



TECHNICAL

NOTES & MANUALS

IMF Engagement on Health Spending Issues in Surveillance and Program Work

Mauricio Soto, Geremia Palomba, Carolina Bloch, Nick Carroll, Tohid Atashbar, Deeksha Kale, Baoping Shang, Kiichi Tokuoka, Ruud de Mooij, and Guillaume Chabert

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Executive Summary

IMF country teams have become increasingly engaged on health spending issues in surveillance and program work, and more so since the COVID-19 pandemic. The primary objectives of health spending are to improve health outcomes and provide protection to households against high financial costs of health care. Health services support inclusive growth and development and protection of the most vulnerable. Health spending is also often one of the largest single public expenditures and is therefore important from both development and fiscal perspectives. The interrelationship between health and economic development has become particularly apparent during the COVID-19 pandemic when health challenges had major macroeconomic effects. The fiscal and macroeconomic importance of health spending will remain high on the policy agenda as a result of global health threats, rising spending pressures in several countries, and deepening interconnections between health spending well-being and economic development.

Following up on the IMF's 2019 social spending strategy, this note provides guidance to staff on when and how to engage on health spending issues. The IMF's engagement on health spending issues is guided by an assessment of its macro-criticality. The macro-criticality of health spending can arise through three channels: spending adequacy, fiscal sustainability, and spending efficiency. Spending adequacy issues can arise when existing spending is insufficient to provide a basket of essential health services consistent with a country's health and economic objectives. Fiscal sustainability issues can become relevant when health spending pressures cannot be accommodated without undermining macroeconomic stability or displacing other critical expenditures. Spending efficiency issues can emerge when spending does not deliver improved health outcomes at a reasonable cost or imposes large negative macroeconomic, fiscal, behavioral, or distributional impacts. The specific purpose of engagement on macro-critical health spending issues may differ depending on whether the engagement occurs in the surveillance, program, or capacity development context.

The note discusses how to assess the macro-criticality of health spending and reviews appropriate policy responses. The objective is to improve the quality and effectiveness of IMF engagement with country authorities, ensure consistent and appropriate policy advice in different country contexts, and strengthen collaboration with development partners with expertise in this area. Reflecting the variety of health systems that exist, as well as diverse country contexts (for example, level of development, fiscal space, and health sector capability), the note focuses on providing tools to staff to better understand health policy issues and information. The information supports staff in understanding (1) the different channels through which health spending may become macro-critical, (2) how to assess the importance of these channels and their trade-offs, and (3) the types of policy responses that are appropriate and the trade-offs involved in choosing among them.

The note also emphasizes the importance of collaborating with development partners on health policy issues. The design and implementation of macro-critical health reforms often require specific sectoral knowledge and experience. Thus, collaboration with development partners with health sectoral knowledge, such as the World Bank, the World Health Organization, and the UN Children's Fund is critical to identify specific micro-level actions for assessing and supporting health sector reforms.

I. Introduction

This note focuses on IMF engagement on health spending issues. In June 2019, the IMF Board approved “A Strategy for IMF Engagement on Social Spending” (IMF 2019) and supported the systematic incorporation of social spending issues into the IMF’s analytical, surveillance, and program work. The strategy clarified that staff engagement on social spending issues would be guided by an assessment of their macro-criticality that can arise through three key channels: spending adequacy, fiscal sustainability, and spending efficiency.¹

Health spending is an important driver of individual and population health, and supports human and economic development. Through a set of financing, regulation, and delivery mechanisms, health systems aim at enhancing the health status of individuals and protecting against risks of high expenditures from health shocks. Health systems thus support inclusive growth and development and the protection of the population, including the most vulnerable. In addition, good health supports higher human capital and better labor market outcomes, particularly for disadvantaged individuals (Weil 2014).

The macro-fiscal relevance of health spending is increasingly recognized. Spending on health care is a large share of households’ and governments’ budgets, particularly in advanced and emerging market economies. Moreover, adequate and efficient spending on health services is critical to support population health and human and economic development. However, rising public health spending needs may pose important fiscal sustainability issues. In many advanced economies and emerging market economies, public health spending is projected to continue increasing at a faster pace than GDP, reflecting aging and other cost pressures. In many low-income and developing economies, substantial increases in public health spending are critical for filling service delivery gaps.

The COVID-19 pandemic has further highlighted the links between health and economic outcomes. The health crisis during the pandemic affected global and macrofinancial stability (Agarwal and Gopinath 2021). The pandemic has led to a greater focus on lifting country capacities to prevent, detect, and manage health security threats, including investing in global pandemic preparedness. More broadly, the pandemic has highlighted the importance of enhancing the ability to respond to surges in health care demand, manage public health emergencies, and invest in strengthening health systems to protect people from health shocks and the associated economic shocks. Accordingly, IMF staff’s engagement on health spending issues has been expanding, including through strengthening collaboration with the World Bank and other international institutions such as the World Health Organization (WHO) and the UN Children’s Fund (UNICEF).

Following the 2019 social spending strategy, staff engagement on health spending issues is guided by an assessment of their macro-criticality. Macro-criticality of health spending can arise through one, or a combination of three, often interrelated, channels:

- *Spending adequacy* refers to the capacity to provide people with essential quality health services consistent with a country’s health objectives, while protecting households from major financial distress arising from the cost of seeking necessary health services. For example, substantial additional spending would be required to make progress along the Sustainable Development Goal focused on health (SDG3), and filling important service delivery gaps exist in most low-income and developing countries (LIDCs) in particular.
- *Fiscal sustainability* refers to a country’s ability to finance health expenditure over the medium to long term. Health spending is often a large and fast-growing area of public expenditure, and a core driver of fiscal sustainability. In advanced economies and emerging market economies, rising health spending

¹ As part of the strategy, staff were invited to prepare a guidance note to support country teams in deciding when and how to engage on social spending issues. As input to the guidance note, staff are developing a series of papers to help operationalize policy advice on key social spending areas, including pensions, social safety nets, health, and education.

pressures often reflect aging populations and rising costs; in LIDCs, health spending pressures tend to reflect efforts to expand coverage and respond to increasing service demand.

- *Spending efficiency* refers to a country's ability to deliver on the national health objectives in a cost-effective way, avoiding waste and leakages and without imposing undue economic distortions (for example, on labor supply).

There are important connections and trade-offs across the different channels of macro-criticality. For example, increasing the coverage of health services can improve adequacy but undermine sustainability if adequate financing is not available. In addition, the use of copayments might reduce overconsumption and improve efficiency, but affect adequacy if low-income households are prevented from accessing care.

Staff engagement on health spending issues would benefit from leveraging external knowledge and resources. Engagement on economic and fiscal policies related to health spending may require specific sectoral knowledge, hence staff engagement would benefit from collaborating with other institutions with specialized knowledge on the design and implementation of health policies, including the World Bank, WHO, and UNICEF. On health care spending issues, staff should leverage any existing centralized collaboration mechanisms with these agencies to coordinate support and activities.

The design of health spending policy needs to reflect country-specific social, political, and economic realities. Because there is no one right model of health care, it is important to ensure that health service reforms respond to countries' specific expectations and capacity. The COVID-19 pandemic has also made clear the importance for national health systems to respond quickly to shocks and coordinate responses internationally.

This note aims at furthering staff understanding of health spending issues in the context of the IMF's work and the importance of engaging with development partners and stakeholders (Box 1). Acknowledging the variety of health systems and the diverse country contexts (for example, level of development, fiscal space, and health sector capability), the note supports staff in understanding the key characteristics and dimensions of health systems and health spending (second section), assessing the different channels through which health spending may become macro-critical (third section), and where macro relevant, on integrating health analyses into surveillance and program activities (fourth section). The note equips staff with tools to better understand economic and fiscal policies related to health spending and provides information on additional support, including data resources (Annex 1) and examples of reforms (Annex 2).

BOX 1. Key Messages: How to Engage on Health Spending

Staff engagement on health spending issues is guided by an assessment of their macro-criticality (see the section titled “Assessing the Macro-Criticality of Health Spending and Policy Reforms”). Macro-criticality can arise through three channels: (1) *spending adequacy*, which refers to the capacity to provide people with essential quality health services consistent with a country’s health objectives, while protecting households from major financial distress from the cost of necessary health services; (2) *fiscal sustainability*, which refers to a country’s ability to finance health expenditure over time without undermining government debt sustainability or crowding out other spending priorities; and (3) *spending efficiency*, which refers to a country’s ability to deliver on the national health objectives in a cost-effective way, avoiding waste and leakages and without imposing undue economic distortions (for example, on labor supply).

The scope of staff engagement depends on whether it occurs in surveillance or program context (see section titled “Incorporating Health Spending Issues into Country Work”). In the *surveillance context*, engagement should occur when macro-critical health spending issues affect or have the potential to affect external or domestic stability. In *program context*, engagement should focus on the role of health spending issues in achieving program objectives or monitoring program implementation. Therefore, the extent and purpose of engagement may vary across countries and programs. Conditionality on health reforms in a program context can be considered where reforms are critical to program objectives or monitoring implementation.

Policy options and reforms typically fall in three broad categories, depending on scope of the issue. There are macro-level policy reforms that target system-wide features (for example, health spending levels) and micro-level reforms that deal with incentives and governance issues (for example, budget caps), and service-related reforms that cover the scope of health services, public and private service provisions, and human resource management (see “Typical Policy Options and Reform Design”).

Staff engagement on health spending issues would benefit from leveraging specialized external knowledge and resources. Engagement on economic and fiscal policies related to health spending may require specific sectoral knowledge. In this context, collaboration with other institutions with sectoral knowledge of the issues is critical to successfully identify and incorporate health issues in the IMF’s country work. Staff should establish and strengthen collaborations at the country level with agencies with specialized knowledge on the design and implementation of health policies, including the World Bank, the World Health Organization, and the UN Children’s Fund, and leverage any existing centralized collaboration mechanisms with these institutions.

II. Objectives and Features of Health Systems

This section discusses the key objectives and the economic importance of health systems. It also identifies the key features of health systems to consider when assessing and benchmarking health spending, including the role of government intervention.

Health Systems, Health Outcomes, and Economic Development

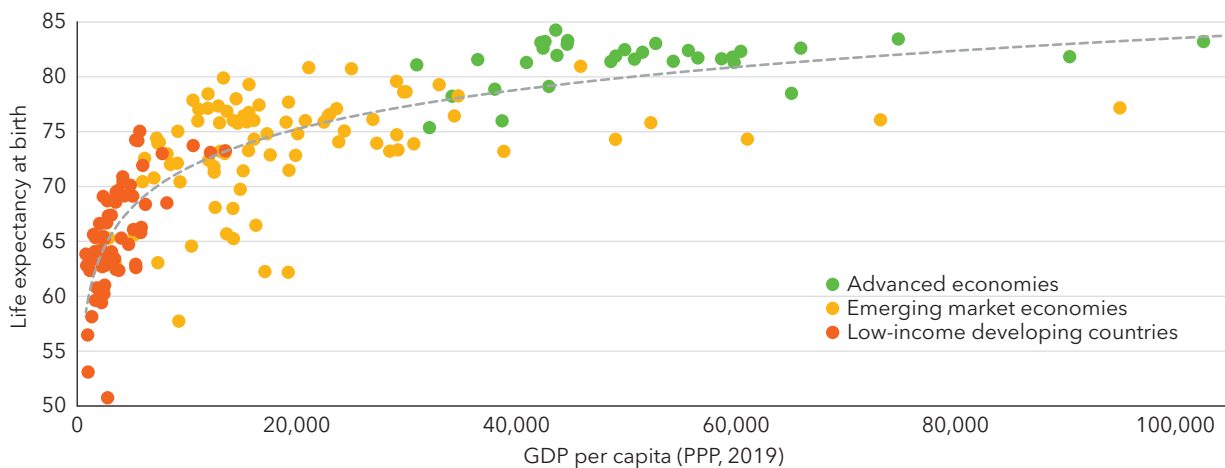
Strong health systems typically fulfil three main objectives (WHO 2000; Franken and Koolman 2013):²

- *Delivering quality essential health services to improve health outcomes equitably:* This objective includes health care access, coverage, and delivery (OECD/Eurostat/WHO 2017). Delivering quality health services is an important determinant of wellbeing and supports human capital development. Over recent decades, health outcomes have improved greatly leading to large increases in life expectancy (WHO 2021b). Longer and healthier lives have positively impacted welfare for a growing number of people in the world (Murphy and Topel 2006).
- *Financially protecting people from excessively high health expenditures:* Health services may be costly as a result of their technical complexity, reliance on skilled workforces, presence of market failures, and high research and development costs. Given the unpredictable nature of health service costs (in terms of both occurrence and amount), a strong health system should adequately protect households from not being able to pay for essential treatment, for example, through health insurance or subsidized health services.
- *Being responsive to service delivery expectations:* This objective focuses on how health systems meet people's nonmedical expectations such as choice, respect, access to support networks, and prompt attention. Although health system responsiveness is mostly beyond the scope of this note, related issues are discussed in terms of risks associated with market and nonmarket provision of health services.

Health outcomes, such as life expectancy and economic performance (IMF 2017a; Bloom, Kuhn, and Prettner 2018), have a two-way relationship. Although it is difficult to make a causal inference at the macro level (Acemoglu and Johnson 2007), countries with higher GDP per capita tend to have longer life expectancy (Figure 1). The relationship can go in both directions (Box 2). Improvements in health outcomes (for example, decreased morbidity and mortality) enhance learning, human capital, individual productivity, earnings, and consumption (Bor and others 2012; Cortés and others 2022; García-Gómez 2011; Halla and Zweimüller 2013; Jones, Rice, and Zantomio 2020; Meyer and Mok 2019; Trevisan and Zantomio 2016; Weil 2014). At the same time, higher incomes allow for investments in nutrition, clean water, improved sanitation, and essential health services that are critical to improving health in many low-income countries (Deaton 2013). The link between health and economic outcomes may vary with the level of development and may be affected by the prevalence of communicable and noncommunicable diseases that also varies with income level (Figure 2).

