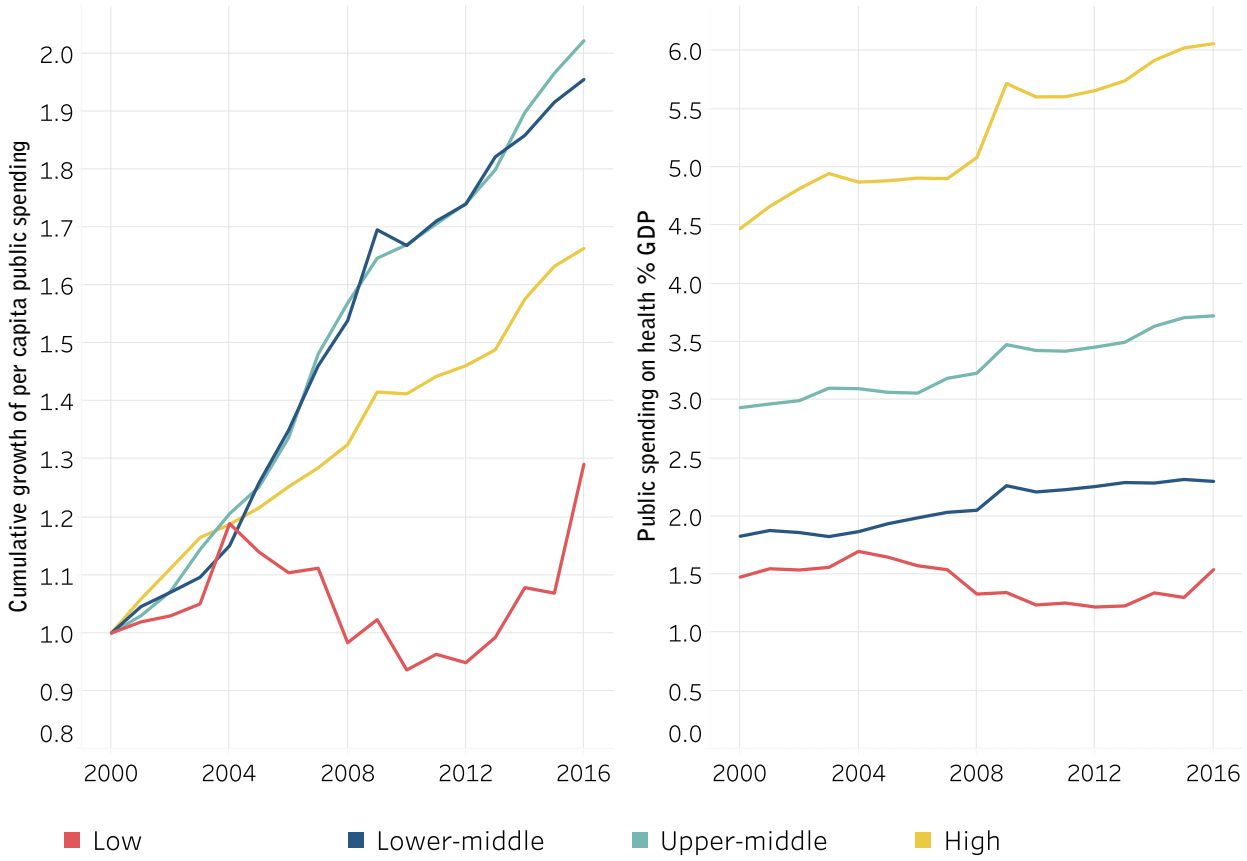
Public spending on health per capita (constant US$), 2000–2016




Note: Boxplots show the interquartile range of values with the median marked by a line inside the bar. The lines from the bars extend to the maximum and minimum values with outliers excluded.

## Figure 2.2: Public per capita spending on health is increasing, except in low-income countries

Trends in public spending on health per capita (left) and as a share of GDP (right), 2000–2016

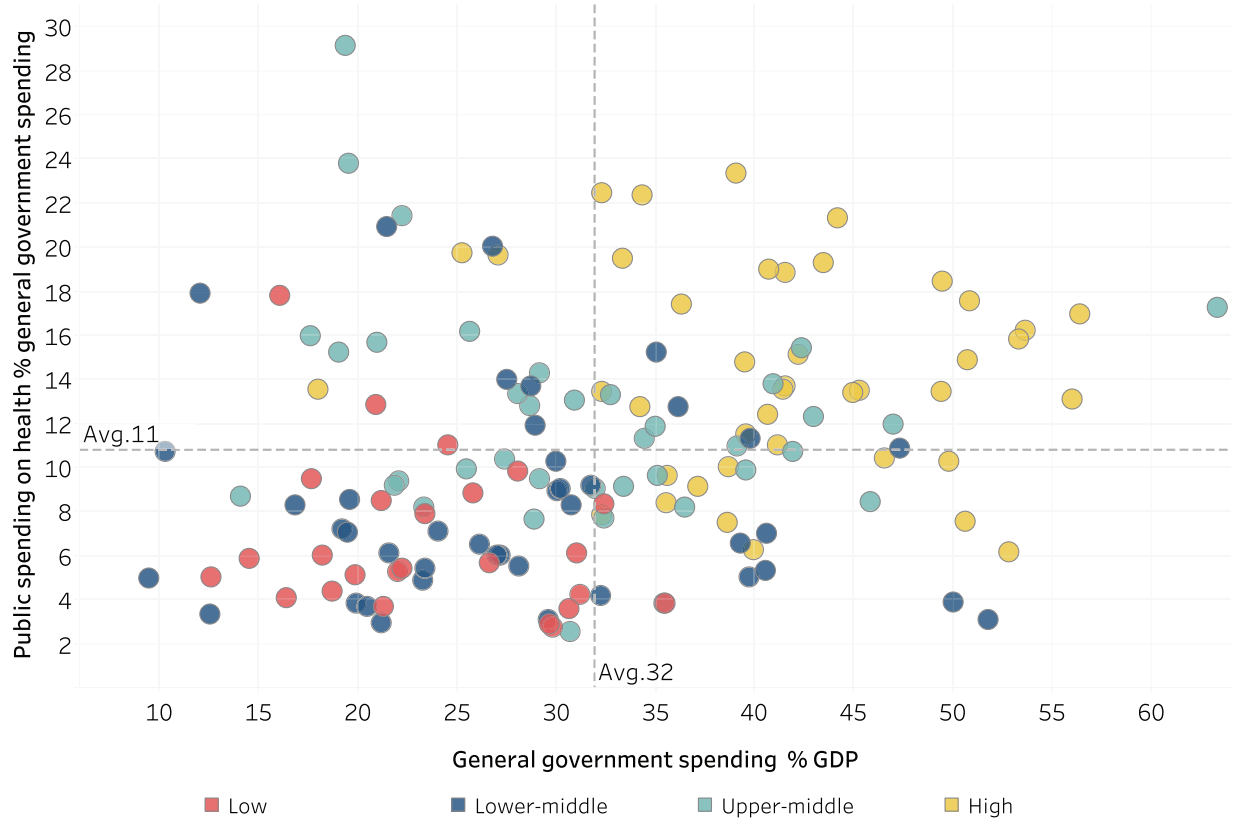



Note: The cumulative growth rate is calculated using the average of per capita public spending on health from domestic sources, in 2016 constant US$, by income group and year. Base year 2000 = 1.0.

spending remained mostly unchanged over the period 2000–2016, at around 8%, while public spending as a share of GDP increased from 24.6% to 28% (Table 2.1 and Fig. 2.5). Thus, it appears that, on average in middle-income countries, it was income growth and fiscal expansion that drove increases in public spending on health, with budget prioritization for health playing a very limited role.

In low income countries, economic growth and more public spending were not accompanied by higher allocations for health. Despite steady growth in GDP and public spending, public spending on health as a share of general public spending declined from 7.9% in 2000 to 6.8% in 2016 (Figs. 2.4 and 2.5 and Table 2.1). This may be attributable to increases in external aid for health. Governments that received high levels of external funding for health tended to prioritize health less in their spending from domestic sources. However, health prioritization increased sharply in 2016. Ongoing tracking is needed to determine whether this is the start of a new trend.

Figure 2.3: Overall public spending and prioritization of health vary across and within country income groups




## Middle income countries are transitioning to domestic funding of health

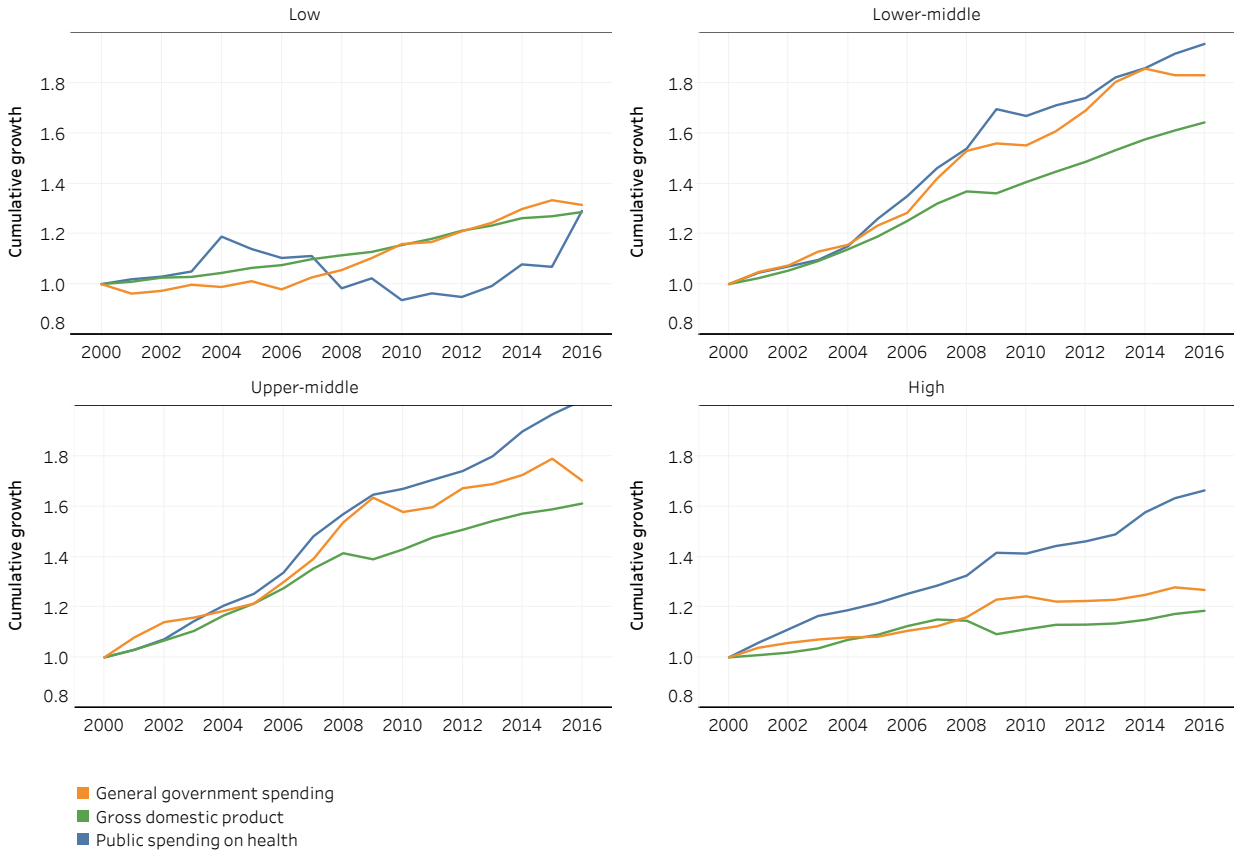
In all developing countries, the transition to domestic government funding of health is under way. The roles of external and domestic funding are evolving, with the proportion of domestic government funding of health rising. In upper-middle income countries, external aid has been declining since 2008, and domestic government funding, which constitutes the largest share of funding for health, has increased from an average of US$ 207 per capita in 2008 to nearly US$ 270 per capita in 2016. In lower-middle income countries, as external aid rose on average from US$ 2.6 per capita in 2000 to US$ 6.8 per capita in 2016, domestic government funding of health per capita also increased significantly, from US$ 30 to US$ 58 during the same period (Fig. 2.6).