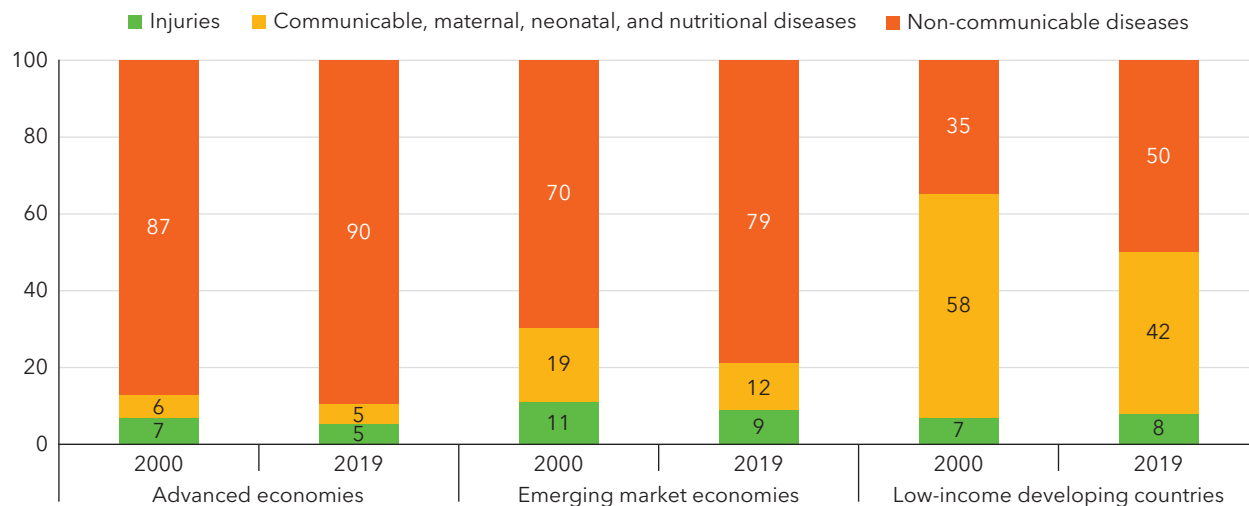
² Strong health systems meet three objectives: adequate health outcomes, fair (financial) contribution, and responsiveness to peoples' nonmedical expectations (WHO 2000).

Figure 1. GDP per Capita and Life Expectancy at Birth (2019 or latest available data)



Sources: IMF, World Economic Outlook database; and World Health Organization, Global Health Expenditure Database.
 Note: The countries classified as emerging market economies with high GDP per capita tend to be resource-rich (for example, oil) countries. PPP = purchasing power parity.

Figure 2. Cause-Specific Mortality (Percent of total deaths)



Source: World Health Organization, Global Health Expenditure Database.

BOX 2. Health and Economic Outcomes

Good health has intrinsic value as it improves individual welfare and longevity. Better health outcomes also contribute to economic development.

Improvements in population health can foster economic development through lower mortality and infection rates. Together with other social policies, health spending can also help build public support for needed economic reforms to promote macroeconomic stability, resilience, and inclusive growth. However, increased health spending may involve trade-offs with other priorities. The pandemic has highlighted these complementarities—with strong health systems reducing economic disruptions—and challenges—rapidly rising health spending can put stress on governments' budgets.

Better health outcomes are also associated with better education outcomes, higher labor force participation, and higher wages for individuals (IMF 2017a; Weil 2014). Empirical evidence also shows the links between nutrition, education, and labor market outcomes (Fogel 1994). For example, specific nutrition and health programs appear to be associated with better economic outcomes (Bloom 2014), particularly: (1) deworming associated with school attendance and subsequent earnings (Kenya); (2) iron supplementation associated with labor market outcomes (Indonesia); (3) iodine supplementation associated with cognitive function (Tanzania); and (4) hookworm associated with malaria eradication and school attendance and labor earnings (the Americas).

Health and poverty are strongly interrelated. Poor individuals are disproportionately affected by illness and premature death. The cost of addressing poor health and illness can be a major factor in causing poverty, especially in low-income and developing countries given the expense of modern medicine and the absence of insurance or subsidized health services. Analysis of household survey data for 89 countries indicates that, in the poorest welfare quintile, child mortality and the share of women reporting problems accessing health care as a result of lack of money are nearly double those for the richest quintile.¹

Infectious diseases such as HIV/AIDS, malaria, and tuberculosis have significant effects on economic outcomes. Between 1965 and 1990, countries with high transmission of malaria experienced an average per capita GDP annual growth of 0.4 percent, while average growth in other countries was 2.3 percent after controlling for other determinants of growth. Dixon, McDonald, and Roberts (2001) find that growth rates were reduced by HIV/AIDS in Africa on average by 2 to 4 percent between the 1960s and 1990s. In developing economies, the economic costs associated with communicable—and often preventable—diseases remain high (Bloom and Cadarette 2019). For example, HIV, malaria, and tuberculosis reduce schooling, affect earnings capacity, and lower employment rates (Wagner, Barofsky and Sood 2015; Bor and others 2012; Heaton 2022). Although the share of deaths attributable to infectious and other communicable diseases has decreased over the past decades, these were still responsible for more than 40 percent of deaths in low-income and developing countries in 2019.

Noncommunicable diseases pose growing economic challenges. Noncommunicable diseases account for the largest share of mortality across income groups and have surpassed communicable diseases in low-income and developing countries in the past decade. In advanced economies, the burden of noncommunicable diseases (including cardiovascular and respiratory diseases, cancer, and diabetes) is associated with earlier retirement and higher unemployment. In the European Union, premature deaths from noncommunicable diseases are estimated to amount to a 0.8 percent of GDP loss per year (OECD and European Commission 2016). Moreover, the chronic and long-lasting nature of noncommunicable diseases often results in prolonged health care costs, loss of productivity, financial burden, and, subsequently, an enduring economic burden.

¹ Data from the Health Nutrition and Population Statistics, a dataset from the World Bank.

Health Spending and the Role of Governments and Markets

Health spending covers various core functions and its composition tends to vary with countries' income level and needs (Box 3). Across countries, curative care (inpatient and outpatient services) and medical goods make up on average more than half and nearly 20 percent of health expenditure, respectively (Figure 3).³ However, advanced economies tend to allocate a higher proportion of total health spending to long-term care (14 percent), and low-income and developing economies tend to spend on average a higher proportion on preventative care (15 percent) and governance (12 percent).⁴

BOX 3. Key Components of Health Spending

Curative and rehabilitative care: Services to reduce symptoms and severity of illness or injury. This includes *inpatient care* in health care facilities, often hospital based but also overnight stays in nursing care facilities or ambulatory care providers, and *outpatient and community care* delivered to patients not formally admitted to a facility, often at general practitioners and community health centers.

Long-term care: A range of services typically provided within health care providers' settings with the primary goal of managing deterioration in health status in patients with long-term dependency.

Ancillary services: A variety of services provided to outpatients, mainly performed by paramedical or medical technical personnel, such as laboratory services, diagnosis imaging, and patient transport.

Preventative care: Preventative services are any measure that aims to avoid or reduce the number or the severity of injuries and diseases, including vaccinations and disease-specific campaigns.

Pharmaceuticals and medical products: Products and nondurable goods intended for use in the diagnosis, cure, mitigation, or treatment of disease. This typically does not include pharmaceuticals administered during a treatment in a hospital or by a health provider.

Governance, public health systems (including around pandemic preparedness), and health administration: Governance services focus on health systems rather than direct health care. Public health systems including planning and execution of national/public health plans.

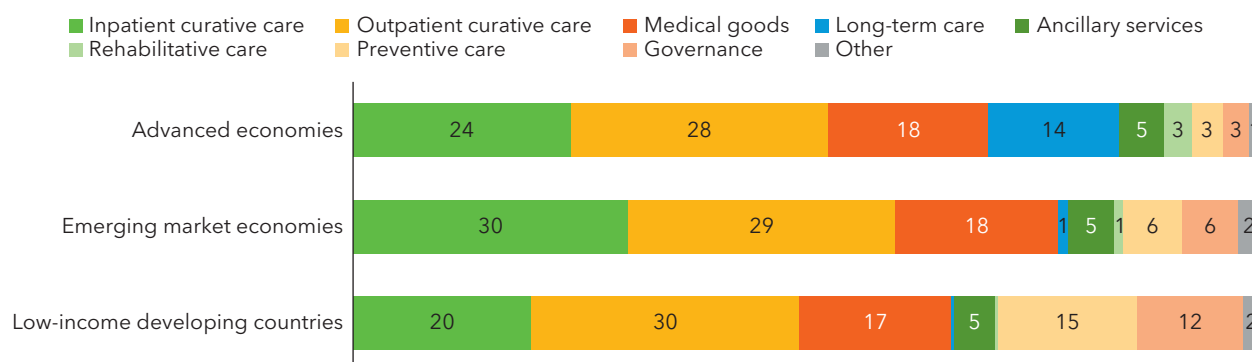
Source: OECD and WHO 2017.

Health spending varies significantly across countries, and its financing usually involves governments, businesses, households, and donors. Total health spending ranges from an average of about 10.0 percent of GDP in advanced economies to 6.9 percent of GDP in emerging market economies and 5.6 percent of

³ This note uses data from the 2022 GHED for benchmarking purposes. Although health spending was elevated in 2020 as a result of the health system response to COVID-19, early indications are that it also remained elevated in 2021. The major differences in health spending trends that were observed in 2020 were typically (1) stronger growth in public health expenditure than in private expenditure, (2) greater spending on preventative care (including vaccinations), and (3) generally higher spending overall. When undertaking more detailed country analysis, it is important to examine the degree to which health spending in 2020 was an outlier compared with earlier years.

⁴ This note uses the System of Health Accounts (OECD/Eurostat/WHO 2017) to guide what is inside and outside of health expenditure. For example, spending in water and sanitation, although important for health, have a primary nonrelated health objective and thus fall largely outside of health expenditure.

Figure 3. Health Care Functions, 2020
(Percent of health expenditure)



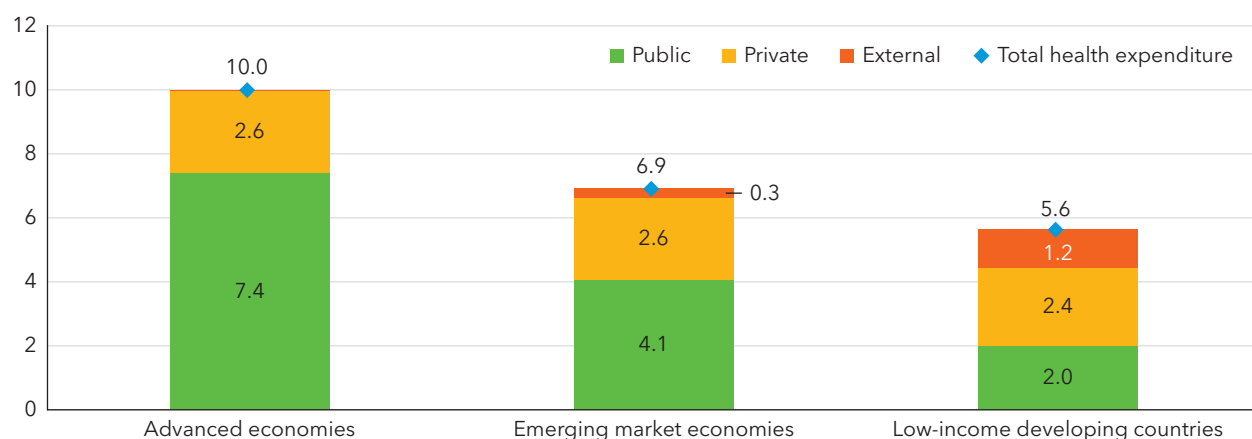
Source: World Health Organization, Global Health Expenditure Database.

Note: Totals may not add up to 100 because of rounding.

GDP in LIDCs (Figure 4).⁵ In advanced economies, government financing usually plays a predominant role compared with countries with other economies..

In addition to health spending, other public policy levers might have bearing on health outcomes. Taxation of tobacco, sugary beverages, and alcoholic drinks can lower health harm associated with excessive consumption of these products (Petit, Mansour, and Wingender 2021; Petit and Nagy 2016). Similarly, access to clean water and adequate waste and sanitation systems can play a critical role in reducing disease. Improved education and higher standards of living are usually associated with better population health. A well-designed social safety net can support nutrition and housing, which are critical for health outcomes. A range of social services, including for long-term care, may also have an effect on the demands on the health

Figure 4. Health Expenditure by Financing Source, 2020
(Percent of GDP)



Source: World Health Organization, Global Health Expenditure Database.

Note: Totals may not add up to 100 because of rounding.

⁵ Following the System of Health Accounts, this note focuses on current health spending. Typically 3 to 6 percent of total health spending is on capital, with lower-income countries spending a smaller share on capital. The Organisation for Economic Co-operation and Development and WHO identify this as an area of further work for understanding the full costs of health expenditure over time. Having strong public investment management frameworks can ensure health infrastructure projects are prepared, assessed, implemented, and maintained efficiently to reduce further costs (IMF 2020).

system.⁶ Furthermore, synergies also exist between climate and health policies—decarbonization policies can deliver significant health benefits by reducing mortality and morbidity resulted from air pollution (WHO 2018a).

Governments also play an important governance and regulatory role in the health sector. Governments are typically involved in the governance of the health system, including through social insurance systems. Regulation may cover occupational requirements, mandates relating to cost and coverage of private insurance markets, and the establishment, role, and powers of public and personal health functions. Health regulators often need to balance competing interests, for example between costs and safety and flexibility, and between interests of consumers and producers. For example, regulation of prices may keep costs down for current patients, but may result in lower incentives for innovation that benefit future patients.

In general, government intervention in health care markets is justified to overcome market failures and address equity issues (Arrow 1963; Cichon and others 1999; Musgrove 1996). Rationales for intervention include typical market failures:

- *Externalities*: Individuals' health choices influence population health outcomes, and the costs of individual poor health may have social externalities (for example, individual immunization against infectious diseases).
- *Asymmetric information, moral hazard, and adverse selection*: Risk-averse health consumers would be expected to pool risks through health insurance, but under a market-based insurance system: (1) consumers might underinvest in preventative health or engage in adverse health behaviors (moral hazard); (2) those with higher (unobserved) risk of high expenditure might be more likely to purchase insurance (adverse selection), leading to inflated costs and prices and low insurance take-up; and (3) health professionals may have more treatment knowledge (asymmetric information) and incentives to overtreat.
- *Production of public goods and distributional goals*: Public health may be underprovided in a market context because of economies of scale. For example, there is an upfront cost in establishing a public health monitoring function to track diseases and provide advice to decision makers, but the marginal cost of extending this function falls as the population expands. Governments may also intervene because of distributional concerns about market-based outcomes (for example, concerns of low-income households being impoverished by high health costs).

However, governments' intervention also carries challenges and risks. The major risks arise from (1) limited information and the difficulty to achieve consumers' needs and preferences because public regulators do not necessarily know what consumers want and may not provide the right level and mix of services, and (2) limited incentives for efficiency and innovation, because there will not be market disciplines or incentives to reduce costs or develop new and innovative treatments.

Key Health Systems Dimensions

Health systems can be characterized along four critical and interrelated dimensions: governance, financing, resource generation, and service delivery (Box 4).⁷ In practice, countries have multiple models to organize across these different dimensions to achieve health objectives. For example, in terms of governance, the United States has a government scheme (Veteran's Affairs), a social insurance scheme (Medicare), a public

⁶ The line between health care and social care is an ongoing area of focus in the System of Health Accounts. The quality and availability of long-term social care provision in a country may have an effect on the demands on the health system, and this may become increasingly important with the aging of populations.

⁷ Although a wide variety of approaches, frameworks, and typologies can be used to examine health systems, experts from the WHO and the European Observatory on Health Systems and Policies have recently suggested a simplified framework based on the key building blocks of health care systems (Papanicolas and others 2022).

BOX 4. Selected Building Blocks for Health Systems

Selected building blocks of health systems include the following:

Governance: Strategic policy frameworks, including oversight, coalition-building, regulation, system design, and accountability. These include national policy frameworks for health, with various models of governance (social insurance, government schemes, or mandated and voluntary private schemes).

Financing: The flow of monetary resources through the system, from revenue raising to pooling resources and the purchasing of goods and services. Financing sources are typically split across general government revenue, social insurance levies, health insurance premiums, out-of-pocket expenditure, and donor financing.

Resources: The human and physical resources used to deliver the core health functions. Examples of human resources are doctors, nurses, and other health professionals. Other key resources include essential medicines, pharmaceuticals and medical goods, and the infrastructure used in the delivery of health services (that is, buildings and hospital beds).

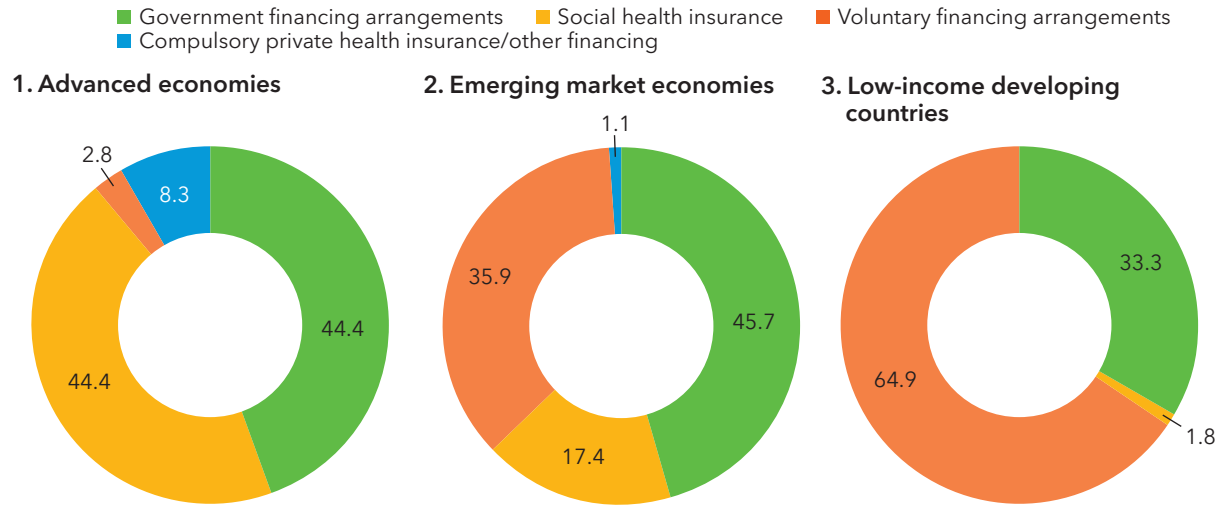
Delivery: Services delivered by the resources of the health system within the governance framework. Examples include primary care, specialized (secondary and tertiary) care, and public health initiatives.

Source: Papanicolas and others 2022.

insurance scheme (Medicaid), and mandated and voluntary insurance schemes. The Australian system combines a large public health system (funded through Medicare) with significant voluntary health insurance above the basic cover. Countries also have options about the delivery models they rely on (for example, the balance between primary and hospital care) and how resources are deployed (for example, the scopes of practice for nurses and pharmacists in prescribing medicines and delivering primary care).

The schemes for health financing varies across countries. In advanced economies, health financing comes primarily from public sources (including social insurance financing) or from a mix of public/private compulsory financing (for example, The Netherlands, Switzerland, and the United States). About half of emerging market economies have a predominant public/social health insurance financing, whereas LIDCs rely heavily on voluntary financing schemes, including out-of-pocket expenditure and, to a lesser extent, voluntary health insurance (Figure 5). In Bangladesh, Cameroon, and Nigeria, for example, out-of-pocket expenses make up more than 60 percent of health expenditure (WHO 2022). This overreliance on out-of-pocket financing might limit access to care for poor households—who are less likely to be able to afford private health insurance or out-of-pocket spending—and can lead to a fragmentation of the schemes within a system, which can affect the alignment with national priorities and patient needs (Hanson and others 2022).

Figure 5. Health Care Financing Schemes, 2020
(Percent of health expenditure)



Source: World Health Organization, Global Health Expenditure Database.

Note: The data show an unweighted averages. Totals may not add up to 100 because of rounding.

III. Assessing the Macro-Criticality of Health Spending and Policy Reforms

This section discusses how health spending can be evaluated through each of the three channels of macro-criticality: spending adequacy, spending efficiency, and fiscal sustainability. Macro-criticality can arise from any one or a combination of these channels.

Evaluating the macro-criticality of health spending requires an integrated assessment of the overall health system and outcomes. The macro-criticality of health spending can arise through one—or a combination—of three channels: spending adequacy, spending efficiency, and fiscal sustainability (IMF 2019). Although the discussion aims to be comprehensive to reflect the degree of heterogeneity between countries, issues, and data availability, a streamlined assessment undertaken with a narrower scope and relying on key indicators can be appropriate in specific cases, depending on the scope of the analysis.

There are important connections and trade-offs across the different channels of macro-criticality. For example, a typical general concern, particularly in emerging and developing market economies, is the potential trade-off between enhancing spending adequacy (to increase coverage) and safeguarding medium-term fiscal sustainability.

Spending Adequacy

Spending adequacy refers to whether health spending is sufficient to achieve a government's social policy objectives. In the case of health, these objectives typically focus on providing an essential basket of quality health services, while ensuring people do not fall into poverty because of health care expenditures. The essential basket of services might vary across countries depending on national health objectives, any adopted international standard, and a wide range of economic, historical, political, and social factors. The adequacy assessment generally includes an evaluation of the capacity of health spending to achieve a certain level of access to quality of health services and goods, deliver adequate health outcomes, and protect the vulnerable from financial or other hardships (Box 5).⁸

The analysis of spending adequacy should start by assessing aggregate health spending using different indicators. Although the level of aggregate spending according to various indicators differs across countries, the level of health expenditure does indicate the overall resources available to support coverage, purchases of inputs, user costs, or quality. A streamlined assessment could examine whether the level of

BOX 5. Essential Health Services and Financial Protection

The World Health Organization considers access to essential health services and financial risk protection as keys to attain the Sustainable Development Goal that relates to health (WHO and World Bank 2017). Coverage of essential health services—monitored across countries by the Sustainable Development Goal indicator 3.8.1—includes reproductive, maternal, newborn and child health; infectious diseases; noncommunicable diseases; and service capacity and access among the general and the disadvantaged population. The financial protection measure—monitored by the Sustainable Development Goal indicator 3.8.2—focuses on the proportion of the population with large expenditure on health in relationship to consumption or income.

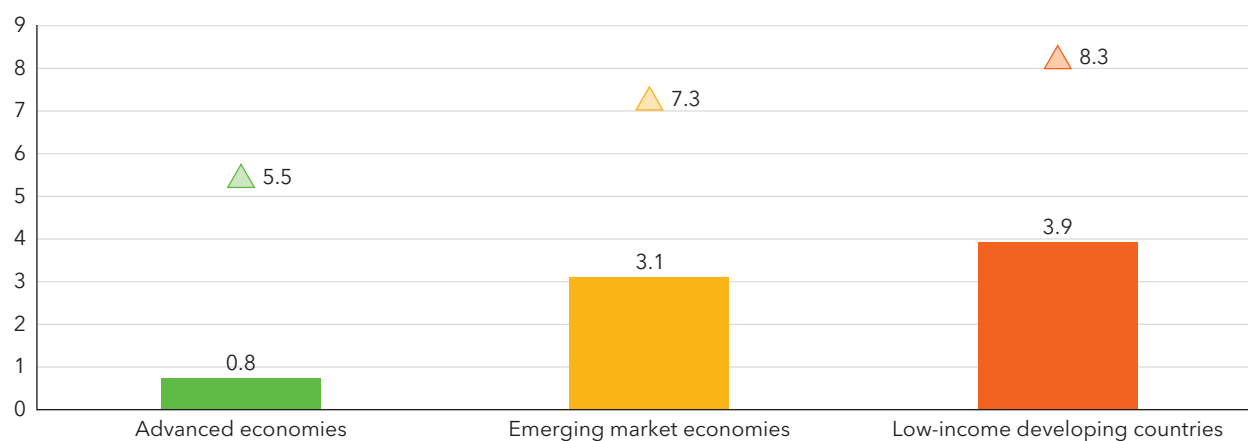
⁸ More broadly, the social spending strategy defined spending adequacy as an adequate level of spending for inclusive growth and protecting the vulnerable.

health spending as a share of GDP, or as per capita spending, is low or if trends are different when compared with peer countries. Where possible, various benchmarks offered in the literature could be used to assess spending adequacy, depending on data availability and the level of analysis.

- Per capita spending thresholds offered in the literature could help assess adequacy.⁹ For example, Watkins and others (2020) estimate that the annual costs of providing access to a package of essential health benefits would cost \$79 per capita (10 percent of 2015 gross national income) in low-income countries and \$130 per capita (6 percent of gross national income) in lower-middle-income countries.¹⁰
- An alternative approach is to estimate the cost of expanding access to health services. For example, Moses and others (2018) quantify the volume and costs of services needed to achieve universal health coverage (UHC) standards, and estimate that on average health spending would have to increase by 4 percentage points of GDP in low-income countries, 2.2 percentage points of GDP in lower-middle-income countries, 0.9 percentage points of GDP in upper-middle-income countries, and 0.4 percentage points of GDP in high-income countries.
- Other studies estimate the additional spending needed to make progress toward achieving SDG3.¹¹ Using this as a benchmark and the methodology of Gaspar and others (2019), it is estimated that health spending would have to increase in 2030 by 3.9 percentage points in LIDCs and nearly 3.1 percentage points in emerging market economies to make progress along SDG3 (Figure 6).

Where more granular analyses of adequacy are warranted, progress toward achieving UHC could be discussed. Although countries have different perspectives on essential health services, the breadth and depth of health coverage is a central element in assessing adequacy. The UHC service coverage index indicator (3.8.1) developed by the WHO—discussed in Box 4—is a widely available marker for adequacy,

Figure 6. Estimate of Additional Spending Needed to Attain SDG3
(Percent of 2030 GDP)



Source: IMF staff calculations, based on the methodology of Gaspar and others (2019) and updated data.

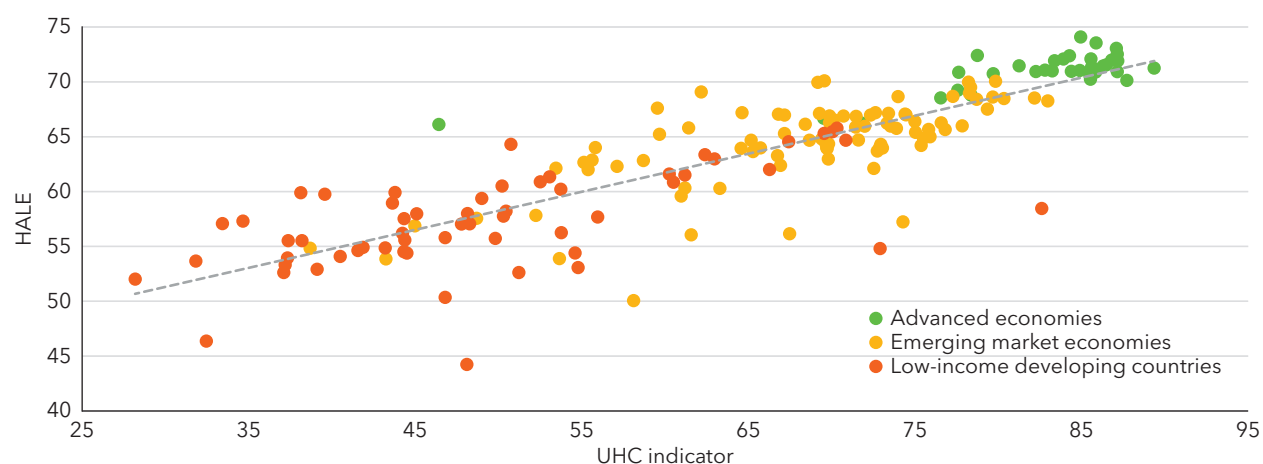
Note: The bars represent the mean for each country group; the triangles represent the maximum. SDG3 = Sustainable Development Goal focused on health.

⁹ Although spending thresholds offer insights, a more tailored approach of estimating the country-specific threshold costs of achieving health goals is needed (Jowett and others 2016).

¹⁰ These estimates are broadly in line with the projected resource needs for health in Stenberg and others (2017).

¹¹ The SDG3 (good health and wellbeing) aims to ensure healthy lives and promote wellbeing for all at all ages—including progress in maternal and child health, health risk factors, and health system resourcing and preparedness. It therefore includes Sustainable Development Goal indicator 3.8 and remaining subindicators around health domains and populations.

Figure 7. Universal Health Coverage Indicator and Health-Adjusted Life Expectancy (Latest available data)



Source: World Health Organization, Global Health Expenditure Database.

Note: HALE = health-adjusted life expectancy; UHC = universal health coverage.

which is closely associated with health outcomes such as life expectancy (Figure 7).¹² For example, where both health expenditure and UHC are low, spending adequacy may be a critical issue. According to the UHC indicator, coverage of essential health services is widespread in advanced economies, whereas many emerging market and developing countries rank low (WHO and World Bank 2021; WHO 2021b; Barış and others 2021), notwithstanding recent improvements in some countries (Box 6).