In low income countries, however, while donor funding per capita almost tripled from US$ 4 in 2000 to US$ 10 in 2015, domestic funding did not follow a similar path, but rather stabilized at US$ 7–US$ 9 per capita. Aid is additional, but there is some fungibility. in low income countries, budget prioritization is the main instrument in higher income countries.

However, in middle income countries, budget prioritization has not been fully tapped, leaving space for more investments in health. And in low income countries, more attention is needed to prioritizing health in domestic budgets and to better exploiting economic growth to increase health spending as countries transition from external aid.

## Figure 2.4: Changes in priority given to health as country income and public expenditures grew

Cumulative growth of GDP, overall government and public spending on health, 2000–2016




Note: The cumulative growth rate is calculated using the average of public spending on health from domestic sources, general public spending and gross domestic product per capita, 2016 constant US$, by income group and year. Base year 2000 = 1.0.

## Table 2.1: Overall results of public spending on health

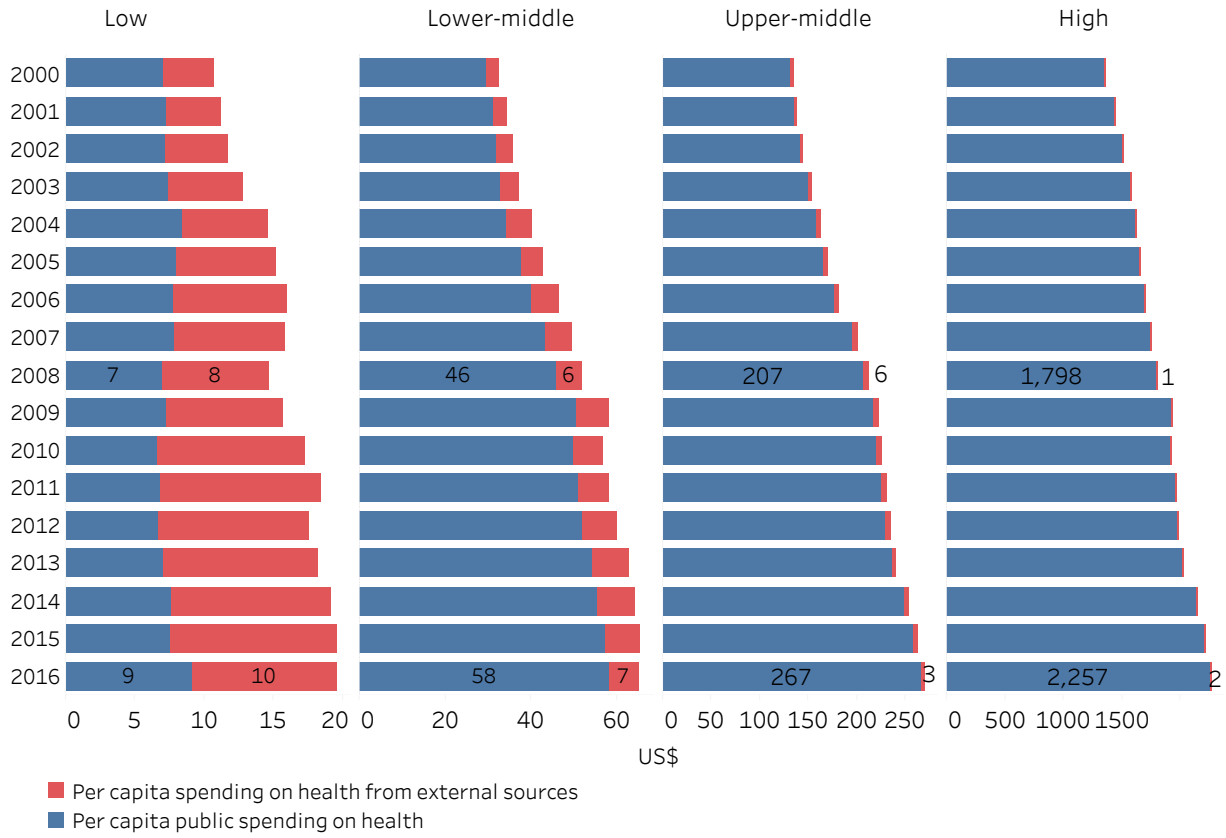
| | Public spending as a percent of gross domestic product (%) | | Public spending on health as a percent of general government spending (%) | | Public spending on health as a percent of gross domestic product (%) | | Per capita public spending on health (constant US$ 2016) | | Per capita gross domestic product (constant US$ 2016) | |
|---|---|---|---|---|---|---|---|---|---|---|
| Country income group | 2000 | 2016 | 2000 | 2016 | 2000 | 2016 | 2000 | 2016 | 2000 | 2016 |
| Low | 20.4 | 23.6 | 7.9 | 6.8 | 1.5 | 1.5 | 7 | 9 | 487 | 626 |
| Lower-Middle | 24.6 | 28.0 | 7.6 | 8.3 | 1.8 | 2.3 | 30 | 58 | 1,465 | 2,407 |
| Upper-Middle | 29.1 | 31.4 | 10.3 | 12.2 | 2.9 | 3.7 | 132 | 267 | 4,381 | 7,058 |
| High | 38.1 | 41.2 | 11.6 | 14.9 | 4.5 | 6.1 | 1,357 | 2,257 | 28,649 | 33,951 |

## Figure 2.5: No clear relation between overall government spending and prioritization of health

Trends in public expending on health as a percentage of overall government spending and overall government spending as a percentage of GDP, 2000–2016

Figure 2.6: Middle income countries are rapidly transitioning to public spending on health

Per capita domestic and external spending by country income groups, 2000–2016

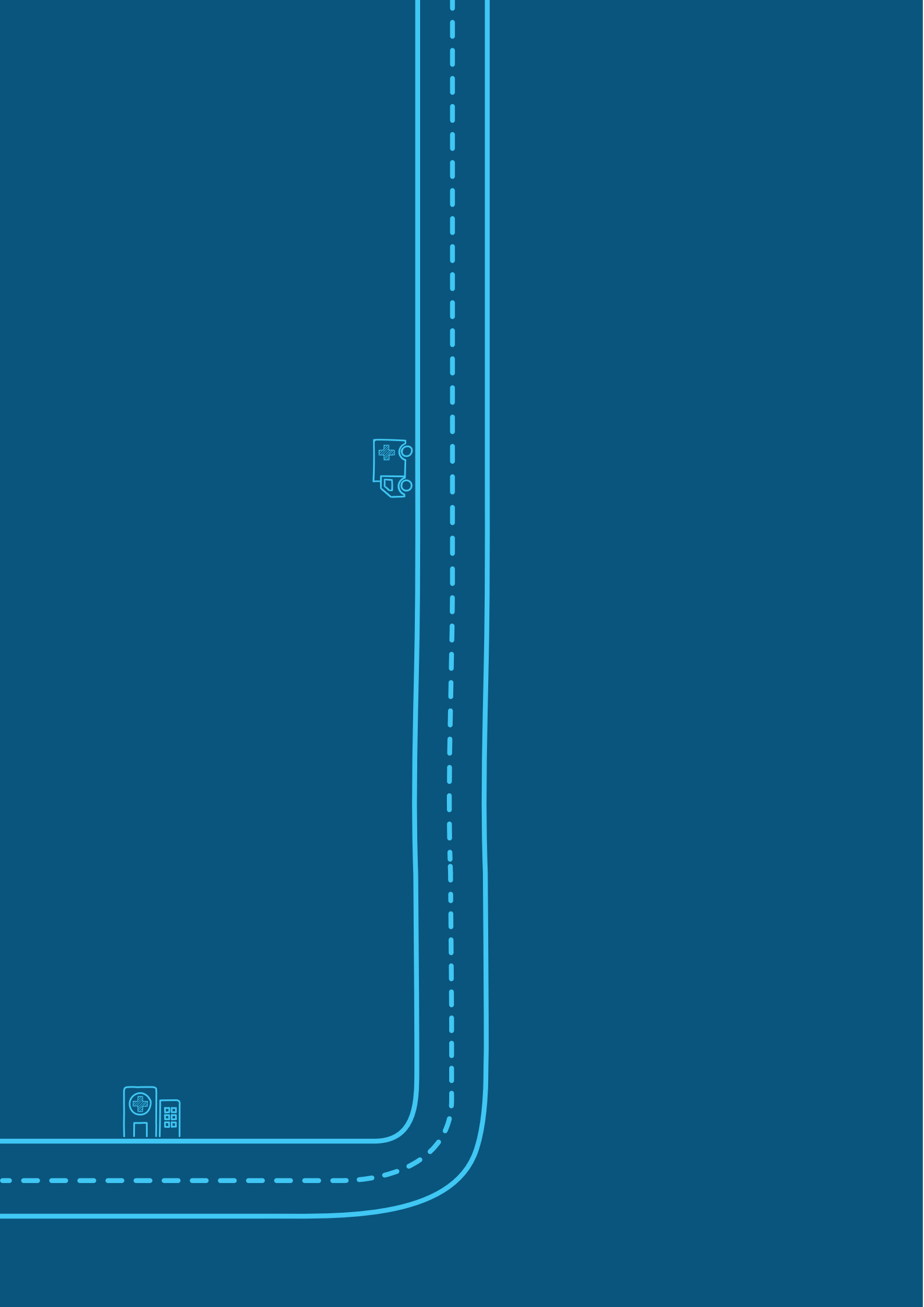



## Implications

Public spending on health is increasing in absolute terms, except in low income countries. The drivers behind this change vary across country income groups. While budget prioritization is the main instrument in higher income countries, economic growth is a predominant driver of public spending on health in middle income countries. However, in these countries, budget prioritization has not been fully tapped, leaving space for more investments in health. In low income countries, more attention is needed to prioritizing health in domestic budgets and to better exploiting economic growth to increase health spending as countries transition from external aid.

# Chapter 3
# Primary health care is a priority for expenditure tracking

- This report contains the first-ever comparable measures of primary health care spending in low and middle income countries.
- Low and middle income countries devote more than half of health spending to primary health care.
- Public spending accounts for less than 40% of primary health care spending.