In addition, the level of out-of-pocket expenditures is a useful indicator of the ability to ensure financial protection from high health expenditures. High out-of-pocket health costs can prevent some households from accessing needed health services or push them into poverty.¹³ The SDG3 target for financial risk protection (Sustainable Development Goal indicator 3.8.2; WHO 2021b) shows that nearly 13 percent of the world's population had out-of-pocket expenditures exceeding 10 percent of the household budget (a measure of catastrophic expenditures).

Where data are available, some input and output indicators can provide additional insights on adequacy. Some input indicators, such as doctors and nurses per capita and hospital beds, can complement adequacy assessments by providing direct measures of essential service capacity.¹⁴ In addition, summary measures of health outcomes, such as life expectancy and mortality rates, are another proxy for health service delivery capacity, particularly for specific population groups.¹⁵ For example, high maternal and infant mortality rates might be associated with inadequate spending and limited access to specific health services.¹⁶

¹² Many countries in Asia and the Pacific have expanded social health protection over the past decades and several have reached universal or quasi-universal coverage including Indonesia, the Philippines, and Thailand (ILO 2021).

¹³ In context of lower-income countries, increments in public financing for health can provide a shield against these financial vulnerabilities. Gabani, Mazumdar, and Suhrcke (2023) find that transitions from out-of-pocket-dominant to government-financed systems helps improve health outcomes.

¹⁴ The number of doctors and nurses per 10,000 people varies from 40 doctors and 110 nurses in advanced economies to around 4 doctors and 15 nurses in LIDCs. Comparing these with internationally established standards sheds light on whether the health systems are adequately resourced.

¹⁵ Health-adjusted life expectancy is expected life expectancy at birth adjusted for disability and health status across the population.

¹⁶ In addition, when poor maternal and child health indicators are present, a more granular analysis might be warranted because inadequate health spending in these areas may become a barrier to human capital formation (WHO 2021a).

BOX 6. Expanding Access to Health Care: The Cases of Tanzania and Thailand

In the 2000s, Tanzania promoted expanding health care access through strengthening primary health care, devolving responsibilities to local authorities, and implementing a results-based approach (Wang and Rosemberg 2018). Public financial management and provider payment reforms channeled general revenues to health facility managers according to a weighted capitation formula. This helped reduce rigidities and improve health service management. Moreover, some improvements have been observed in the training of health personnel and in the quality of health services. However, coverage remains low and inequities remain, particularly related to the poor quality of rural health services and limited financial protection.

Thailand's policy toward universal health coverage started in the early 2000s. This has helped expand Thai citizens' access to preventive, curative, and palliative health services (Sumriddetchkajorn and others 2019). Over time, the disparities in per capita spending between the Universal Coverage Scheme and the scheme for private sector workers were greatly reduced, and each of these provider payment mechanisms effectively managed expenditure growth. In the decade after Universal Coverage Scheme was initiated, life expectancy at birth rose from 72 to 74 years, out-of-pocket spending came down, and fewer households incurred catastrophic spending.

Fiscal Sustainability

Health spending is sustainable if its level and growth over time can be financed without undermining government debt sustainability or crowding out other priority spending. A sustainability assessment requires an evaluation of past, current, and planned spending within a medium-term fiscal framework that accounts for other spending priorities and revenue capacity. In that framework, the sustainability assessment focuses on the authorities' capacity to finance health expenditure levels and respond to pressures related to public and compulsory health systems.¹⁷ The objective is to assess whether existing health policies and prospective reforms are consistent with overall fiscal and debt sustainability in line with the IMF's mandate to support domestic and balance of payment stability.¹⁸ Moreover, because governments are often implicit financiers of last resort, fiscal risks related to private or donor health financing might need to be accounted for when assessing fiscal sustainability.

Analyses of sustainability of health spending could start by examining the drivers of spending levels and trends, and the potential effect of policy reforms.

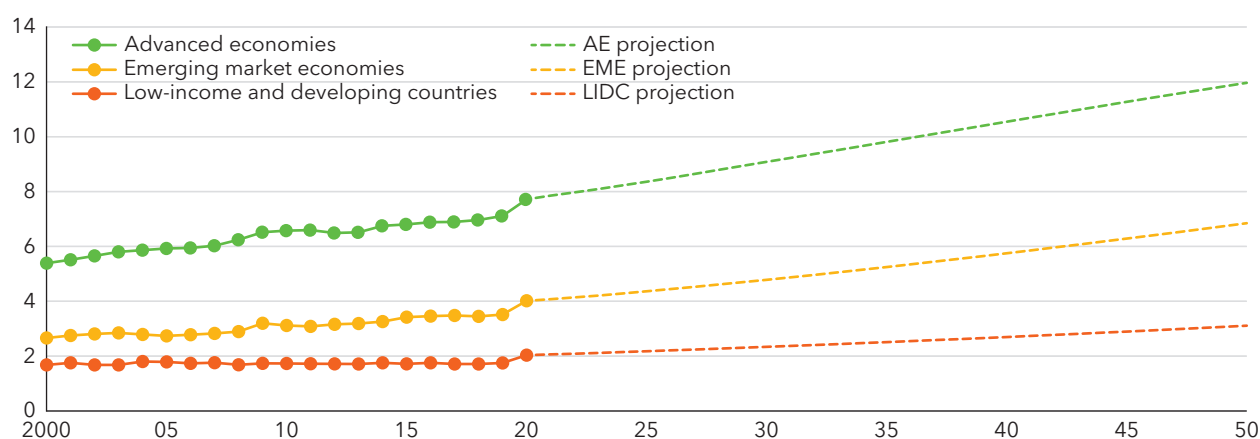
- Key drivers of health expenditure may be decomposed into spending pressures from population aging, excess cost pressures, and income levels. Population aging increases the proportion of the population with higher health needs (because of age and proximity to death), thus rising health spending pressures. Health spending might also increase because of the so-called excess cost growth, which includes, for example, the cost of adopting newer technologies and treatments.¹⁹ Last, higher

¹⁷ Public and compulsory health spending includes spending in government schemes, social insurance schemes, and mandated private insurance schemes.

¹⁸ IMF (2022) notes that: "Appropriate fiscal policy is vital to maintain a country's domestic and balance of payment stability, and often global stability ... fiscal policy is often part of the policy mix to address macro-critical challenges that are not necessarily directly related to public finances (for example, slow growth, high unemployment, and inequality)."

¹⁹ Expenditure changes can be split into demand for health (driven by population size and composition, changes in health status, and demand for new drugs and technologies) and underlying cost growth (including changing price of inputs, including wages and pharmaceutical prices), productivity, and unit costs. In practice, these nonaging factors are difficult to disentangle within excess cost growth. Health prices differences are a source of the large variations in expenditures across countries (OECD 2020).

**Figure 8. Public and Compulsory Health Expenditure, 2000–50
(Percent of GDP)**



Sources: IMF, World Economic Outlook database; and World Health Organization, Global Health Expenditure Database.
Note: AE = advanced economy; EME = emerging market economy; LIDC = low-income and developing country.

income levels tend to be associated with higher demand for health services and high health expenditure (Lorenzoni and others 2019).

- Other important drivers of public health expenditure are the scope of the coverage offered, how much is subsidized by governments, and the level of inputs used to deliver services. Some countries rely on explicit lists of services and pharmaceuticals to set boundaries of what is covered by public health spending. Even in the absence of lists, the services provided are typically bounded by the level of inputs (for example, doctors, nurses, and hospital beds).
- Sustainability assessments may also include an appraisal of the institutional and administrative capacity to administer and control health budgets. When spending trends of prospective reforms pose debt sustainability concerns, a review of health spending priorities and reforms, in the context of other spending priorities and revenue capacity, might be needed.

Although most countries have experienced rising public and overall health expenditure over time, the reasons underlying health spending pressures varies across countries. In most countries, health spending increased in response to the COVID-19 pandemic. Taking a longer-term view, in most advanced economies and many emerging market economies, health expenditure has grown faster than GDP driven by pressures associated with aging populations, excess cost growth, and technological change (Figure 8). In some emerging market economies and in most LIDCs, health spending pressures have largely derived from the need to expand coverage and provide services to a rising population.²⁰

To accommodate rising health spending while safeguarding fiscal sustainability, countries can consider a set of policies. Policy assessments should be made in the context of credible medium-term fiscal frameworks and should cover a combination of reprioritizing spending, enhancing spending efficiency, increasing revenue capacity and external financing, and enhancing management of public financing processes.

- *Credible medium-term fiscal frameworks are crucial* to accommodate additional health spending needs in the context of limited fiscal space and other spending pressures (for example, pensions, social safety nets, and development needs). As a first step, governments can build capacity to undertake long-term projections of health expenditure and include them in national medium-term fiscal frameworks (for

²⁰ Other fiscal risks associated with the health sector include the financial performance of health providers (for example, including public providers, state-owned enterprises, or private-public partnerships in health) (Independent Evaluation Group 2016; Fouad and others 2021) and additional costs derived from judicial decisions (Ferraz 2018).

example, Commonwealth of Australia 2021).²¹ A clear medium-term revenue strategy is a critical component of a medium-term fiscal framework.

- *Overall spending reprioritization and better spending efficiency* can help respond to spending pressures both in health, as well as in other areas of the budget. Some countries have increased over time the share of health spending in their budgets and thereby enabled expanding coverage (Kurowski and others 2021). Taking a whole-of-budget perspective, to prioritize health spending further may require efficiency gains in other sectors or rescaling of other spending priorities to generate fiscal space.
- *Revenue mobilization* is crucial to create fiscal space to increase health spending without crowding out other spending priorities, particularly in emerging market and developing economies. More than half of LIDCs and a third of emerging market economies have tax-to-GDP ratios below 15 percent, suggesting the presence of room for increasing domestic revenue mobilization without impairing growth (Gaspar, Jaramillo, and Wingender 2016).²² In many LIDCs, although broad revenue efforts would be welcome, the taxation of tobacco, sugary beverages, and alcohol may provide an easy tax handle in a context of typically limited administrative capacity and high marginal social value of government spending (Petit, Mansour, and Wingender 2021).
- *Effective and flexible public financial management systems* are a key factor supporting effective health spending (Barroy and Gupta 2021). Public financial management systems support the appropriate budgeting of priorities, including health, and budget execution through the whole health system. Strong public financial management systems are crucial to respond to health shocks. For example, during the COVID-19 pandemic or the Ebola crisis, public financial management systems proved critical to support the efficacy of governments' emergency responses by identifying emergency funding mechanisms, allowing for the reprioritization of spending, and ensuring government accountability (Saxena and Stone 2020; Khasiani and others 2020).
- *Donor funding/official development assistance* can create fiscal space for health spending, particularly where mobilizing national resources is challenging (such as fragile states or those with low administrative capacity). In low-income and developing economies, about a quarter of health spending is financed from donors. For many countries, this lifeline proved critical during COVID-19—for example, in Burkina Faso, Ghana, and Senegal, where external sources financed 11 to 18 percent of health spending in 2019, the role of external financing was critical in 2020 (WHO 2021c). Given the nature of official development assistance, countries should preferably use such funds to finance health expenditure as part of emergency responses, because donor funds are less adept to finance recurrent spending given their volatility (Roy, Heuty, and Letouzé 2007; UNICEF 2016; Barroy and others 2018; Kutzin and others 2017).

Spending Efficiency

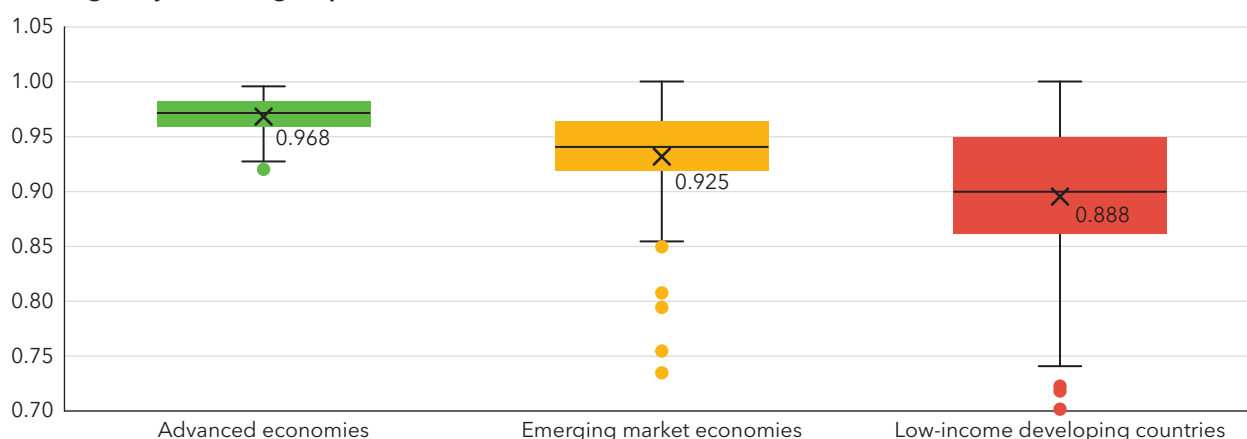
Health spending is efficient when it delivers the intended health outcomes in a cost-effective manner and without unintended economic distortions.²³ The efficiency of health spending refers to the relation between the level and composition of health care inputs (for example, spending, workers, and infrastructure), outputs (for example, treatments and services), and outcomes (for example, health indicators). The large variation in health outcomes for similar levels of health spending across countries (even controlling for initial conditions) suggests that efficiency considerations play a critical role in assessing health spending. Inefficiencies

²¹ Fiscal rules can play a role in guiding fiscal strategies in the context of long-term challenges related to health spending (Caselli and others 2022; Gbohoui and Medas 2020).

²² There is less room for domestic revenue mobilization in most advanced economies, given their high tax-to-GDP ratios, but there may be specific measures that are possible (for example, the level of social security contributions).

²³ Health systems have economywide distortions (costs and benefits). For example, the financing of health expenditure through labor taxes may lead to disincentives on labor supply and other economic distortions (Gruber 2000; Yazbeck and others 2020).

Figure 9. Health Efficiency Scores, 2017
(Averages by income group)



Source: IMF staff calculations based on output-oriented efficiency scores (Garcia-Escribano, Juarros, and Moguez 2022).

can reflect poor governance (for example, poor transparency of how health resources are distributed), weak system management (for example, imbalances between primary and hospital care), low capacity (for example, leading to inappropriate case management and treatments), or market failures (for example, underinvestment in preventative care that leads to higher expenses later).

Spending efficiency analyses should look at how resources are allocated to enable broad access to quality services. Assessments may be done at the macro level by evaluating the efficiency of an entire health system or at the micro level by examining specific components of spending (for example, hospitals, primary care, or pharmaceuticals). Macro-level assessments can identify broad and system-wide efficiency issues, whereas micro-level assessments may be useful in assessing the effect of specific reforms under consideration. From an equity point of view, efficiency assessments may try to gauge whether health spending levels provide commensurate access to health services, particularly to vulnerable groups.

At the macro level, efficiency issues can be gauged in various ways. For countries at similar levels of development and health risk profiles, relatively high levels of health expenditure combined with poor health outcomes may signal efficiency problems. Where feasible, a health frontier approach can also be a valuable starting point to identify efficiency issues (Grigoli and Kapsoli 2018). This approach compares countries' health outputs to the highest performing country at a given level of inputs (Figure 9). This approach can provide indication of potential gains from improving efficiency. Compared with their respective frontiers, estimated spending efficiency losses are in the range of 3 percent of health spending for advanced economies and 8 to 12 percent for developing economies. Using input-based efficiency measures, Garcia-Escribano, Juarros, and Moguez (2022) find substantial scope for savings from efficiency improvements (1.2 percentage points of GDP in advanced economies, 1.4 percentage points of GDP in emerging market economies, and 1.0 percent of GDP in LIDCs), and show that lower income inequality and corruption as well as wider access to health services are typically associated with greater efficiency.

At the micro level, an analysis of the composition of health expenditure may help identify specific sources of spending inefficiencies and support the design of policy responses (OECD 2017). In hospital services, for example, efficiency gains are possible by integrating different levels of care (for example, primary care or emergency care) or by increasing investments in primary, community, and preventative care with the aim to reduce hospital admissions and adverse incidents (Box 7). In addition, the large variation in pharmaceutical spending across countries suggests that there are large efficiency gains to be realized in this area, including

BOX 7. Reducing Avoidable Hospital Admissions: The Cases of The Netherlands and Norway

Some regions in The Netherlands integrate primary care services into hospital emergency departments. Depending on their triage outcome, patients either receive a scheduled appointment at a general practice cooperative (a primary care facility) or are directly referred to the emergency department. As well as increasing patient satisfaction, evidence shows that these integrated models are associated with a reduction in patient self-referrals to hospitals.

In Norway, larger primary care centers act as intermediate care facilities delivering nonurgent care and a mix of postacute, rehabilitation, and nursing care. They aim to strengthen primary care and curb hospital care costs by reducing unnecessary admissions.

Source: OECD 2017.

through increased use of generics, reforms to procurement, and tendering (Garcia-Goñi 2022). Indeed, pharmaceutical policy reforms have delivered significant savings in some countries (Box 8). Moreover, enhancing administrative capacity can lead to efficiency gains, for example, by changing the employment mix to avoid unnecessarily biases toward specialized—and costly—health staff, or by calibrating the level of devolution to lower governments in accordance with their responsibilities.

Typical Policy Options and Reform Design

The analysis of macro-criticality of health spending can suggest the need for reforms, which can be typically grouped in three broad categories. Policy options can target system-wide (“macro”) features (such as the level of the budget allocated to health), incentive issues and governance (“micro”), and services provided

BOX 8. Managing Pharmaceutical Costs in Colombia, Greece, and Mexico

In Colombia in 2012, a new national pharmaceutical policy was launched to improve accessibility and quality of pharmaceuticals to better meet population health care needs, irrespective of individuals’ ability to pay. The policy aimed to establish methods to identify the medicines that should be subject to price control and determine their highest sale price. In 2014, another decree relevant to biopharmaceuticals (including monoclonal antibodies and other immunotherapies) was issued.

In Greece in 2010, the government undertook efforts to unify annual tenders for hospital pharmaceuticals and medical devices. In the first year of operations, the centralized agency reported a 10 percent overall price reduction for pharmaceuticals and a 20 percent price reduction for selected medical devices. In addition, payment times were significantly shortened and stock management improved, allowing for transfer of redundant stocks between hospitals.

The Mexican Institute of Social Security’s centralization efforts helped reduce prices for pharmaceuticals and other medical supplies. Between 2007 and 2010, cumulative savings of \$2.8 billion were realized as a result of improved stock management and creation of a centralized procurement function, which served all public health care stakeholders in Mexico.

Source: OECD 2016a, 2017.

(“coverage and adequacy”) (Emanuel 2020; OECD 2021; IMF 2012).²⁴ For example, countries facing sustainability or efficiency issues (for example, many advanced economies and emerging market economies) may focus primarily on macro or micro reforms. On the other hand, countries that need to address spending adequacy (for example, many LDCs) may prioritize reforms to increase coverage. Annex 2 provides an overview of some typical policy reform options.

Macro-level policy choices influence the prices of inputs across the whole health system and the overall cost of guaranteed services provided. These policies directly affect adequacy, sustainability, and efficiency of health expenditure, and typically include the following:

- *Budget controls and caps*, including mechanisms to monitor the level of health expenditure, ensure that actual spending is within budgeted allocations, and enforce hard or soft spending ceilings (Box 9).
- *Scope of health services covered by public schemes* has a direct bearing on public health spending. Policy options may aim at expanding health services and typically include the target population and the package of services offered. Policy options to contain costs and improve efficiency typically include prioritizing the most vulnerable population as well as focusing coverage packages on highly cost-effective services, especially related to communicable diseases and child and maternal health.
- *Management of human resources for health* is critical for the delivery of essential health services and overall system costs (ILO 2019, WHO 2016b). Health service provision requires adequate levels of staffing and competitive remuneration packages to attract and retain qualified staff. Periodic functional reviews and compensation benchmarking of the health workforce can be helpful in identifying workforce reform options.
- *Improving health data and information technology systems that strengthen service delivery, monitoring, and governance*: Reforms to improve health data and information technology projects should have a comprehensive cost-benefit analysis and high-quality program management to ensure good value for

BOX 9. Budget Controls and Caps: France and the United Kingdom

The introduction of the National Objective for Healthcare Spending targets in 1996 in France were an effective cost-containment tool when an early warning system was introduced that allowed payments to be withheld from health providers. On the revenue side, the introduction of the Contribution Sociale Généralisée successfully reduced reliance on wage-based contributions for health insurance. The Contribution Sociale Généralisée accounted for just over a third of social health insurance revenues after 20 years.

The United Kingdom introduced stringent caps on overall government health spending in the 2010s, combined with spending reviews. Two components initially supported meeting these caps: limits to health worker’s pay growth and reductions in administrative costs, principally by abolishing a tier of National Health Service management. These components were complemented by more specific strategies by local health commissioning bodies. Each local commissioning body had a plan to deliver savings, including better medicines management and demand-management measures to reduce the use of hospital care. Significant savings came from reducing the price commissioners pay National Health Service and other providers for care.

Source: OECD 2015.

²⁴ Annex 2 summarizes policy challenges under these headings, building on Clements, Coady, and Gupta (2012). In practice, reform options can also be described around policy levers (for example, regulatory, financing, governance and organizational, service delivery and workforce) or objectives (quality care and access, equity, cost containment, efficiency).

money. These reforms are typically incremental—for example, in Estonia a unified health record was established over time and enables individuals and providers to view all their medical data in one place, including diagnoses, test results, and medications.

Microeconomic incentives supported by gatekeeping institutions and public financial management systems can help enhance the efficiency of health spending. Typical reform areas include:

- *Management and coordination of health services*, including monitoring performance and service quality and applying evidence-based practices. For example, improving coordination across health schemes, taking steps to better integrate health services across different health professionals and levels of care, and avoiding duplication of service provision could offer significant savings (OECD 2020). This can include leveraging technology for medical information sharing. Reviewing activities and processes undertaken in hospitals also helps identify options for significant savings through, for example, reducing avoidable admissions.
- *Contracting and procurement mechanisms*: Reforming contracting structures and incentives, including payments to providers, affect the volume, quality, and costs of health care.²⁵ Moreover, adequate design of procurement processes has the potential to reduce the cost of pharmaceuticals and other medical goods through, for example, improved preprocurement (licensing, selection, and coverage decisions), core procurement (negotiation and tendering processes), and postcontract management (supply execution and performance monitoring). The establishment of a centralized procurement function is a typical reform because it concentrates purchasing power, allowing for lower purchasing costs.
- *Regulation, financial incentives, and information sharing* can affect the use and mix of inputs for health services (Box 10). Common sources of spending inefficiency and typical reform areas include underutilization or unnecessary use of equipment, overuse of medicines, and the mismatch in the mix of inputs (for example, equipment without qualified health workers to operate it). A low uptake of generic medicines can also lead to higher health costs.
- *Public financial management reforms* may help improve the effectiveness and efficiency of health spending, support more strategic and sustainable financing, and promote financial transparency. Burkina Faso, Burundi, and Niger, for example, shifted from input-based to program-based allocation for primary care facilities, allowed more autonomy to providers, and established budget performance monitoring frameworks related to outputs. These changes helped enable more direct funding of primary care facilities from general revenue and increase the share of payments to health providers directly linked to outputs.
- *Copayments* are primarily used in conjunction with other options (for example, budget caps), to manage demand (for example, in Bulgaria, Czech Republic, Estonia, and Hungary). Copayments are often used on specific items, such as pharmaceuticals, and usually exclude essential services and exempt low-income families to avoid disruptions in access to needed care.

Reforms can be used to complement one another, or they can be developed as a package to ensure the right balance of sustainability, adequacy, and equity. For example, combining measures to improve fiscal sustainability (such as budgeting and other cost control mechanisms) with protecting or expanding coverage of primary care can ensure that unintended loss of access for certain groups is minimized and support the sustainability of reforms. Alternatively, the costs associated with expanding coverage can be managed by introducing carefully designed copayments. Likewise, some reforms can improve efficiency, adequacy, and sustainability such as improved management of pharmaceuticals.

²⁵ Purchasing is a core health financing function to allocate funds to health care providers. Reforms to increase the efficiency of purchasing can help maximize health system objectives (Mathauer and others 2019).

BOX 10. Payments to Health Providers

Payment structures to health providers can potentially affect the volume, costs, and the quality of health care services. The literature on the effect of payment structures is mixed, with the effect depending on the interaction with features such as governance and budgeting. The common payment structures include:

- *Fee for service*: A fixed fee for each type of health service. This is a transparent payment structure that reduces financial risks of providers, but that may encourage greater clinical activity and higher costs.
- *Diagnostic-related groups*: Activity-based payment per patient, based on diagnoses and expected resource use. Unlike fee for service, it is set independent of the intensity of services. Diagnostic-related groups encourage efficiency of services but can lead to a focus on more profitable activities and higher transaction costs.
- *Capitation*: Lump sum payment per enrolled patient to cover services. Health providers bear the risk if the population they serve needs additional services. Capitation provides incentives to reduce costs and has lower transaction costs, but may lead to increased registrations or fewer services per patient.
- *Global budgets*: Fixed annual budgets set by a central authority to providers for a range of mandated services. Within this model, wages may be set administratively. Global budgets provide incentives for cost containment and lower transaction costs, but may result in less transparency and rationing of care.
- *Wages and salaries*: In government health services, without contracting, payments to professionals are based on administratively set wages and salaries. In this model, there are limited financial incentives to deliver high quality services, beyond the value of maintaining a high wage.
- *Pay for performance*: Payments to health providers based on performance objectives (for example, clinical outcomes for specific groups such as people with diabetes or satisfaction in hospitals). Pay for performance can have a positive effect of on performance, but have high transactions and measurement costs.
- *Blended payments*: The blending of these different payment structures. For example, in inpatient care, a combination of global budgets, with diagnostic-related groups and some fee for service, or the use of pay for performance.

Source: OECD 2016b.

Global Cooperation on Health and Health Security

Beyond individual countries' policies, some health challenges have a global dimension and require global cooperation to be addressed. The COVID-19 pandemic brought global health security to the forefront of the policy agenda. Addressing the fallout of the pandemic required international coordination. The pandemic was one example of a broader range of health challenges with a global dimension that includes a range of infectious and noninfectious diseases, which highlighted the global good nature of research and development spending and global supply chains of medical goods.

After the pandemic, an active agenda to look at increasing global cooperation on pandemics and health security is moving forward (G20 High Level Independent Panel 2021). The world needs better stewardship of global public goods, including preparedness to fight future pandemics (Agarwal and others 2022). The main international architecture for the management of health security is the International Health Regulations

(2005) (WHO 2016a). Agarwal and others (2022) highlight the need to (1) achieve equitable access beyond vaccines to encompass a comprehensive toolkit, (2) monitor the evolving virus and dynamically upgrade the toolkit, (3) transition from the acute response to a sustainable strategy toward COVID-19, integrated with other health and social priorities, and (4) adopt a unified risk-mitigation approach to future infectious disease threats. Further discussion on pandemic preparedness is in Annex 3.

IV. Incorporating Health Spending Issues Into Country Work

General Considerations

Discussions of health spending issues should be guided by an assessment of their macro-criticality and, where relevant, an analysis of specific economic and financial concerns and policy options. The analysis should cover the following analytical steps (Table 1):

- *Establishing macro-criticality:* This entails assessing health spending along the three macro-critical dimensions discussed earlier: spending adequacy, fiscal sustainability, and spending efficiency. This initial assessment should cover health spending issues as a whole rather than specific health measurements or activities.²⁶ If health spending issues are not deemed macro-critical, and would not effect external and domestic stability, no discussion of health policy issues is expected in surveillance country reports. The analysis of macro-criticality should be tailored to country-specific characteristics and the most pressing economic and financial policy concerns. For example, if a country is facing issues in financing health care, an analysis of the indicators related to public health expenditure or out-of-pocket spending would be relevant; if a country is trying to improve access to quality health services, an analysis of spending adequacy and fiscal sustainability would be appropriate. Where applicable, reports should link the analysis to progress made on the Sustainable Development Goal related to health.
- *Identifying critical features of the health system and reform plans relevant to determine the economic and financial effects of health policies:* The analysis could consider the following points:
 - (1) Broad overview of the health system, including objectives, structure, organization and functioning, and main challenges.
 - (2) Current policies and reform plans, including how they might effect cost, access, and quality.
 - (3) Financing of health services, including public and private funding, the role of insurance companies and other third-party payers, and related processes to pay for health services.
- *Identifying health spending challenges and policy options:* Drawing on the expertise of, and in collaboration with, external partners as needed, staff should analyze health spending issues and policy options. When considering policy options, staff could document evidence of the issues and review potential solutions. Policy options should reflect guidance from IMF technical assistance, consider whether execution could be hampered by limited local capabilities or contexts (for example, fragile and conflict-affected state status), and highlight areas in which technical support would be valuable.
- *Considering macroeconomic and other implications of proposed policy recommendations:* The economic costs and benefits of proposed policy options should be analyzed in terms of their effect on the economy as a whole, different groups of people, health sector businesses and industries, the health care labor market, and health spending. It would be useful to consider both the potential short- and long-term effects of the recommendations. In the context of these analyses, the social-political climate around the health care debate and country-specific domestic social and political policies could be considered by the assessment.