## This report contains the first-ever comparable measures of primary health care spending in low and middle income countries

Primary health care is a priority among policy-makers and development partners. However, there are many challenges to its measurement, from ambiguity in defining it to differences in accounting frameworks and shortcomings in data quality and availability. At the 40th anniversary of the Primary Health Care declaration, WHO published a first set of data on primary health care spending in low and middle income countries using a standard framework, the System of Health Accounts 2011. The System of Health Accounts 2011, an international accounting system, provides a coherent global standard for producing comparable evidence on primary health care.

To make data as comparable as possible, classifying spending by health care function (the primary purpose of each health care good or service) offers the most consistent approach for monitoring primary health care spending across countries (capital spending is excluded, since it is for future service delivery). The functional classification of the System of Health Accounts 2011 delineates health care activities by type: individual or collective services; basic purpose (curative, rehabilitative, long-term care, preventive); and mode of provision (inpatient, day-care, outpatient and home-based; Table A3.1).

This report presents results using data for 2016 from 46 low and middle income countries. These global results are a first attempt at producing such estimates. As such, they are preliminary. Following their publication, the global definition could be adjusted to better reflect country contexts, and data accessibility and quality will most likely improve as information is used and analysed.

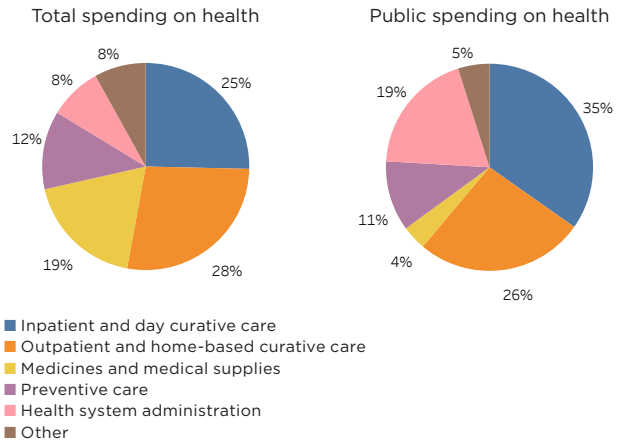
## Inpatient and outpatient curative care and medicines and medical supplies account for more than 70% of health spending

The three largest functional expenditure items of health spending are inpatient and outpatient curative care (including day care and home-based curative care) and medicines and medical supplies (Fig. 3.1). These represent more than 70% of total health spending. Such a high share leaves limited resources for other types of care (such as long-term care and rehabilitative care), for preventive services, for diagnostic services provided outside health care services and for health system administration. Spending shares on these functional categories can vary considerably across countries. For example, spending on outpatient curative care ranges from 12% to more than 50% of total spending on health, leading to very different interpretations. In the low case, data flag the possible underuse of outpatient curative care, while in the high case, data flag the possible overuse. Further investigation is needed to understand how spending by health care functions varies across different service delivery systems and health financing systems. The fact that more than 20% of current health expenditure remains unclassified in some countries also suggests a lack of availability or accessibility of more granular administrative data for producing health accounts.

The distribution by function of public spending on health from domestic sources matches the distribution by function of total health spending closely, except for health system administration and medicines and medical supplies (Fig. 3.1).

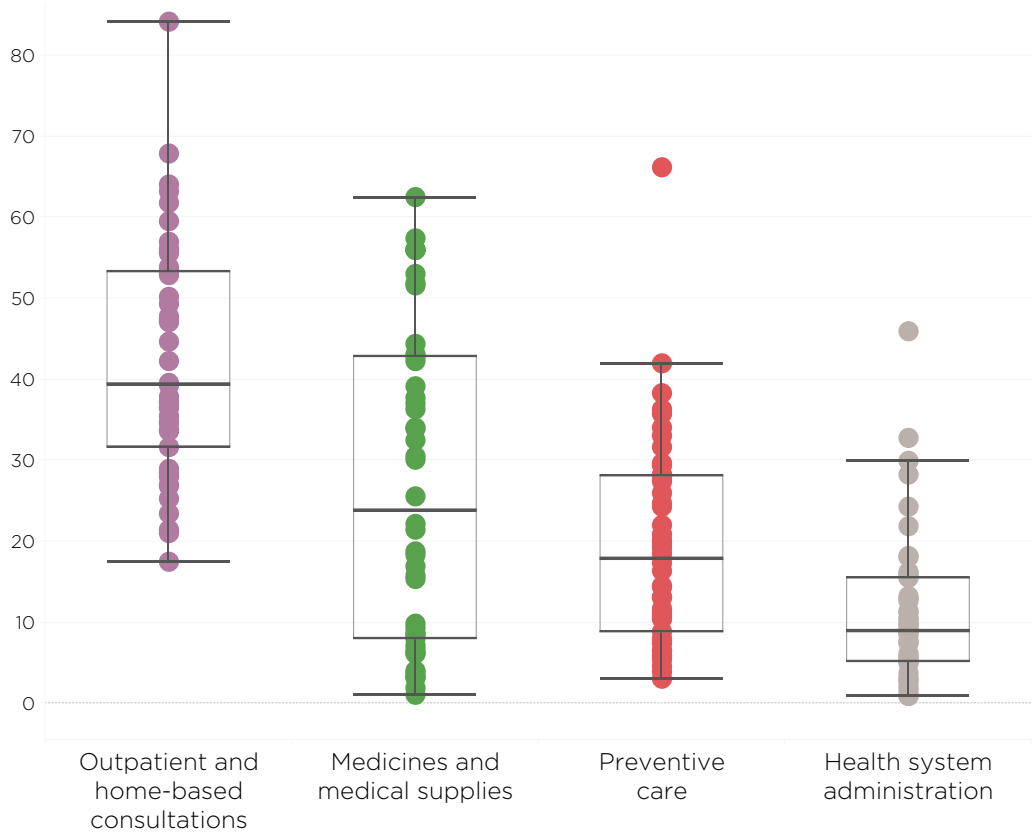
Figure 3.1: Three health care functions together account for more than 70% of health spending

Comparison of the distribution of total and public spending on health by key function, 2016



## Figure 3.2: On average, primary health care spending is driven by outpatient consultations and medicines

Components of primary health care spending, 2016




Note: Boxplots show the interquartile range of values with the median marked by a line inside the bar. The lines from the bars extend to the maximum and minimum values with outliers excluded, whereas outliers are shown as points beyond these lines.

Governments allocate on average more than 70% of health spending to inpatient and outpatient curative care and medicines and medical supplies, about the same share as for total health spending. However, governments spend a larger share on inpatient curative care (35% vs 25% for total health spending) and considerably less on medicines and medical supplies (4% vs 19%). Preventive care represents 11% of public spending on health and 12% of total health spending. The largest difference in shares of health spending is naturally in health system administration. On average, governments allocate 19% of their spending to health system administration, compared with 8% of total health spending.

## Figure 3.3: On average, less than 40% of primary health care is funded by public spending from domestic sources

Primary health care spending in total health spending, 2016

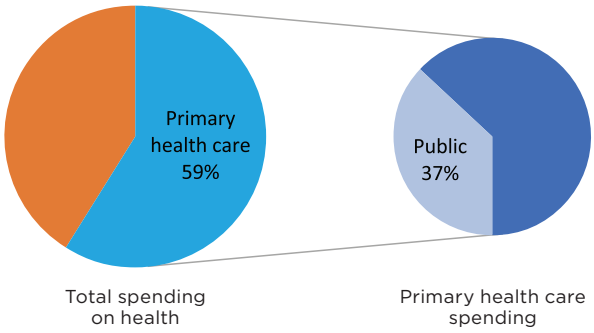
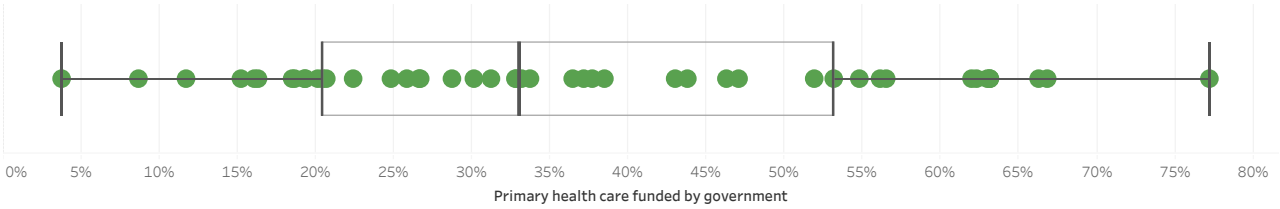


Figure 3.4: The public share of primary health care spending varies considerably across countries

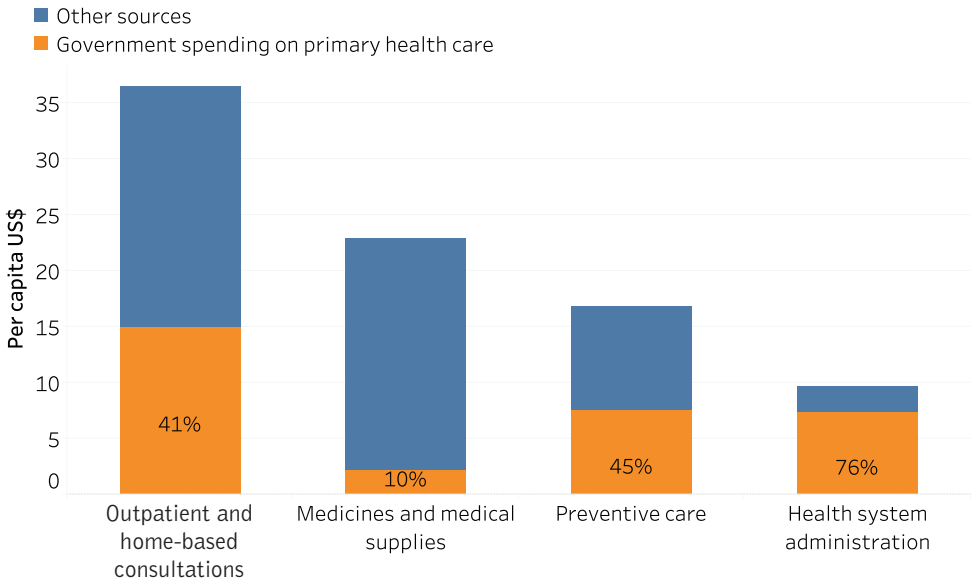
Proportion of primary health care spending funded by government, 2016




Note: Boxplots show the interquartile range of values with the median marked by a line inside the bar. The lines from the bars extend to the maximum and minimum values with outliers excluded.

Figure 3.5: Public spending on primary health care components varies widely across components

Primary health care components by funding source, 2016




## Low and middle income countries devote more than half of health spending to primary health care

Spending on primary health care is estimated by aggregating spending on the following services that are considered primary health care services, or first contact services:(7)

- Outpatient and home-based consultations
  - General outpatient curative care
  - Dental outpatient curative care
  - Home-based curative care
  - Outpatient and home-based long-term health care
- Preventive care
- Part of medicines and medical supplies (80%)
- Part of health system administration (80%)

Among low and middle income countries, more than half of total health system resources are devoted to primary health care–type services. This represents an average of US$ 26 per capita in low income countries, US$ 67 in lower-middle income

countries and US$ 185 in upper-middle income countries. Primary health care spending is dominated by outpatient and home-based consultations, medicines and medical supplies, followed by preventive care services (Fig. 3.2). Medicines and medical supplies represent medical goods provided outside health care services. Without information on how much of the spending on medicines is associated with primary health care, an arbitrary share of 80% was applied in this analysis, signalling that not all the spending on medicines is for primary health care. Considering the importance of this item in primary health care spending, we recommend additional research on these estimates.