²⁶ The principle of macro-criticality ensures consistency with the IMF mandate. In bilateral surveillance context, macro-critical health issues are covered to the extent that they significantly influence present or prospective balance of payments or domestic stability (IMF 2022). In a lending and program context, macro-critical health issues are discussed and may call for program conditionality under specific conditions (IMF 2014). For more details, see next sections.

Table 1. Illustrative Questions in Analyzing Health Spending Issues

Establish Macro-criticality	Lay Out Key Facts about the Health System/Spending/Reforms Relevant to Assess Economic Effect	Identify Specific Policy Concerns	Formulate Policy Options	Integrate into Macroeconomic Analysis
Are health system expenditures adequate to achieve its objective?	What are the main features and goals of the health system and reform proposals? Organizational and governance structure?	What are the sources of concern? Is it with the design? Coverage? The capacity to implement? With its effect?	If health system is inadequate to meet its objectives, is there fiscal room to enhance health? If not, can measures to increase fiscal space be identified?	What role do policy recommendations play in the IMF's fiscal advice and the macro framework developed by the team? What are the choices for resolving potential trade-offs or inconsistencies?
Is the health system, including reform proposals, fiscally sustainable? Is there a threat to macroeconomic stability from current or anticipated health spending levels? Is it critical for political stability, time-sensitive, or urgent?	How is health spending financed, including public and private funding, the role of insurance companies and other third-party payers?	Are health care reforms jeopardizing fiscal sustainability or macro-economic stability?	If the health system is unsustainable, what are the scope, size, and timing of necessary changes?	Is the proposed timing and sequencing realistic or feasible? Are the proposed milestones and the key reforms clear and measurable?
How efficient is the health care system? Is there a link between inefficiency and design or implementation?	What is the rationale for the reform or changes? Why is this specific proposal on the table?	Have these concerns been articulated in previous IMF reports (that is, Article IVs)? Are they new? Are there analytical gaps?	If the health system is inefficient, what are the potential strategies to improve value for money, such as better monitoring and control procedures?	What are the most important social and political economy concerns? Is there general support for the health design/reform among stakeholders?

Source: IMF staff summary.

The analysis of health spending issues in IMF country papers should be based on a set of key questions relevant to understand their economic and financial implications.

- *What should be the scope and depth of the analysis?* The scope and depth of the analysis depends on various factors, including the level of health spending, its potential fiscal and macroeconomic implications, the authorities' policy priorities and planned reforms, and the particular needs of the health system. For example, a country with a well-developed health infrastructure will require a different analysis compared with a country where the health infrastructure is still being built up. Likewise, a country with a high rate of chronic disease will require a different analysis than one with a high rate of infectious disease. The analysis should also take into account the IMF's in-house expertise and resources that may constrain its depth and degree of specificity. Likewise, staff should be aware of welfare considerations of health policy options and their direct effect on people's lives and wellbeing.
- *Are adequate data available for an assessment?* Data needs vary with the purpose of the analyses, the issues under consideration, and the economic and fiscal challenges related to health spending. Data needed for analysis include, but are not limited to, health spending by government, private entities, and out-of-pocket spending. Additional data to support analyses include health insurance coverage,

access to primary and specialist care, health workforce and infrastructure, prevalence of diseases, and maternal/infant mortality rates.²⁷ Specific indicators might be particularly important in special circumstances (for example, during outbreaks, data on new cases, deaths, and hospitalizations).

- *How should health care be paid for?* The analysis should cover the appropriate form to finance health services because this can affect the quality, accessibility, and sustainability of health spending. In general, a mix of public and private financing is often considered. Discussion of health financing could consider whether health services and specific initiatives should be funded through general taxation or through other financing mechanisms, including earmarked health taxes, employment-related insurance premiums, or mandated individual insurance. In low- and middle-income countries, donor support could contribute to finance health services through either budget support or project financing (for example, hospital construction). Additional financing options should also be discussed if, for example, staff determine that health spending is inadequate. Financing of health care reforms should be assessed in the context of broader fiscal sustainability. Staff should examine whether the identified financing sources are sustainable over time, particularly for donor support and volatile revenue sources.
- *How to leverage collaboration with other institutions?* The analysis of economic and financial policies related to health spending issues may require specialized knowledge, and staff would benefit from collaborating with and leveraging the sectoral knowledge of other institutions and development partners working on health policies, including the World Bank, Organisation for Economic Co-operation and Development, WHO, and UNICEF. This will help ensure that relevant data and analyses are considered, and that findings and recommendations are sufficiently granular and can be effectively implemented. Analyses could require establishing and strengthening collaborations at country level and leveraging any existing centralized collaboration mechanisms with key specialized institutions to coordinate support and activities. Engagement with other institutions would complement support from IMF functional departments and capacity development activities. In addition, given sensitivity around health policies, it is important to discuss public messaging of staff advice on health reforms with key stakeholders and national authorities.

Surveillance

Engagement on macro-critical health spending issues in the surveillance context should occur when such issues affect or have the potential to affect external or domestic stability. This assessment is made on a case-by-case basis and should be risk-based. The depth of engagement needs to balance the level of risk, macro-criticality and urgency of the issues, as well as availability of internal resources and expertise.²⁸ Health spending issues may have significant effect on macroeconomic stability. For example, a severe health crisis could lead to sharp increases in health spending and weaken the fiscal and external positions; health-related shocks could also lower productivity and employment, leading to slower growth, lower trade, and less investment, which could harm macroeconomic stability. Likewise, economic developments may affect health outcomes and create loop effects on economic performance, for example, exchange rate depreciation may undermine pharmaceutical imports, or surges in unemployment may undermine the sustainability

²⁷ Most health data and indicators do not provide a complete picture of a health system but rather a snapshot of the performance in specific areas. Moreover, health indicators vary in their reliability and accuracy. In addition, health indicators should be interpreted in the context of the specific population being studied. For example, maternal mortality rates may be higher in a population with a higher prevalence of HIV/AIDS.

²⁸ For purposes of bilateral surveillance in Article IV consultations, the IMF's engagement on social protection issues is guided by the principles set forth in IMF (2012). This establishes that policies other than exchange rate, monetary, fiscal, and financial sector policies are examined only to the extent that they significantly influence present or prospective balance of payments or domestic stability.

of insurance coverage. Staff should monitor major health developments (for example, pandemics) and assess whether they present policy concerns warranting any engagement.

Health spending analyses should not be limited to public spending and, where relevant, should include an assessment of the role of the private sector and donors. The private sector often plays an important role in the financing and delivery of health services, particularly in emerging market and low-income economies. Through capital investments, the private sector also contributes to innovation, for example in the pharmaceutical industry (Robinson 2021). However, private companies have incentives to profit from health service provision, which, in the absence of proper regulation, can increase costs and raise issues of differential access to care and suboptimal provision of some services, with relevant economic and financial implications. In addition, particularly in low-income countries, donor funding is often a stable feature of health spending financing, with a rising role during health emergencies (for example, outbreaks, pandemics, and natural disasters). The potential volatility of donor resources poses, however, challenges for the sustainability of spending and fiscal management that need to be part of any assessment.

Engagement on health spending issues should cover long-term prospects, issues, and risks. A long-term approach would allow an assessment of the effect on health spending of, for example, population aging, increasing life expectancy, and technological change as well as risks and preparedness to shock such as pandemics. It would also help account for the effect of health spending on human capital, potential growth, and macroeconomic performance. Assessing pandemic preparedness could require specialized knowledge, and Annex 1 provides a list of resources to support staff in making such assessments. Functional departments can also be leveraged to establish and support coordination with WHO/World Bank, where more in-depth assessment is needed.

The analysis should account for possible trade-offs of health policy options. Given the interconnected nature of health systems, numerous trade-offs might be present, particularly when policies affect financial incentives or access to the treatment of different health conditions. For example, higher copayments for preventive care could increase the demand for nonpreventive and treatment care, particularly by poor individuals who cannot afford to pay for both. Insurance policies may also create trade-offs. For example, increasing access to health insurance may risk decreasing the quality of care provided to poor individuals as providers manage a rising influx of patients. In identifying core trade-offs, staff would leverage specialized sectoral knowledge from functional departments and other institutions.

Examples of past engagement on health spending issues in surveillance can offer insights on how to engage with members and collaborate with other institutions on health issues. The extent and depth of IMF engagement on health spending issues typically varies across countries, depending on the specific country context, but some commonalities can be identified (Box 11). First, health spending issues may pose significant macroeconomic risks. Second, data availability is critical for analysis and decision making. In addition, the private sector and donors are often key players in national health systems. Last, collaborating with and leveraging knowledge of development partners and key stakeholders is essential to provide effective macroeconomic advice.

IMF-Supported Programs

Engagement on health spending issues in IMF-supported programs should focus on their role in achieving program objectives or monitoring program implementation.²⁹ The extent and purpose of engagement on health spending issues may vary across countries and programs. Tackling health spending issues can contribute to addressing fiscal management and balance of payment gaps (for example, Greece 2010

²⁹ The analysis refers to IMF lending to low-income countries under the Poverty Reduction and Growth Trust and to other countries under the General Resources Accounts. Where needed, specific references are made to the new Resilience and Sustainability Trust.

BOX 11. IMF Experience with Addressing Health Sector Issues in Surveillance Countries

Mexico (2019/2021)

Context and health sector issues: At the time of the analysis, Mexico's health care system was fragmented, service delivery was unequal (for example, substantial variation in access to health care across states), and administrative costs were high. Health spending has been growing but is below the level of other emerging market economies. The health system consists of separate schemes with parallel provider networks, funding and administrative structures, and the lack of coordination between them increase the administrative and insurance costs of health services and contribute to unequal service delivery. As a result, administrative costs account for almost 10 percent of total health spending and insurance premiums are high. The system was restructured in 2018. At that time, a public health system with integrated finance and provision was introduced to replace Seguro Popular, a public health insurance scheme that separated financing and service supply. In 2022, IMSS-Bienestar—a network that provides health services for those not covered by social security—was elevated to a decentralized agency aiming to further improve coverage.

Reform recommendations: In the context of surveillance activity, IMF's costing exercise suggested that health spending would have to increase by about 1 to 1.5 percent of GDP by 2030 in order to make progress along the health Sustainable Development Goal. Fiscal pressures would be higher if the share of public sector in total health care provision increases and if spending efficiency is not improved. Staff advice from the Article IV Consultations included (1) investment targeting rural and impoverished areas with deficient access to services, (2) reduction in administrative and insurance costs, (3) efforts to improve the portability of insurance, and (4) creation of an information infrastructure compatible across subsystems to improve continuity of care, health outcomes, and reduce beneficiary duplication. Staff also advised to remain vigilant to health and nutrition not getting negatively affected by the removal of conditionality linked education schemes, especially in the pandemic context where school dropout and economic scarring pose highlighted risks.

Thailand (2016)

Context and health sector issues: Thailand achieved universal health care coverage under its 2002 reforms. Before the reform, there were four different state health insurance schemes, which collectively covered over three-fourths of the population. The 2002 reforms consolidated two of those programs and extended coverage to everyone who did not already benefit from the country's health insurance programs for civil servants and formal sector workers. Yet the public health insurance system remained fragmented, with wide differences in benefits, contributions, and financing schemes, which risked hindering service quality and access. With faster population aging and higher than average health care expenditure among Association of Southeast Asian Nations countries, health care expenditure puts pressure on the budget. Public expenditure on health care (including that financed by contributions) was expected to increase over the coming decades.

Reform recommendations: Staff advice from the 2016 Article IV Consultation included (1) undertaking a comprehensive review of the fragmented schemes and formulating a long-term cost projection across the schemes, while setting up a central unit within the Ministry of Finance to monitor public health expenditures across all schemes; (2) improving coordination across the different schemes, minimizing the fee-for-service payment that tends to be prone to overutilization and increasing the use of the capitation payment and close-ended budget; and (3) reviewing contributions with due

Box 11. IMF Experience with Addressing Health Sector Issues in Surveillance Countries
(continued)

consideration to social equity and considering alternative revenue sources, including an increase of value-added tax, which is less distortionary and more growth-friendly.

Japan (2018)

Context and health sector issues: Rapid population aging has pushed up social security spending, raising concerns about medium- to long-term fiscal sustainability. The authorities have made tangible progress on pension reform since the early 2000s, but tackling pressures from health care has proved more challenging. Without reforms, public spending on medical and long-term care is projected to double to about 20 percent of GDP by 2050. Although preserving Japan's public finances sustainability would require revenue collection efforts and expenditure containment measures, financing such a large increase in health care costs with additional revenue would imply radical and potentially disruptive large tax hikes. In addition, there is relatively limited room for further containing nonsocial security spending, which is already low by Organisation for Economic Co-operation and Development standards. This situation has necessitated Japan to advance a comprehensive set of health care system reforms.

Reform recommendations: Staff advice from the 2018 Article IV Consultation included (1) containing total health care spending, focusing on improving efficiency; and (2) increasing the share of out-of-pocket spending, while safeguarding low-income households. Staff laid out options for improving efficiency, including strengthening the gatekeeper function of primary physicians, making greater use of generic drugs, and eliminating nonessential services from the public insurance. Staff analysis suggested that a combination of reforms could generate fiscal savings of up to 2 percent of GDP by 2030.

The Netherlands (2018, 2021)

Context and health sector issues: The Dutch health care system has been providing high-quality and accessible health and long-term care services. However, the rapidly aging population has posed significant cost containment challenges to contain spending pressures. To manage pressure on public finances, the curative health care system underwent a major overhaul in 2006. This reform aimed to transition from a heavily regulated system to a competitive system for insurers to foster efficiency gains and reduce health care prices through bargaining mechanisms, under which insurers were tasked with the responsibility of negotiating the prices with health care providers. Since then, there have been efficiency improvements in the health insurance market, and there was a shift toward increasing premium differentiation offered by insurers, while remaining relatively concentrated. Also, the degree of competitiveness achieved on the health insurance market remains limited, likely reflecting the persistence of important barriers to entry.

Reform recommendations: Staff advice from the 2018 Article IV Consultation suggested the need to quantify positive externalities associated with the aforementioned structural changes (notably, the competitive system to reduce prices), keeping in mind the interactions between health insurers and hospitals, especially when it comes to assessing their relative bargaining power. Regulatory and monitoring agencies should also remain vigilant regarding cost-saving measures entailing a risk of lower quality of care in the future within the new institutional framework. In the context of the COVID-19 pandemic, staff has been assessing the use of available fiscal buffers to provide ongoing support to the health care sector.