Health system administration includes management, regulation and financing of health systems. It is at the heart of any policy development for promoting primary health care. On average, it represents 11% of primary health care spending, but differences across countries are large.

## Public spending accounts for less than 40% of primary health care spending

In low and middle income countries, governments account for less than 40% of primary health care spending (Fig. 3.3). There are huge variations across countries in public spending on primary health care, ranging from 4% to 77% (Fig. 3.4).

Government contributions to the four primary health care components vary widely. For example, average public spending on medicines and medical supplies is only about 10% because these goods are often purchased by nongovernment agents (Fig. 3.5). At the other end of the spectrum, and as expected, governments account for most of the spending on health system administration (76%). The rest is paid by private or external sources. Further investigation would be needed to ensure alignment of the nongovernment-funded activities with government priorities.

For outpatient and home-based consultations—the largest primary health care component—public spending accounts for an average of 41% of total spending. For preventive care, an essential primary health care component, governments account for an average of 45% of total spending, implying that the rest comes from other sources (private and external). While prevention accounts for only 12% of total health spending (Fig. 3.1), it is the underpinning of primary health care policy development. So, it is surprising to see that governments account for less than half of spending on preventive care. More research is needed to understand why government investment in preventive care is so low.

It is also relevant to health policy to note that governments pay for such a small share of medicines and medical supplies (10%). Primary health care is intended to give people access to quality care, including access to medicines, as needed. Governments would be expected to pay for these medicines (which could be represented by the list of essential medicines in some countries) from domestic sources. More research is necessary to determine the proper distribution of spending on medicines and medical supplies between primary health care and other health care and to better understand the share of these goods paid for by government.

# Chapter 4
# Allocations across diseases and interventions differ between external and government sources

- Across a set of aid receiving countries, 46% of external funds for health and 20% of public spending on health went to combat HIV/AIDS, malaria and tuberculosis.
- External funding to combat HIV/AIDS does not have a clear relationship with national prevalence or income level.
- Immunization spending still relies heavily on external sources of funding in most low income countries.

## A common health spending tracking framework was used to identify health spending by disease groups and financing source

Since the 1950s, policy-makers have been interested in knowing how much of health spending goes to specific diseases.(8) Such data can reveal changes in disease patterns and medical practice(9) and lead to a better understanding of the drivers of health spending and of the need for reform.(10,11) Yet despite the importance of this information, comparable cross-country estimates of spending by disease are scarce, limited largely to a 2016 exercise by the Organisation for Economic Co-operation and Development (OECD) for six countries.(12)

With international agreement on the Sustainable Development Goals in 2015, the paradigm shifted from a strictly disease-by-disease approach, with vertically conducted resource-tracking exercises (such as National AIDS Spending Assessment for HIV/AIDS or Joint Reporting Framework for immunization[1]) to a more holistic view of health spending, with disaggregated comparative spending estimates available for all diseases for use at both country and global levels (Box 4.1). (13–15) Over the past five years, WHO and partner agencies[2] led this effort by supporting countries in producing detailed health accounts that enable comparative assessments of relative spending on diseases.

This report presents the first comprehensive picture of health spending by disease category —infectious and parasitic diseases, reproductive health, nutrition deficiencies, noncommunicable diseases and injuries[3]—across 40 countries,[4] 29 of them in African Region.[5] The dataset includes 16 (40%) low income countries and 24 (60%) middle income countries with at least one year of disease-disaggregated health accounts over 2011–2016. In 2016, these countries received 54% of the total aid for health. On average, this accounted for 14% of their total health envelope. The following summary presents general findings, with an emphasis on HIV/AIDS, reproductive health and immunization.

## Across a set of aid receiving countries, 46% of external funds for health and 20% of public spending on health went to combat HIV/AIDS, malaria and tuberculosis

Donors have heavily supported interventions to reduce infectious and parasitic diseases, which accounted on average for 68% of external resources spent on health in low and middle income countries. Three diseases alone—HIV/AIDS (28%), malaria (14%) and tuberculosis (4%)—accounted for 46% of external financing for health. The next largest categories were reproductive health and noncommunicable diseases (9% each; Fig. 4.1). Public spending on health has targeted both communicable and noncommunicable diseases[6] in a comparable way, with about one-third of the spending on diseases going to each category and a smaller share (20%) going to combat HIV/AIDS, malaria and tuberculosis (Fig. 4.2). Donors clearly have less appetite for funding activities specifically earmarked as addressing noncommunicable diseases.(18–21) Governments of low and middle income countries, on the other hand, devote one-third of their own resources to targeted interventions for noncommunicable diseases.

A further analysis by income group revealed little influence of country income level[7] on spending allocations to noncommunicable diseases.[8] This would appear to show that countries are adjusting to the double epidemiological burden of communicable and noncommunicable diseases they are facing, or at least are starting to do so.(22–25)

[1] The National AIDS Spending Assessment is a UNAIDS-developed measurement tool to track countries' health and non-health HIV spending; it describes the flow of resources spent in the HIV response from their origin to the beneficiary populations. The Joint Reporting Framework for immunization is a WHO/UNICEF-led mechanism for collecting data on immunization financing indicators as part of an overall set of immunization indicators designed to measure countries' system performance and trends.

[2] Notably Bill & Melinda Gates Foundation, the Global Fund and Gavi, the vaccine alliance.

[3] WHO/SHA 2011 disease classification is a mix of functional and anatomical classification derived both from the International Classification of Diseases and the Global Burden of Disease nomenclatures. It contains five main broad categories as described in the text.

[4] Armenia, Benin, Bosnia and Herzegovina, Burkina Faso, Burundi, Bhutan, Cambodia, Cabo Verde, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Kyrgyzstan, Lao People's Democratic Republic, Liberia, Malawi, Mali, Mauritania, Mauritius, Namibia, Niger, Nigeria, Philippines, Samoa, Sao Tome and Principe, Senegal, South Africa, Sri Lanka, Tajikistan, Togo, Tunisia, Uganda, United Republic of Tanzania and Zambia.

[5] The other 14 countries are from the following WHO regions: Western Pacific (10%), Eastern Mediterranean (8%), Europe (8%) and SouthEast Asia (4%).

[6] Noncommunicable diseases and injuries categories are lumped together. Noncommunicable diseases represents 27% of public spending on health and 9% of external funds for health. Injuries represents 5% of public spending on health and 1% of external funds for health.

[7] The underlying assumption is that the wealthiest countries were more likely to have transitioned out of communicable diseases.

[8] Not shown here.

Figure 4.1: External aid for health went mainly to communicable diseases

Distribution of aid expenditure by main disease categories, 2016

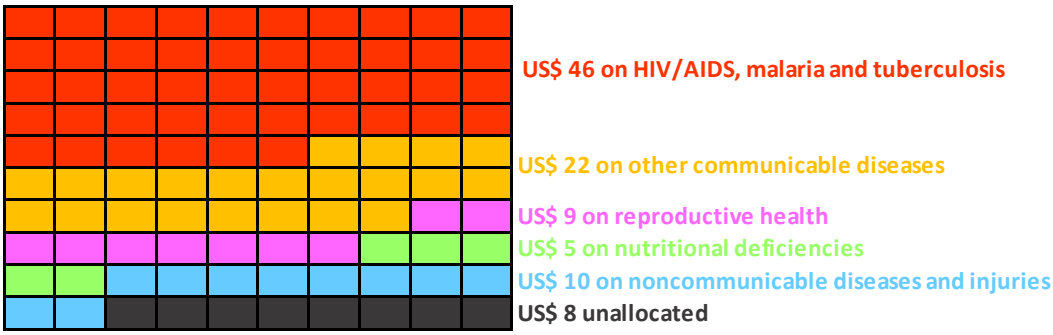
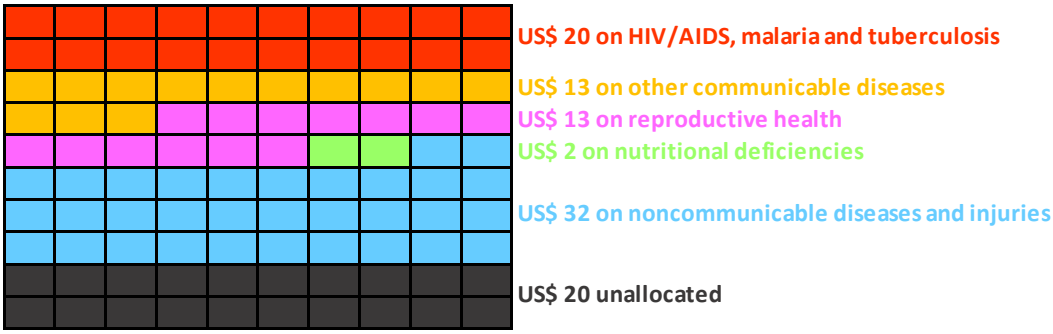



Figure 4.2: Equal shares of public spending on health went to communicable and noncommunicable diseases—one-third each

Distribution of public spending on health by main disease categories, 2016




Overall, shares of spending by disease category have remained relatively stable from both foreign and domestic government sources (Figs. A4.1 and A4.2 in the annex).

## External assistance to combat HIV/AIDS does not appear to have a strong relationship with national prevalence or income level

Of total HIV/AIDS and sexually transmitted disease spending, 54% derived from external funding compared to 21% contributed from governments. Analysis shows spending from external sources is not strongly related to either HIV/AIDS prevalence or national income (Fig. 4.3).

Some middle income countries received more aid to combat HIV/AIDS than did low income countries. Spending from external sources varied widely across countries with similar prevalence levels of 1% or less, from less than US$ 100 per person living with HIV to almost US$ 800. The reasons behind these large differences, particularly whether they arise from conscious political decisions or from

### Box 4.1 Diseases in the System of Health Accounts 2011

WHO uses the System of Health Accounts 2011 framework to track spending by disease. Overall country health spending is distributed among five mutually exclusive categories— infectious and parasitic diseases, reproductive health, nutrition deficiencies, noncommunicable diseases, and injuries —using a top-down approach. Spending amounts include the full range of provision costs—drugs, services and human resources—incurred at both the service delivery point, where health care services are produced and consumed, and centrally for governance of the system. This means that, unlike other tracking exercises (such as for primary health care, described in section 3), or the recently published "SDG health price tag,"(6,7) health system–related spending is already embedded in the amounts presented by disease and therefore is not discussed separately. Also, in allocating spending amounts, some line items can be directly allocated to a specific disease (for example, drugs such as insulin to diabetes or the salary of midwifes from maternity clinics to reproductive health), whereas others, such as the salary of ministry of health staff, are further distributed across disease categories.

country health system constraints on better targeting of aid, warrant further research.

## Immunization spending still relies heavily on external sources of funding in most low income countries

In most low income countries, immunization programs still rely heavily on external funding (Fig. 4.4).

This is somewhat unexpected as immunization is widely recognized as one of the most cost-effective public health interventions for control of infectious diseases (26,27), and the cost of traditional vaccines is fairly low thanks to advances in medical technology. Many countries provide free access to a specified set of vaccinations to children. Further examination would be useful to understand why governments still do not fund immunization fully. The most likely explanation is that donor funding is focussed largely on newer vaccines.

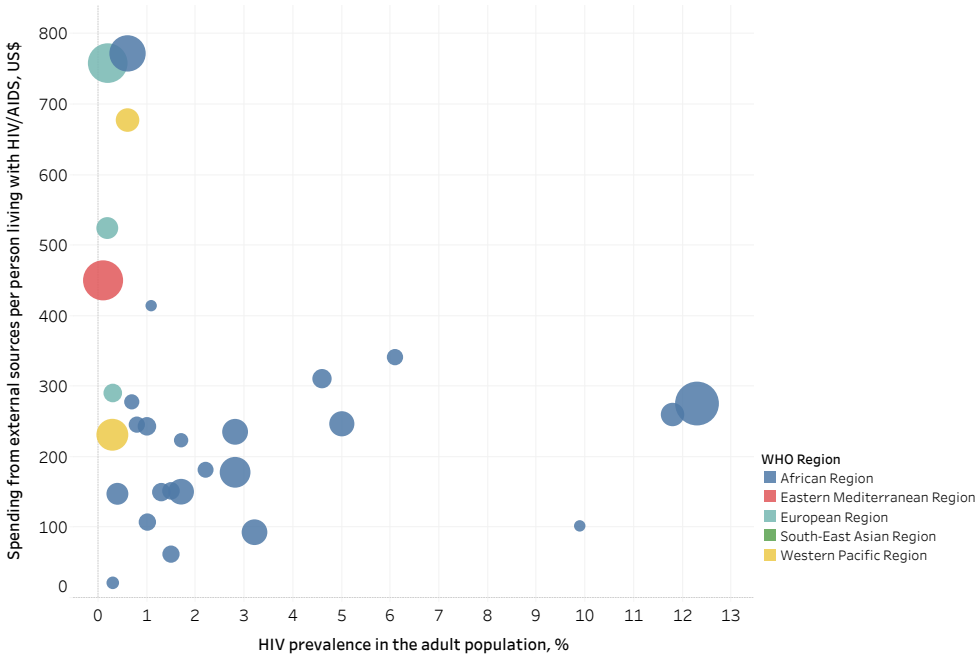
Finally, health-related reproductive services are paid for mainly out of public spending on health from domestic sources (Fig. 4.4).

## Implications

HIV, malaria and tuberculosis absorb nearly half of health spending from external sources, and 68% of health spending from external sources is devoted to communicable diseases. This external funding is often vertically channelled through disease-specific health programs. More surprisingly, immunization in most low income countries still relies heavily on external funding. Changing disease patterns and the transition to domestic financing make it critical to follow closely the evolution of external financing and how it adjusts to the new challenges of the Sustainable Development Goals—including strengthening health systems for universal health coverage and responding to emerging challenges of noncommunicable diseases and pandemic threats.

## Figure 4.3: Spending from external sources to combat HIV/AIDS is not clearly related to national HIV/AIDS prevalence or income

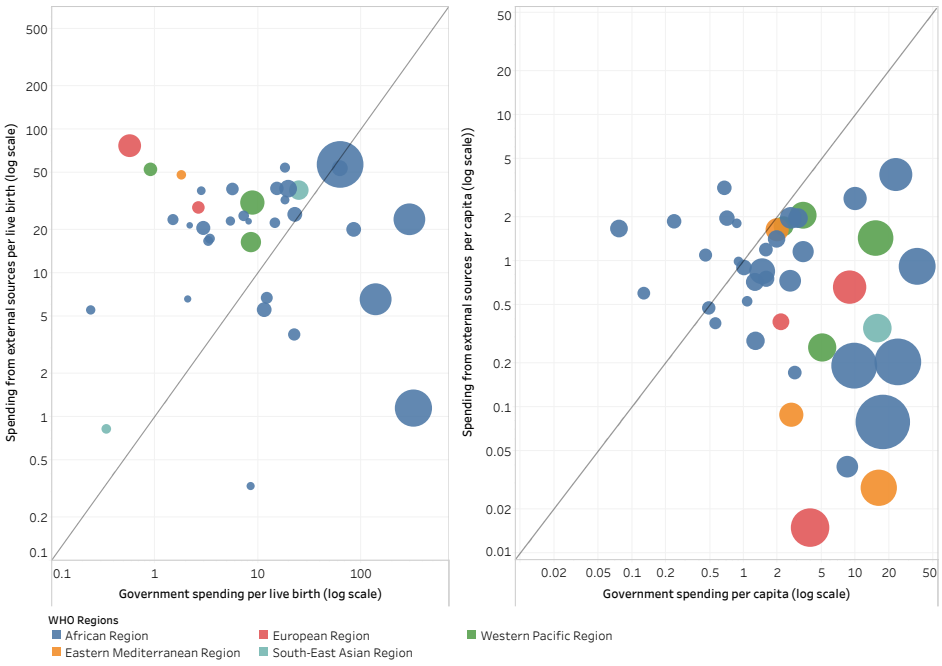
Relationship among HIV prevalence, GDP per capita, and spending on HIV/AIDS from external sources




Note: The size of the bubble represents GDP per capita.

## Figure 4.4: Immunization still relies heavily on external funding in most low income countries, but reproductive health less so

Relationship between external and public spending on immunization (left) and reproductive health (right), 2016




Note: The size of the bubble represents GDP per capita.

# Chapter 5
# Performance of public spending on health can improve

- Service coverage is driven more by income than by the share of public spending in total health spending.
- A larger share of public spending on health in total health spending does not always improve equity in access to health services.
- A health system with higher public spending on health tends to improve financial protection for individuals.

## Universal Health Coverage is defined as all people having access to the health services they need without financial hardship.

The 2017 Global Monitoring Report on tracking universal health coverage established that at least half of the world's population cannot obtain essential health services and that 800 million people spend at least 10% of their household budgets on health care for themselves, a sick child or other family members.(28) For almost 100 million people these expenses are high enough to push them into extreme poverty, forcing them to survive on US$1.90 or less a day.

Progress towards universal health coverage means that more people get the quality health services they need and that the use of those services is less and less associated with financial hardship—that people receiving the health services are still able to afford food and other necessities and do not place their families at risk of poverty.

Health systems have a vital role in achieving progress towards universal health coverage. This involves strengthening health system financing and governance, as well as the organization of the health care workforce, service delivery, health information systems and medicine, and other health product provision.

As a consequence of economic growth in recent years, both governments and households are spending more on health in absolute terms. Public spending on health is essential for achieving the Sustainable Development Goal (SDG) targets for health through sustainably funding common goods and subsidizing services to the poorest segments of society. A health system that relies mainly on high levels of government funding, as well as a high share of public sources in overall health spending, generally provides better and more equitable access to services and better financial protection.(29)

However, access to essential health care varies widely across countries with similar levels of government contribution to the health system. The amount of funding is not the only factor that determines performance. Simply increasing the percentage of public spending on health without effective reform in financing and service delivery arrangements may not yield much progress towards universal health coverage.(29)

This section takes advantage of 2015 data on health service coverage (the UHC index), as published in the 2017 Global Monitoring Report on tracking universal health coverage,(28) and data from the last decade on measures of financial protection. It explores the relationship between public spending on health and three markers of progress in universal health coverage: access to services, equity in access to services and financial protection. The service coverage index, equity in service access index and financial protection index are extracted from the WHO Global Health Observatory database.[1]

## Service coverage is driven more by income than by the public share of total health spending

The relationship between public spending on health and service coverage in 2015 is examined using the UHC index of service coverage. The index consists of 11 tracer indicators representing mostly primary health care services, including maternal and child health, communicable diseases and noncommunicable diseases. The index is truncated at 80%, which most high income countries have achieved.

Countries with a high percentage of public spending as a share of total health spending generally provide a higher level of essential health services—but with large variations in each country income group (Fig. 5.1, left panel). The relationship becomes less clear if the effect of income as a confounding variable is removed (as both observed variables appear to be highly associated with GDP per capita). Once that is done, the share of public spending in total health spending does not seem to independently define the level of essential health coverage (Fig. 5.1, right panel). In other words, countries at the same income level with similar shares of public spending in total health spending perform very

[1] http://apps.who.int/gho/data/node.home.

differently in the level of essential health coverage they provide.

Thus, the large differences in health coverage among countries do not seem to be explained by the mix of health funding sources, but rather by the overall level of health spending (driven by income), both public and private, which drives both increased supply and increased demand. Some countries provide primary health care (a large component of health care) to residents nearly free of cost, while in other countries people have to pay for it mostly out-of-pocket. Whether public spending dominates total health spending is related to country income level (GDP per capita) through its influence on overall fiscal capacity and to the decisions that governments make about the share of public spending to allocate to the health sector. The effectiveness of the public spending is linked mostly to what it buys, how it buys, and to related public policies.

Public spending on health as a share of total health spending is also weakly associated with the density of health workers (Fig. 5.2). The shortage of health workers in low and lower-middle income countries is a large impediment to achieving universal health coverage, (1) and the density of the health workforce is an important determinant of service coverage.

Country income is the main driver of health worker density, highlighting the effect of market forces on the size of the health labour force. Only in high income countries is a larger share of public spending in total health spending associated with more health workers. Public spending on health as a share of total health spending is positively related to the density of health worker only when the effect of income level is not removed. When observations are stratified by country income group, the relationship between public spending and health worker density weakens and becomes less consistent (except among high income countries).

More research is needed into the reasons behind the weak relationship between public spending as a share in total health spending and performance (essential health service coverage) and whether other factors determine the level of essential health coverage. Knowing which public policies shape the performance of public spending is vital for filling gaps in essential health services coverage and setting the path to achieving the SDG health targets. It is essential to identify how public spending, combined with adequate public policies, can better address critical shortages in health workers so that they can improve essential service coverage.

## A larger share of public spending on health in total health spending does not always improve equity in access to health services

A core objective of public spending on health is to reduce inequity in access to services. Equity in service use is measured using the equity index developed in the 2017 Global Monitoring Report on tracking universal health coverage.(2) This index includes seven tracer indicators of reproductive health and maternal, neonatal and child health services. The equity index measures the difference in access to these services between the richest and the poorest population groups in low and middle income countries.