Stand-by Arrangement and 2012 Extended Fund Facility [EFF]; Ecuador 2019 and 2020 EFF); supporting inclusive growth and poverty reduction through building human capital and strengthening financial protection (for example, Madagascar 2016 Extended Credit Facility [ECF]; Ghana 2015 ECF); and ensuring economic and financial stability by creating fiscal space to finance needed health spending (for example, programs designed during the COVID pandemic). However, some health reforms take time to implement, and their effect may go beyond the typical program period, hence program documents should clearly establish the links between such reforms and program objectives.³⁰

Authorities' ownership, country-specific circumstances, and administrative capacity are key considerations when considering health policies and reforms in a program context. Authorities' ownership of health policies and reforms is critical for achieving the goals of IMF-supported programs and monitoring program implementation. Given the lasting impacts of health reforms, ownership is also important for continued reform implementation after program completion. To foster ownership and durability, to the extent possible, health reforms should be aligned with the authorities' long-term development goals and embedded into medium-term fiscal frameworks. For example, if the authorities are in the process of expanding health coverage, programs should avoid reforms that undermine the achievement of such medium-term objective. The consideration of policy options should also take account of the authorities' administrative capacity, and a gradual approach may be at times warranted for countries with low capacity.

Coordination with other multilateral institutions is critical to successfully identify and incorporate health policies and reforms in IMF-supported programs. The formulation, implementation, and assessment of health policies requires specific knowledge and experience that are often beyond the IMF's macroeconomic expertise. Collaboration with development partners with specialized knowledge of health issues is thus critical to identify and design specific actions for supporting health reforms critical for IMF-supported programs. It is also relevant in designing program requirements and conditionality (see the following discussion). Furthermore, partner institutions often maintain continuous engagement on health issues with countries and could further the implementation of reforms after program completion. However, even when relying on other institutions, the IMF is ultimately responsible for the design, establishment, implementation, and monitoring of the conditionality under IMF-supported programs.

Conditionality on health reforms can be considered when these reforms are critical to achieve program's objectives or to monitor program implementation. The establishment of program conditionality, including on health spending issues, is subject to the standards set forth in the Guidelines on Conditionality.³¹ These guidelines also require staff to follow the principles of parsimony and criticality, which apply to any conditionality on health reforms. Health measures that do not meet the criteria set in the guidelines, but that the authorities wish to highlight, can be established as commitments in the Letter of Intent and Memorandum of Economic and Financial Policies (for example, Greece 2010 Stand-by Arrangement and 2012 EFF; Ecuador 2020 EFF; Madagascar 2016 ECF). In addition, capacity constraints and the ability to timely monitor implementation are key considerations in designing program conditionality and setting other program commitments.³² Following the general principles, program conditionality on health sector reforms in Poverty Reduction and Growth Trust- and General Resources Accounts-supported programs can take the form of:

³⁰ In the case of the new Resilience and Sustainability Trust, financing aims to address risks to prospective balance of payment stability stemming from select macro-critical longer-term structural challenges, including pandemic preparedness.

³¹ The guidelines (IMF 2014) require that a member's program be directed primarily toward the macroeconomic goals of "solving the member's balance of payment problem and achieving medium-term external viability, while fostering sustainable economic growth." In addition, poverty reduction and durable growth are also important objectives of IMF financing under the Poverty Reduction and Growth Trust.

³² In the case of the new Resilience and Sustainability Trust instrument, conditionality applicable to disbursements will consist of reviews assessing implementation of reform measures and none of the types of conditionality provided under guidelines for lending under Poverty Reduction and Growth Trust and General Resources Accounts support, that is, quantitative performance criteria and indicative targets, prior actions, and structural benchmarks, applies.

- *Quantitative conditions* include quantitative performance criteria (QPCs) and indicative targets (ITs). QPCs are used for clearly specified variables that can be objectively monitored by staff and are critical for the achievement of program goals and implementation. ITs are used if variables of interest cannot be established as performance criteria because of substantial uncertainty about economic trends and yet they are useful to assess progress in meeting program objectives in addition to QPCs. It is unusual that explicit quantitative conditionality is attached to health measures or spending, with some exceptions in postpandemic programs (for example, Democratic Republic of Congo 2021 ECF). However, the outcome of health measures and health spending is often implicitly embedded in other program targets, such as typical QPCs on fiscal deficit or government expenditure, ITs to set floors on the level of social spending (for example, Madagascar 2016 ECF; Ghana 2015 ECF), or in QPC/ITs related to the management of domestic arrears (for example, Portugal 2011 EFF). In general, the coverage of health spending and measures in quantitative conditionality vary to reflect program-specific priorities and the availability of timely and reliable data for monitoring purposes. For example, when critical for fiscal sustainability, quantitative conditionality could focus on a comprehensive coverage of public health spending, including both government and health insurance schemes. However, if data on health spending by insurance schemes are not available or not under the control of the central government, quantitative conditionality could focus on the narrower government health spending if critical for program purposes.
- *Structural benchmarks (SBs)* are conditions considered critical for achieving program goals and are markers to assess the implementation of reforms critical to the program. SBs on health measures are typically used to promote reforms to improve coverage and spending efficiency. Examples include developing action plans to strengthen the efficiency and quality of health spending (for example, Ecuador 2019 EFF) and strengthening human resource management (for example, Ghana 2015 ECF). Quantitative conditions and SBs are often used to complement each other, and actions envisaged as SBs can help meeting health-related quantitative conditions.
- *Prior actions* are measures that a country agrees to take before the IMF Executive Board approves an arrangement or completes a program review to ensure that the program is successfully implemented. Prior actions on health measures that respect the aforementioned conditions are possible.

Quantitative conditions on health spending are unusual, but floors on the level of social spending are widely used in IMF-supported programs and often include and protect health spending. Empirical evidence suggests that, on average, under IMF-supported programs, health spending would be higher or the same as in nonprogram countries after controlling for macroeconomic conditions (for example, Clements, Gupta, and Nozaki 2013; IMF 2017b; Kitsios and Shang 2019).³³ The design of social spending floors—widely used in IMF-supported programs—can help protect health spending when included under the floors (IMF 2017b). Structural public financial management conditionality can also be effective in boosting the long-term level of health expenditures (Gupta, Schena, and Yousefi 2018). In this context, it is also important to communicate and explain in program documents the role of health measures in achieving program objectives.

Engagement on health spending issues has been gaining increasing emphasis in IMF-supported programs and is likely to expand, as occurred during the COVID-19 pandemic. In recent years, IMF-supported programs have increasingly made use of conditionality on social spending floors, often including health spending, to protect or expand spending directed to protect the vulnerable and support inclusive growth. Indeed, recent IMF emergency support and program financing have emphasized the need to generate additional fiscal space to boost health capacity in response to the COVID-19 pandemic. Moreover, the recently approved Resilience and Sustainability Trust is likely to expand staff engagement on health issues related to long-term

³³ In some cases, health spending has declined under an IMF-supported program (Stubbs and others 2017a, 2017b).

financing of pandemic preparedness and response.³⁴ Recent experience under IMF-supported programs offers some useful insights and lessons on how to engage on health spending issues in program context, including on designing health-related program conditionality, the importance of engaging with development partners, and the need for assessing the distributional implications of health spending (Box 12).³⁵

BOX 12. Country Experiences with Addressing Health Spending Issues in IMF-Supported Programs

Greece (2010 Stand-by Arrangement and 2012 Extended Fund Facility)

Context and health sector issues: The 2010 debt crisis forced Greece to undertake fiscal consolidation, covering a broad range of reforms. On the expenditure side, health sector reform was a key pillar in addition to pension and wage reforms.

Reform actions: The health sector reforms comprised both “macro” policy changes and “micro” structural reforms.¹ During the initial stage of the reform starting under the 2010 Stand-by Arrangement (SBA), the authorities focused on advancing “macro” reforms, including budget caps and improvements in pricing mechanisms. Over time, the focus shifted toward “micro” reforms, including the promotion of gatekeeping, e-prescriptions, and generic drugs. The government also advanced simplification of the fragmented health care system by establishing the Single Organization for the Provision of Healthcare Services (EOPYY) and merging all health funds in EOPYY. The comprehensive reform successfully improved the efficiency of the sector and curtailed public health expenditure by nearly 2 percentage points, from 6½ percent of GDP in 2010 to 4¾ percent of GDP in 2018, below the Organisation for Economic Co-operation and Development average of 6½ percent of GDP. However, unmet demands, in medical and dental care, among low-income households have emerged, requiring a rebalancing of spending directed toward this vulnerable population.

Conditionality: Under the 2010 SBA, the authorities committed to improving pricing and cost mechanisms and simplifying the fragmented health system, in addition to implementing budget caps, in their Memorandum of Economic and Financial Policies. Budget caps were introduced in the form of performance criteria on overall expenditure, as opposed to controlling public health spending specifically. Similarly, under the 2012 Extended Fund Facility (EFF), the authorities’ Memorandum of Economic and Financial Policies committed to structural measures such as promoting the use of generic drugs and merging all health funds under the EOPYY. The 2012 EFF did not introduce any quantitative conditionality directly capping the health spending. Neither the 2010 SBA nor the 2012 EFF adopted structural benchmarks (SBs) specific to health sector reforms.

¹ This classification was applied to the Greek health sector reforms by Kalavrezou and Jin (2021).

³⁴ The Resilience and Sustainability Trust aims at helping countries build resilience to external shocks and ensure sustainable growth, contributing to their long-term balance of payments stability. It complements the IMF’s existing lending toolkit by focusing on longer-term structural challenges that entail significant macroeconomic risks and where policy solutions have a strong global public good nature, including pandemic preparedness and response, and climate change.

³⁵ In the case of the Resilience and Sustainability Trust, the IMF Executive Board directly underscored the importance of close and systematic coordination with the World Bank and other relevant institutions to leverage specialized expertise, provide coherent policy advice, and catalyze financing.

Box 12. Country Experiences with Addressing Health Spending Issues in IMF-Supported Programs (continued)

Ecuador (2019 and 2020 Extended Fund Facility)

Context and health sector issues: Rising public debt required Ecuador to embark on comprehensive fiscal reforms under the 2019 EFF. The country has been addressing health sector reforms within broader fiscal consolidation.

Reform actions: To balance fiscal consolidation and address health spending needs, the authorities aimed to strengthen the efficiency of health spending under the 2019 EFF including through technical assistance from the World Bank. Although reforms were not completed under the 2019 EFF, the authorities placed emphasis on improving spending efficiency, including in the health sector, under the subsequent 2020 EFF. In 2020, the IMF disbursed \$4.6 billion (4.3 percent of GDP) under the EFF and Rapid Financing Instrument to help Ecuador address the effect of the COVID-19 pandemic. In 2021, pandemic-related spending increased by \$1 billion, much of it for health, including on vaccines. Specific actions included issuance of decrees to reform the procurement system to make it more competitive and less cumbersome, lowering the barriers to entry, and creating reference prices for standardized medicines and medical equipment to limit medical costs. In addition, the authorities committed to conduct medical audits of public pensioners' health care claims to ensure appropriate treatment and prescription protocols are being followed.

Conditionality: The 2019 EFF adopted an SB on the publication of an action plan to strengthen the efficiency and quality of primary education and health spending. The authorities were not able to implement this SB under the 2019 EFF. However, building on the reform momentum, in their MEFP at the request for the 2020 EFF, the authorities committed to improving public procurement efficiency and generating fiscal savings. To achieve these objectives, they have subsequently identified concrete actions (as listed under reform actions).

Madagascar (2016 Extended Credit Facility)

Context and health sector issues: Given the persistence of poverty, the key objectives of the 2016 Extended Credit Facility (ECF) included ensuring macroeconomic sustainability and achieving sustainable and inclusive growth. Addressing these challenges required shifting resources toward priority areas such as health, education, and infrastructure.

Reform actions: In the health sector, authorities aimed at increasing health sector resources and integrating health spending in their medium-term budget framework to secure resources for priority health spending in a systematic and strategic way. Through this approach, they intended to address long-standing health challenges such as nutrition, vaccination, and infant and maternal health.

Conditionality: The ECF introduced an indicative target on social spending that covered health sector spending and an SB on the integration of the health and education sector spending plans within a medium-term budget framework, the latter of which was met. In the MEFP at the time of the ECF request, the authorities also committed to improving the quality of health services, in addition to expanding the sector's resources, and expressed their intention to establish the foundation for achieving universal health coverage.

Ghana (2015 Extended Credit Facility)

Context and health sector issues: Before the 2015 ECF, Ghana faced rising public debt and consequently, high interest payments, which constrained development and social spending. This situation

Box 12. Country Experiences with Addressing Health Spending Issues in IMF-Supported Programs (continued)

necessitated the implementation of a sizable and frontloaded fiscal adjustment, while safeguarding priority social and health spending.

Reform actions: Alongside containing nonpriority spending, the authorities continued to expand social spending, including health sector spending, by utilizing savings generated through fiscal consolidation. They expanded the volume of social spending and improved efficiency in the health sector by enhancing human resource management. The 2014 Article IV staff report, which analyzed social inclusion as a key objective on the authorities' agenda, provided inputs for policy discussions on these actions.

Conditionality: The 2015 ECF set a social spending indicative target, which covered selected health and social safety net programs. To improve spending efficiency in the health sector, the ECF also adopted an SB on strengthening human resource management in the sector (integration of payroll and human resource management systems), which the authorities implemented during the ECF period. While formulating IMF policy advice and conditionality, IMF staff collaborated with the World Bank, which engaged with the authorities on social spending issues, including health programs and Ghana's National Health Insurance Scheme.

Annex 1. Resources Supporting Engagement

Staff can rely on a rich set of internal and external resources (Boxes 1.1 and 1.2). Resources include analytical papers and toolkits that can assist in performing standardized assessment analyses. Development partners—including the World Bank, the World Health Organization, Organisation for Economic Co-operation and Development, the European Commission, and other EU agencies—are important sources of information. The Fiscal Affairs Department is available to assist staff in identifying health experts at development partners. Staff can request input from the Fiscal Affairs Department, including ad hoc consultation, desk studies, and technical assistance reports. Further publications are in the references.

Internal Resources

IMF Staff Publications

Agarwal, Ruchir, Gita Gopinath, Jeremy Farrar, Richard Hatchett, and Peter Sands. 2022. “A Global Strategy to Manage the Long-Term Risks of COVID-19.” IMF Working Paper 22/068, International Monetary Fund, Washington, DC.