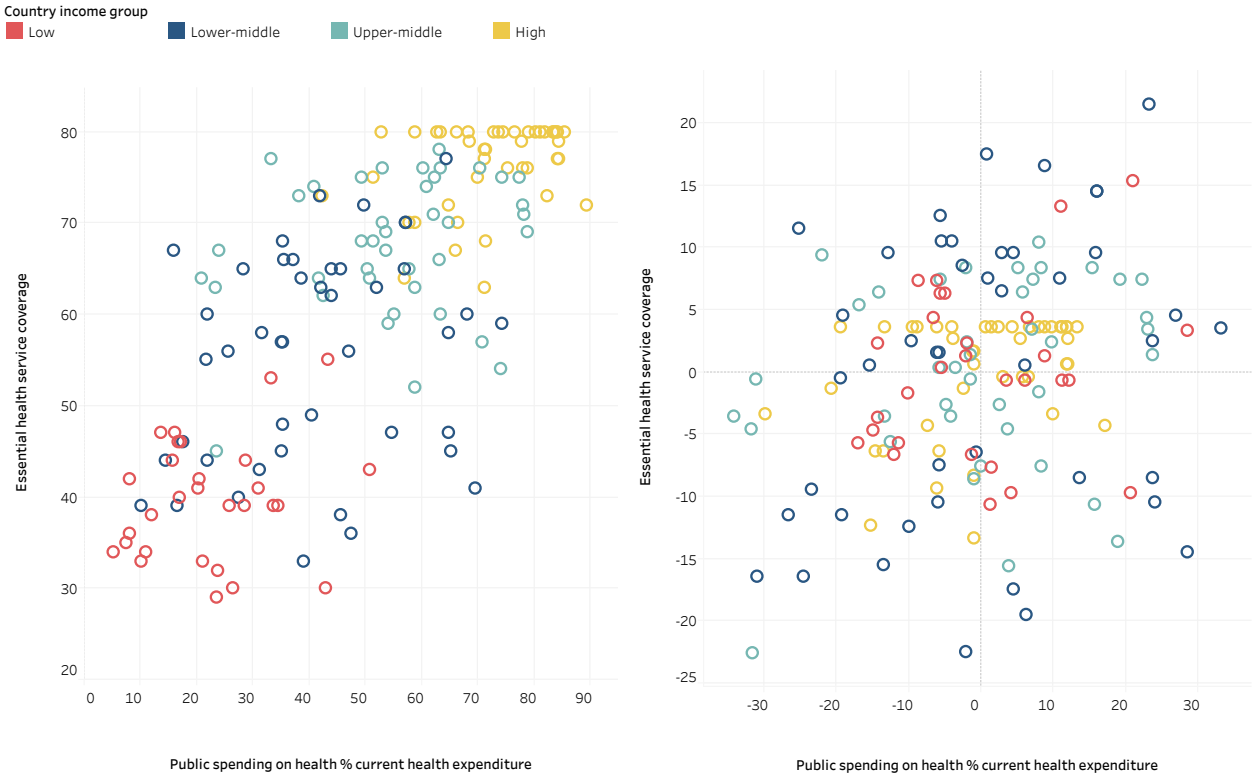
A larger share of public spending on health in total health spending is associated with a smaller gap in service access between the richest and the poorest quintile groups, but with large variations among countries (Fig. 5.3, left panel). The pattern does not change much when the effect of income is removed (Fig. 5.3, right panel). Further in-depth studies would help to understand the choices made among different policy options and the challenges of implementing sound policies.

## Health systems that rely more on public spending tend to have better financial protection

As health systems mature, public spending takes an increasing share while the role of out-of-pocket spending declines. Median out-of-pocket spending on health represents less than 20% of total health spending in high income countries but more than 40% in low income countries. Across

## Figure 5.1: A higher share of public spending on health is associated with better service coverage, but country income largely drives this pattern

Relationship between the share of public spending on health and service coverage index, not adjusted by country income (left) and with adjustment (right)




Source: WHO Global Health Observatory for essential service coverage, latest data available over 2005–2015.
Note: The right side of the figure depicts the partial correlation between essential health coverage and the share of public spending on health in total health spending with the effect of income (GDP per capita) removed. The scatter plot presents the variance in variable values adjusted for differences in income.

countries, private spending (particularly out-of-pocket spending) as a share of total funding declines when public spending as a proportion of GDP increases.

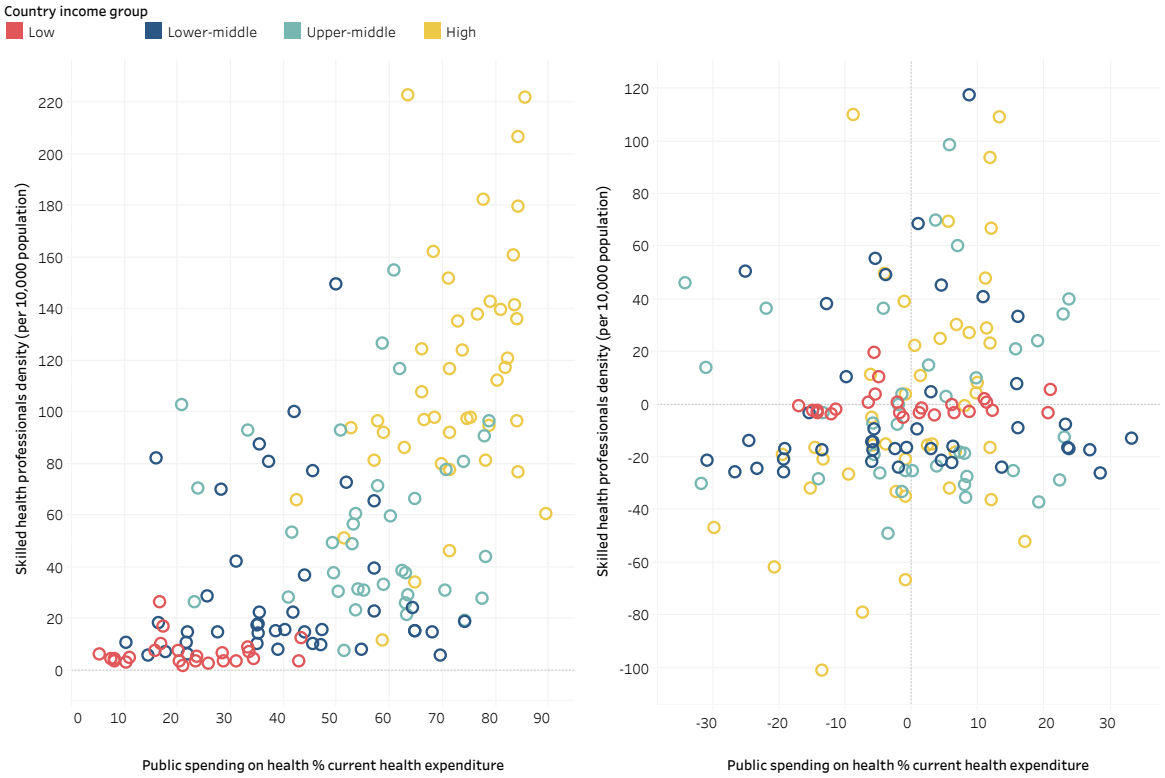
Measuring this shift is not enough to understand how out-of-pocket health spending affects the economic well-being of families. Financial protection must be assessed at the level of the household. For example, within the SDG monitoring framework, people spending more than 10% of their household budget on health are considered to have experienced catastrophic health spending (Box 5.1).

That share of the population is highly variable for any given share of public spending (Fig. 5.4).

Broadly speaking, the incidence of catastrophic health spending across countries tends to be lowest where public spending as a share of country health spending is highest. That association is strongest in high income countries, where public spending on health is also high in per capita terms and as a percent of GDP, and weakest in lower-middle income countries, where absolute levels and GDP shares of public spending on health are much lower. But at no income level does the share of public spending

## Figure 5.2: When the effect of country income is removed, the share of public spending in total health spending is weakly related to health worker density

Relationship between the share of public spending on health and health worker density, not adjusted by country income (left) and with adjustment (right), latest available year within 2005–2015




Source: WHO Global Health Observatory for health workforce density, latest data available over 2005–2015. Note: Health worker density is the number of physicians, nurses and midwives per 10,000 population.

in total health spending fully explain the observed variation.[2]

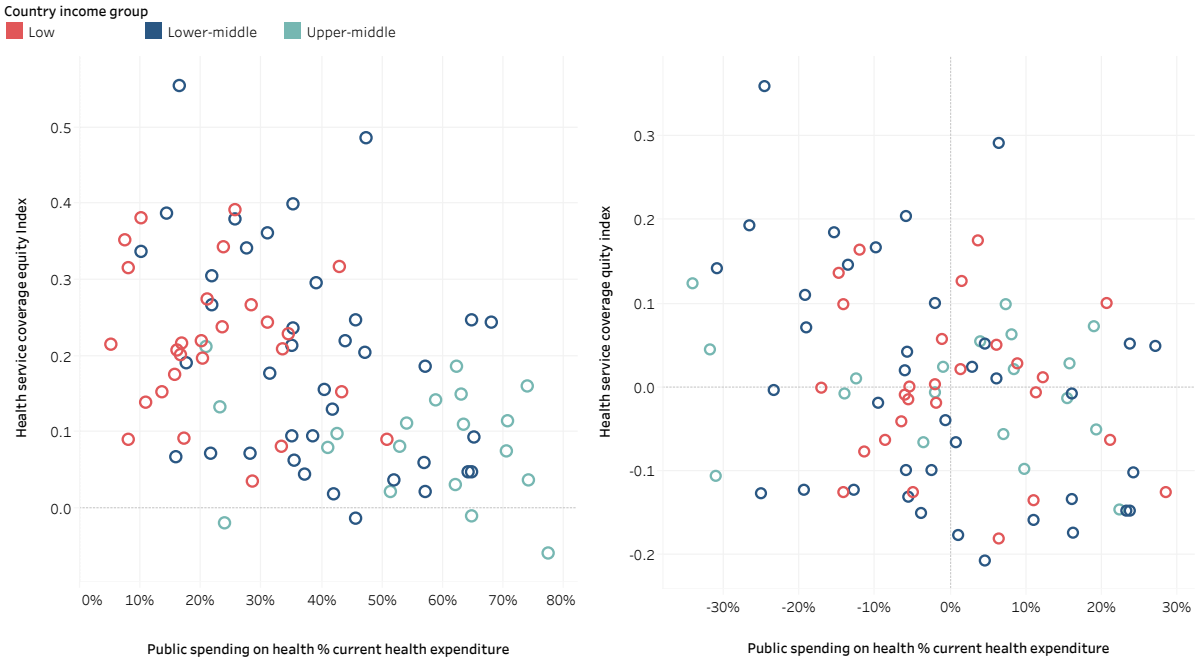
Across all country income levels, there is great variation in financial protection at similar shares of public spending in total health spending. The incidence of catastrophic health spending is negatively correlated with the share of health spending that is channelled through compulsory pooled funding arrangements, such as government budgets and social health insurance agencies.(30)

Generally, in low and middle income countries, more public spending on health as a share of total health spending is also associated with less impoverishment resulting from out-of-pocket spending. Here again, for any given share of public spending, there is considerable variability across countries. However, the correlation with public spending is stronger for impoverishment than for

[2] Based on *R*-squared results from a pooled ordinary least squares regression controlling for public spending on health as a share of total current health expenditure, period fixed effect (dummy variable indicating the 2010–2016 period) and income group = 0.15. *R*-squared from income group–specific regressions controlling for period fixed effects (dummy variable indicating the 2010–2016 period) equal to 0.08 in low income countries, 0.02 in lower-middle income countries, 0.16 in upper-middle income countries and 0.47 in high income countries.

## Figure 5.3: Shares of public spending in overall health spending and equity in access to health services are not strongly related

Relationship between the share of public spending on health and health equity, not adjusted by country income (left) and with adjustment (right)




Source: WHO Global Health Observatory for essential service coverage, latest data available over 2005–2015.
Note: The right side of the figure depicts the partial correlation between essential health coverage and the share of public spending on health in total health spending with the effect of income (GDP per capita) removed. The scatter plot presents the variance in variable values adjusted for differences in income.

catastrophic spending, showing the likely role of public spending on health as a social safety net (Fig. 5.5).[3]

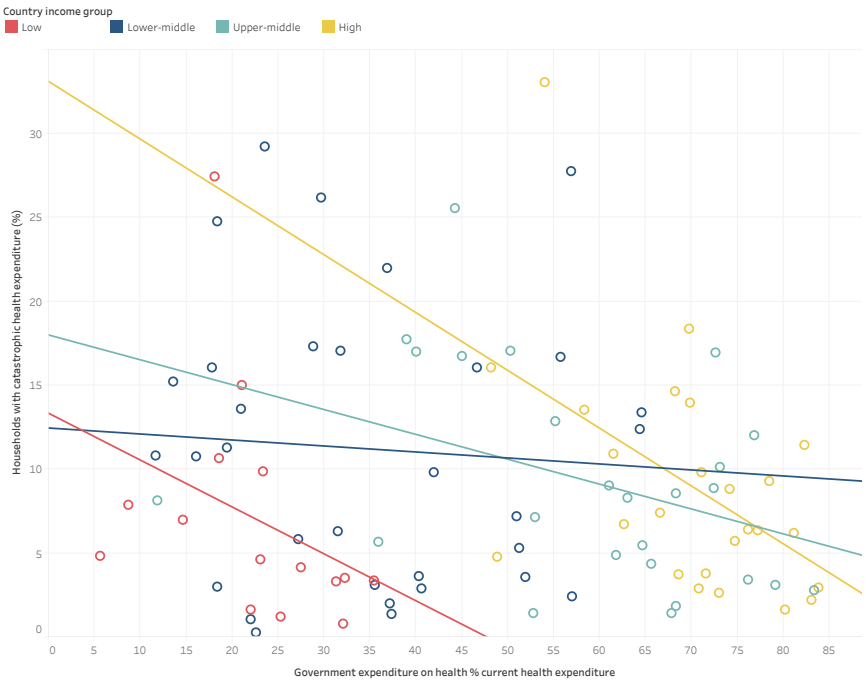
Financial protection is thus not driven solely by the dependence of a country's health system on public spending. What also matters is the level of that spending and how the money is pooled and spent. Policies addressing these issues have an important role to play.(32,33,36,37)

Finally, out-of-pocket payments, and the financial protection problems linked to them, occur only when people actually use services. Therefore, it is possible that countries at all income levels can have apparently high levels of financial protection for households (low catastrophic spending on health) simply because of low levels of service use.(28) For example, in some fragile and conflict-affected countries with an extremely low level of public spending on health as a share of total health spending (8.8%), the incidence of catastrophic health spending is very low (7.9%) because of a lack of service provision or access. This means that great care is warranted in interpreting the data on financial protection. In particular, it is essential to consider service coverage and financial protection

[3] Based on R-squared results from a pooled ordinary least squares regression controlling for public spending on health as a share of total current health expenditure, period fixed effect (dummy variable indicating the 2010–2016 period) and income group = 0.24. R-squared results from income group–specific regressions controlling for period fixed effect (dummy variable indicating the 2010–2016 period) are equal to 0.26 in low income countries and 0.14 in lower-middle income countries.

## Figure 5.4: Public spending tends to reduce catastrophic expenditure, but at all income levels, policy matters

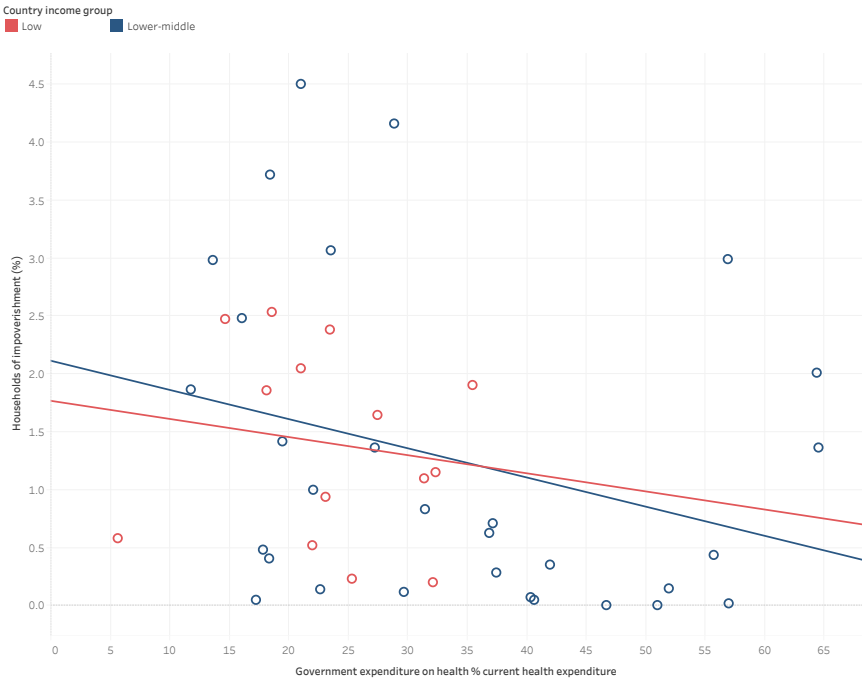
Relationship between the share of public spending on health and catastrophic health expenditure, latest year within 2005–2015




Note: Catastrophic health spending is calculated using the SDG indicator 3.8.2 definition and a 10% threshold for health spending share of the household budget.

## Figure 5.5: More public spending tends to reduce impoverishment

Relationship between impoverishment and government health expenditure, by income group, 2010–2016




Note: Incidence of impoverishment at the international poverty line of US$ 1.90 a day (in 2011 purchasing power parity).

## Box 5.1 Measuring financial protection

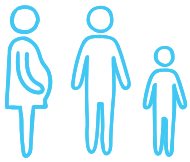
Out-of-pocket spending is the most regressive and inequitable way to fund the health system. Because spending is directly related to the severity of the underlying health condition, treatment is provided only if payments are made, and payments made depend exclusively on a household's capacity to pay. To assess the impact of such payments on people's ability to spend on other needs and their living standards, it is critical to go beyond monitoring the share at the macro level.

Financial protection is a not a condition of a country—the unit of analysis is the household. It means that people who pay out-of-pocket to obtain the health services they need are not exposed to financial hardship.

Quantitative measures of financial hardship rely on two types of indicators: indicators of catastrophic expenditures, which can be defined in different ways and indicators of impoverishment due to out-of-pocket spending, which can be monitored in absolute or relative terms using different poverty lines.(28,30–34)

The analysis for this report uses two indicators. The first is SDG indicator 3.8.2 (using the 10% threshold) of financial protection, which identifies the proportion of the population suffering catastrophic expenditures (defined as the fraction of the population with out-of-pocket spending on health exceeding 10% or 25% of household total expenditure or income). Data on this are available for 132 countries spanning 1984–2015.(35) The sample is restricted to countries with the latest estimates falling within 2005–2015 and with macro indicators of health spending matched to that year. This yields 97 countries, which accounted for 62% of the world's population in 2016. Of these, 15 countries were classified as low income in 2016 (which accounts for 52% of the population in all low income countries); 32 countries as lower-middle income (which accounts for 73% of the population in all lower-middle income countries); 25 countries as upper-middle income (which accounts for 63% of the population in all upper-middle income countries); and 25 high income (which accounts for 58% of the population in all high income countries).

The second indicator is a measure of the incidence of impoverishment due to out-of-pocket spending based on the US$ 1.90 a day (in 2011 PPP) international line of extreme poverty. Because of how this measure of extreme poverty is defined, it results in an incidence of impoverishment that is zero or almost zero in upper-middle income countries and high income countries. The sample is restricted here to those low income and lower-middle income countries whose latest estimates fall within 2005–2015 and with macro indicators of health spending matched to that year. This yields 45 countries, which account for 85% of the world's population in low and lower-middle income countries in 2016. Of these countries, 15 were in low income (52% of the population in such countries in 2016) and 30 were lower-middle income (68% of the population).



together when assessing whether and how countries are progressing, or not, towards universal health coverage.

## Implications

Public spending on health is important to financial protection. However, many countries with similar levels of public spending on health show different levels of financial protection, suggesting that health policies make a difference. The share of public spending on health in total health spending does not have a clear relationship with service coverage or equity in access to essential services, especially in low income countries. Service use, in particular, is strongly correlated with GDP per capita, with the likely explanation being that higher country income translates into higher levels of both public and private spending on health, fuelling both greater supply of and greater demand for services. This lack of a relationship between the share of public spending in total health spending and performance in service coverage and equity of access to services suggests a need for a deeper analysis, particularly between countries of similar income and spending levels. It also signals an urgent need to improve the performance of public spending.

To achieve the SDG targets for health, and to leave no one behind, public spending needs to be more effective in improving access to services, equity in access and financial protection. More studies that take into account the local context could illuminate the factors influencing outcomes and help improve the performance of public spending on health.

# Chapter 6
# Future directions

The priorities for future work that were identified in last year's report remain, most notably:

- Improving data availability and quality.
- Building on the expert knowledge of the health financing community in each country, improving consistency in categorizing expenditures to more accurately characterize health financing arrangements.
- Focussing on country level data work to distinguish capital from current expenditures and external from domestic sources and to identify transfers from government budgets to compulsory and voluntary health insurance programs.

The analyses presented in this year's report point to additional directions for improving data and for identifying potential lines of research for national and international experts. For many issues, deeper insights should be possible if analysis shifts from comparing country group averages to exploring cross-country variations and the factors that determine them. For example, the apparent fungibility between external aid and public spending on health from domestic sources can be explored to see what explains the differences among countries in the same income group. Doing that requires going beyond analysing the Global Health Expenditure Database and examining how aid was channelled in specific countries and how governments responded.

New explorations of spending on primary health care, disease priorities and intervention categories were conducted for a subset of countries. The results are highly sensitive to data availability and to estimation and attribution methods. These challenges must be addressed to improve the quality and consistency of expenditure reporting. The estimates are presented here to stimulate debate, advance research and improve data.

Finally, much more work is needed to tease out the relationship between health spending and progress towards universal health coverage. Again, the analysis finds broad patterns, but the agenda is clearly to explore cross-country variations and their determinants within countries of similar income and spending levels. This work goes far beyond the analysis of global health expenditure data and requires detailed country analysis and cross-country comparison.

This year's report confirms the importance of the ongoing efforts by WHO and collaborating countries and partner agencies to improve the quality, consistency and availability of the data. The Global Health Expenditure Database is a global public good, and there is strong common interest in continuing to refine it as a foundation for policy analysis, monitoring and development as we collectively seek to learn more about policies and actions that enable countries to move closer to universal health coverage. WHO remains firmly committed to this endeavour.

# Annex

## Table A3.1

System of Health Accounts 2011 codes of the health care functions presented in figure 3.1

| SHA 2011 labels | SHA 2011 codes |
|---|---|
| Inpatient and day curative care | HC.1.1 + HC.1.2 |
| Outpatient and home-based curative care | HC.1.3 + HC.1.4 |
| Medicines and medical supplies | HC.5 |
| Preventive care | HC.6 |
| Health system administration | HC.7 |
| Other | 1 – the above |

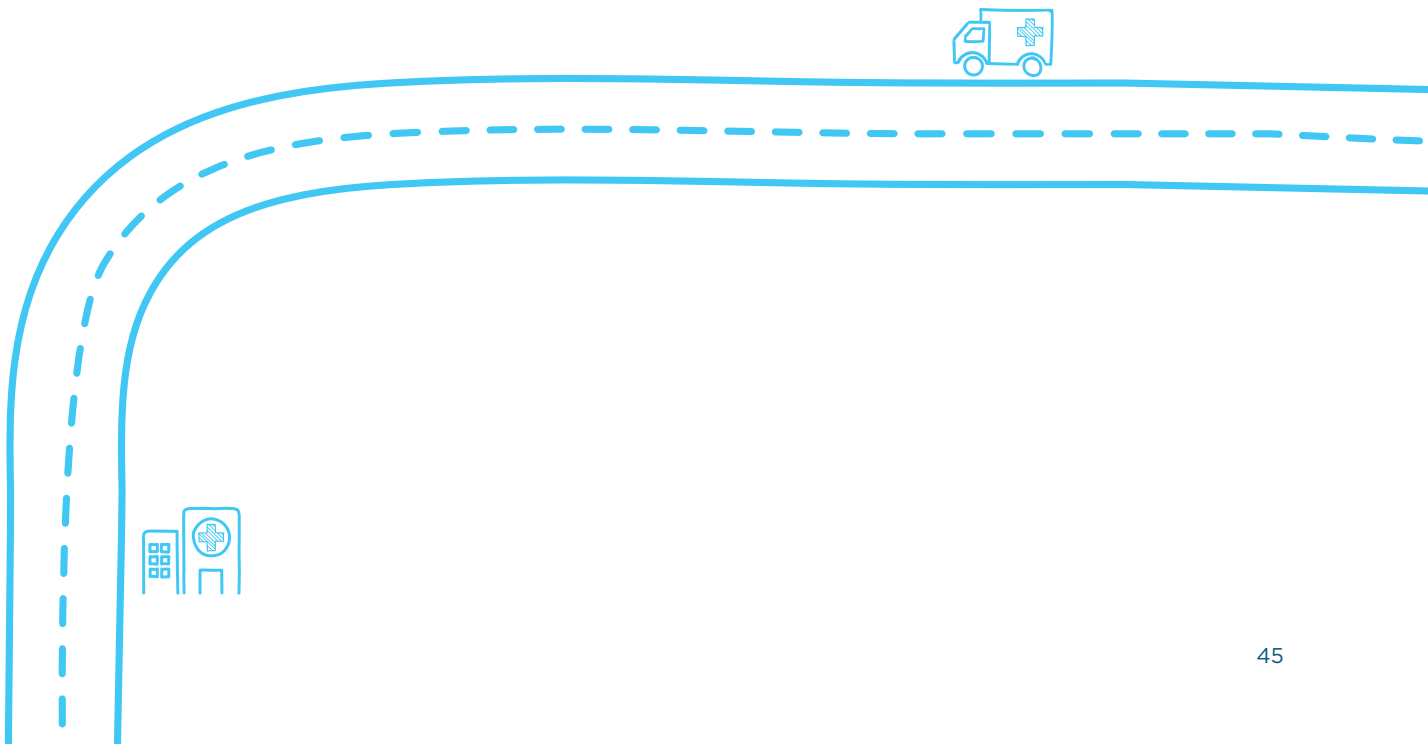
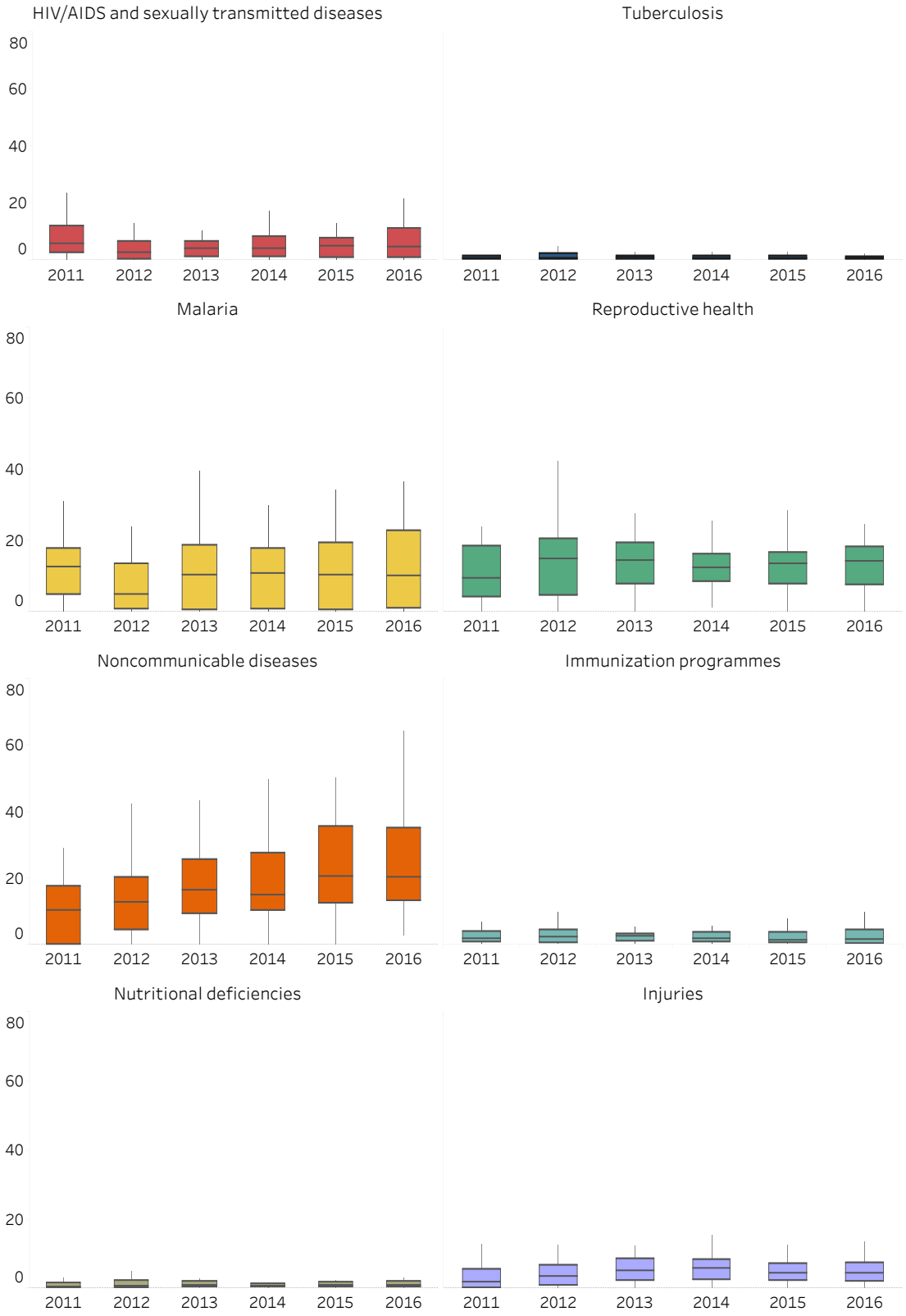


Figure A4.1: Shares of external sources of spending on health have remained relatively stable for most disease groups


Note: Boxplots show the interquartile range (25th–75th percentile) of values with the median marked by a line inside the box. The lines from the bars extend to the maximum and minimum values with outliers excluded.

Figure A4.2: Shares of public spending on health from domestic sources have also remained relatively stable for most disease groups




Note: Boxplots show the interquartile range (25th–75th percentile) of values with the median marked by a line inside the box. The lines from the bars extend to the maximum and minimum values with outliers excluded.

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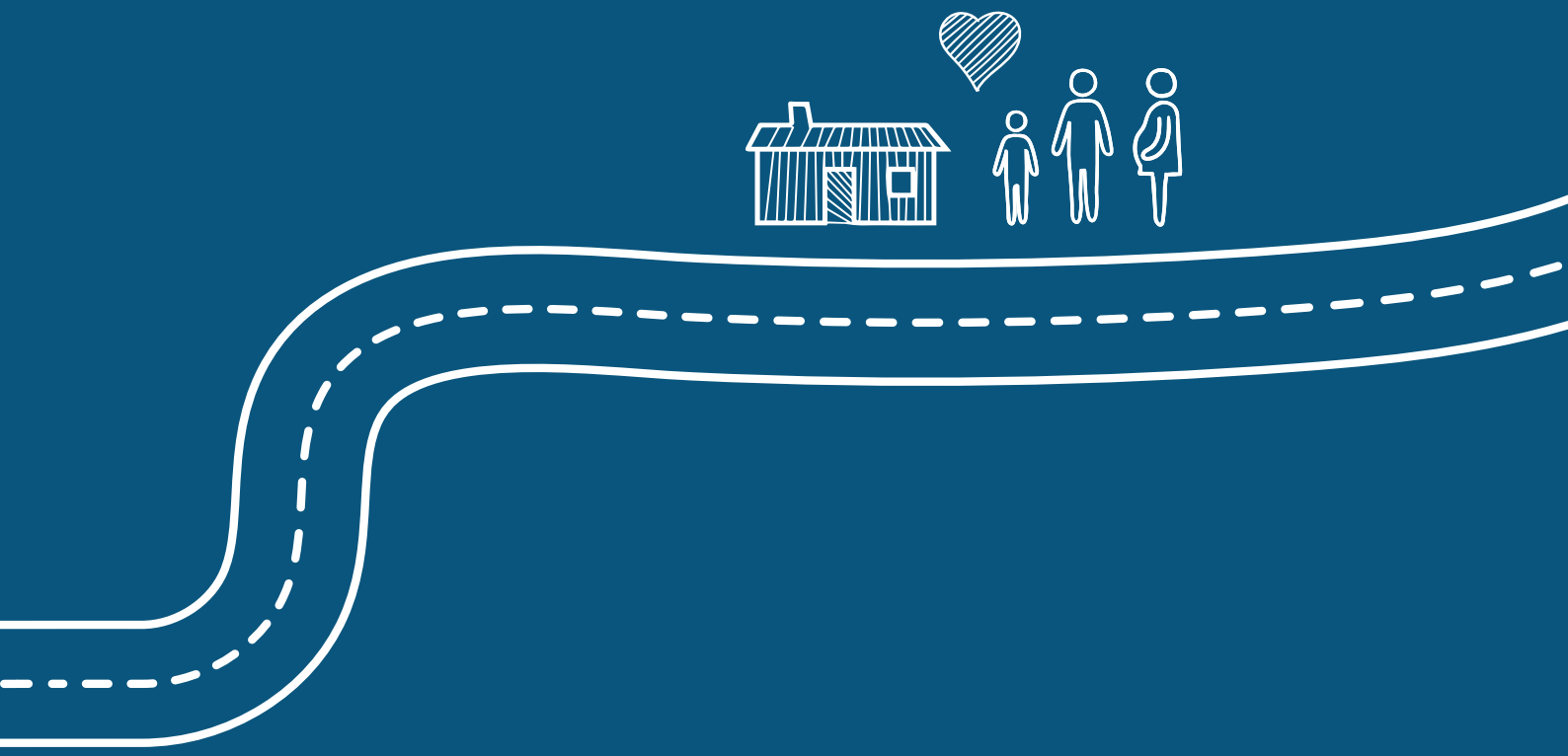


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