Clements, Benedict J., David Coady, and Sanjeev Gupta (Eds.). 2012. *The Economics of Public Health Care Reform in Advanced and Emerging Economies*. Washington, DC: International Monetary Fund.

Garcia-Escribano, Mercedes, Pedro Juarros, and Tewodaj Mogues. 2022. “Patterns and Drivers of Health Spending Efficiency.” IMF Working Paper 22/48, International Monetary Fund, Washington, DC.

Gaspar, Vitor, David Amaglobeli, Mercedes Garcia-Escribano, Delphine Prady, and Mauricio Soto. 2019. “Fiscal Policy and Development: Human, Social, and Physical Investment for the SDGs.” IMF Staff Discussion Note 19/03, International Monetary Fund, Washington, DC.

International Monetary Fund (IMF). 2017. *Fiscal Monitor: Tackling Inequality*. International Monetary Fund, Washington, DC, October.

International Monetary Fund (IMF). 2017. “Social Safeguards and Program Design in PRGT and PSI-Supported Programs.” IMF Policy Paper 17/029, International Monetary Fund, Washington, DC.

International Monetary Fund (IMF). 2019. “A Strategy for IMF Engagement on Social Spending.” Policy Paper 19/016, International Monetary Fund, Washington, DC.

International Monetary Fund (IMF). 2020. “Managing the Impacts of the Coronavirus: Guidance on Health Spending Policies.” Special Series on Fiscal Policies to Respond to COVID-19, International Monetary Fund, Washington, DC.

Other Internal Resources

The IMF Expenditure Policy Division maintains an internal knowledge exchange website, including selected notes and analytical toolkits on health. The Expenditure Assessment Tool provides information to assess public expenditures, including spending on health, and allows benchmarking with country peers. In addition, the website includes a Health Assessment Tool that provides key indicators for assessing spending adequacy, spending efficiency, and fiscal sustainability, including level of health spending, level of health coverage, and the relationship between health spending and healthy life expectancy.

The Fiscal Affairs Department regularly publishes long-term projections of health expenditures as annexes to the *Fiscal Monitor*. These health expenditures projections are regularly updated when new data become available (base year expenditure, and the drivers of future trends: demographics, excess cost growth, technology). The Government Finance Statistics database (<https://data.imf.org/gfs>) includes expenditure by function of government, including on health.

External Resources

ANNEX BOX 1.1. External Resources to Support Engagement on Health

World Health Organization (WHO)

- Data:
 - ◆ Global Health Observatory Data (<https://www.who.int/data/gho>)
 - ◆ European Health For All Database (HFA_DB); (<https://gateway.euro.who.int/en/datasets/european-health-for-all-database/>)
- Publications:
 - ◆ Analytical and policy publications (including regional publications) (<https://www.who.int/publications>)
 - ◆ Country profiles (for WHO European Regions that includes Commonwealth of Independent States and Central Asia countries) (<https://gateway.euro.who.int/en/country-profiles/>)

World Bank

- Data:
 - ◆ World Bank Health Data (<https://data.worldbank.org/topic/health>)
- Publications:
 - ◆ Analytical and policy publications (<https://www.worldbank.org/en/topic/health>)
 - ◆ Work on universal health coverage (<https://www.worldbank.org/en/topic/universalhealthcoverage>)
 - ◆ Public Expenditure Reviews (<https://openknowledge.worldbank.org/handle/10986/2109>)

Organisation for Economic Co-operation and Development (OECD)

- Data:
 - ◆ OECD Health Statistics (<https://www.oecd.org/health/health-data.htm>)
 - ◆ Health Care Quality and Outcomes (<https://www.oecd.org/health/health-care-quality-framework.htm>)
 - ◆ Health Expenditure (A System of Health Accounts) (<https://www.oecd.org/els/health-systems/health-expenditure.htm>)
 - ◆ Health at a Glance (<https://www.oecd.org/health/health-at-a-glance/>)
- Publications:
 - ◆ Health Policy Studies (<https://www.oecd.org/health/health-publications.htm>)
 - ◆ Working Papers (<https://www.oecd.org/health/health-working-papers.htm>)
 - ◆ Country Health Profiles (<https://www.oecd.org/health/country-health-profiles-eu.htm>)

Eurostat Resources

- Data:
 - ◆ Health database (<https://ec.europa.eu/eurostat/web/health/>)
 - ◆ COFOG expenditure data (https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Government_expenditure_by_function)

ANNEX BOX 1.1. External Resources to Support Engagement on Health (continued)**European Observatory on Health Systems and Policies**

- Publications:
 - ♦ Publications by theme (<https://www.who.int/europe/publications>)
 - ♦ Country Health Profiles (<https://eurohealthobservatory.who.int/publications/country-health-profiles>)

UN Resources

- UN Sustainable Development Goals: Goal 3 (<https://sdgs.un.org/goals/goal3>)
- UN Children's Fund (<https://www.unicef.org/media/119736/file/UNICEF-Strategy-for-Health-2016-2030.pdf>).

The Dartmouth Atlas of Health Care

- <http://www.dartmouthatlas.org/>

ANNEX BOX 1.2. Resources to Support the Assessment of Pandemic Preparedness

IMF country teams, with support from functional departments, may need to draw on a range of sources to assess pandemic preparedness. Pandemic preparedness diagnostics and action plans prepared by the World Health Organization, the World Bank, other development partners, and/or the country authorities are the starting point. Key diagnostic sources include the following:

- Joint External Evaluations (<https://www.who.int/emergencies/operations/international-health-regulations-monitoring-evaluation-framework/joint-external-evaluations>), State Party Annual Reports, Universal Health & Preparedness Review (<https://www.who.int/emergencies/operations/universal-health---preparedness-review>), and Global Health Security Index reports (<https://www.ghsindex.org/>)
- National Action Plan for Health Security (<https://www.who.int/emergencies/operations/international-health-regulations-monitoring-evaluation-framework/national-action-plan-for-health-security>)
- World Bank Pandemic Preparedness Assessments and Public Expenditure Reviews

Annex 2. Typical Health Policy Options

Macro-Level Reforms	Micro and Demand Reforms	Adequacy/Coverage Reforms
<p>Top-down budget control and caps</p> <p><i>Description:</i> Developing institutions/ rules to introduce hard budget constraints on aggregate or component parts of budget and then managing expenditure in line with national priorities.</p> <p><i>Implementation complexity:</i> Depends on current settings and may only be possible for subcomponents of the budget (or may exclude devolved administrations). Expectation setting can be used in interim. Building in flexibilities to ensure protections of key health services is important.</p> <p><i>Scale:</i> Large. This initiative has potentially large benefits for certainty and scale of expenditure, but comes with risks associated with not meeting needs or ability to maintain for long periods (if cap is too strict).</p> <p><i>Examples:</i> Chile, Estonia, Sweden, United Kingdom</p> <p><i>Further reading:</i> OECD 2015</p>	<p>Public management and coordination, including performance/quality monitoring; strategic steering (goals) and devolution</p> <p><i>Description:</i> Developing institutions/ rules to monitor and steer the system to achieve the policy objectives. Goals can be set legislatively or involve specialist bodies to monitor the system.</p> <p><i>Implementation complexity:</i> Requires appropriate mix of centralized priority setting, quality assurance, and devolved decision making.</p> <p><i>Scale:</i> Medium/large. Effective health systems require strategic steering and quality assurance mechanisms, but right balance for the country circumstances is important.</p> <p><i>Examples:</i> Canada, Norway, Sweden</p> <p><i>Further reading:</i> WHO 2022</p>	<p>Universal health care (with low out-of-pocket expenses)</p> <p><i>Description:</i> Expanding access and affordability of the basket of health services across the population toward the goal that people in need of promotive, preventive, curative, rehabilitative, or palliative health services receive them, and that the services received are of sufficient quality to achieve potential health gains.</p> <p><i>Implementation complexity:</i> High—requires building capability, mobilizing revenues, and a medium-term commitment.</p> <p><i>Scale:</i> Large.</p> <p><i>Examples:</i> France, Germany, Korea, Norway, Tanzania, Thailand</p> <p><i>Further reading:</i> WHO and World Bank 2023</p>
<p>Supply side reforms: Clear description of the public offering/ exclusions</p> <p><i>Description:</i> Using evidence to inform the core basket of health goods and services and exclusions. This can include classes of care (for example, primary, secondary, and tertiary), medical procedures, pharmaceuticals, medical products and technologies, and services (dental and optical).</p> <p><i>Implementation complexity:</i> Some calls can be based on inclusions/ exclusions of other countries, but ideally internal institutions make evidence-informed decisions on effectiveness and equity.</p> <p><i>Scale:</i> Medium. Some evidence that systematic assessment of high-quality interventions can lead to additional spending. Nevertheless, can be important part of package.</p> <p><i>Examples:</i> Netherlands, Sweden, Thailand</p> <p><i>Further reading:</i> OECD 2017</p>	<p>Public management: Duplication and administrative costs</p> <p><i>Description:</i> Identifying administrative cost efficiencies including simplifying procedures—partly by making better use of information communications and technology—and optimizing the size of administrative bodies to generate economies of scale. In addition, regulatory changes can have an effect on administrative costs and the administrative workload of health providers.</p> <p><i>Implementation complexity:</i> Low.</p> <p><i>Scale:</i> Probably small in a COVID environment with stretched health resourcing.</p> <p><i>Examples:</i> Estonia, Germany, Greece, The Netherlands</p> <p><i>Further reading:</i> OECD 2017; Kalavrezou and Jin 2021</p>	<p>Maternal and child health</p> <p><i>Description:</i> Expanding the quality and access of health services for mothers and children, including immunization and nutrition embedded within a cross-government approach to support child wellbeing and development. Conditional cash transfers in India, for example, have been associated with increased institutional/ hospital births.</p> <p><i>Implementation complexity:</i> Medium, requires cross-government coordination and investment.</p> <p><i>Scale:</i> Large.</p> <p><i>Further reading:</i> WHO 2021a; Randive, Diwan, and De Costa 2013</p>

(Continued)

Annex 2. Typical Health Policy Options (*continued*)

Price controls: Health sector wages

Description: Identify if wages for health sector are high compared with private sector and then moderate future wage setting.

Implementation complexity: Political economy of reform difficult and therefore can be scaled back. Often more successful at the roles level.

Scale: Low/medium—depending on the size of the wage gaps and implementation.

Further reading: IMF 2016

Contracting and market mechanisms, including incentives on hospitals/providers

Description: Reforming market structures and incentives, including payment structures for providers (for example, service versus capitation payments).

Implementation complexity: High—all countries have faced challenges in improving the incentives in their systems.

Scale: Large, but implementation difficult.

Examples: Germany, Japan (structures); Belgium, Denmark, France (payments)

Further reading: OECD 2016b¹

Primary care access and cost

Description: Expanding quality and access to community-based providers with a particular focus on educative and preventative activities.

Implementation complexity: High—requires capability building.

Scale: High—evidence for the highest returns when expanding coverage.

Examples: The Netherlands, United Kingdom

Further reading: WHO and World Bank 2023

Prices controls: using institutions to manage pharmaceuticals and medical technology costs

Description: Developing evidence-based institutions to assess medical products and pharmaceutical effectiveness and improve procurement.

Implementation complexity: Medium, many successful models, but political economy can be challenging in some contexts.

Scale: Medium to large depending on effectiveness.

Examples: Australia, Colombia, Greece, Mexico

Further reading: OECD 2017

Hospital inpatient efficiencies including gatekeeping and triage

Description: Reviewing the activities and processes that are undertaken in hospitals and identifying options to improve efficiency and reduce avoidable admissions.

Implementation complexity: High.

Scale: High.

Examples: The Netherlands, Norway

Further reading: OECD 2017; Emanuel 2020

Investments in effective health interventions, pharmaceuticals, and social determinants

Description: Identifying highly effective interventions inside (such as immunization, health security, and Malaria bed netting) and outside the health system (including water, sanitation, and nutrition), where further investment could significantly improve health outcomes.

Implementation complexity: Medium.

Scale: High.

Further reading: WHO and World Bank 2023; WHO 2018b

(Continued)

Annex 2. Typical Health Policy Options (*continued*)

Supply side reforms: workforce strategies and structure (for example, nurse practitioners)

Description: Considering the scope and roles of health professionals, such as nurses and pharmacists, and identifying training and occupational licensing barriers to changing the scope.

Implementation complexity: Many successful models of changing the scope of roles, but often takes time to implement systems.

Scale: Results often improve quality and access to services, rather than resulting in spending efficiencies.

Examples: Brazil, Canada, Ethiopia, India, Mexico, The Netherlands, United States

Further reading: OECD 2017

Demand side: copayments for certain services (for higher-income families)

Description: Identifying areas for patient copayment without reducing demand for services that result in longer-term costs. Often used as a vehicle to expand coverage or in conjunction with other options (such as budget caps).

Implementation complexity: Depends on the coverage, but will involve some transaction costs and risk of underprovision of care.

Scale: Medium to low.

Examples: Bulgaria, Czech Republic, Estonia, Hungary

Further reading: WHO 2010

Source: IMF staff summary.

¹A recent IMF Working Paper examines the degree to which market concentration may influence health prices in the United States (Lin, Mrkaic, and Weber 2021). Their findings suggest that promoting more competition in health care markets and reducing barriers to entry can help contain health care costs.

Annex 3. COVID-19 and Pandemic Preparedness

According to the World Health Organization (WHO), as of early 2023, there were 759 million reported cases of COVID-19, excess mortality of more than 14.9 million people, and more than 6.8 million reported deaths. The economic consequences included the largest drop in global GDP (of over 3 percent) and the largest rise in public debt (of more than 9 percent of GDP or more) in more than half a century.¹ The consequences from the COVID-19 outbreak raise the question of what steps should be considered to prevent, detect, and respond to future global health emergencies. Health security resilience requires systems to prevent, detect, and respond to large disease outbreaks without undermining other socioeconomic priorities (including other health needs). Many of the elements used to address COVID-19 also build resilience against future outbreaks and health shocks, such as testing and tracking capacity, a public health function, and health system capacity.²

Infectious disease outbreaks in countries need to be identified and managed early to prevent global pandemics, meaning that global health is vulnerable to weak individual country preparedness. There have been successes where potential global pandemics have been avoided, including yellow fever and Ebola. Only 15 percent of countries have an average health security summary (Joint External Evaluations) score of more than 80 (consistent with demonstrated health security capacity) and nearly one-third of countries have a Joint External Evaluations score of 40 or less (consistent with no or limited capacity in core components). A lesson from COVID-19 is that these capacities must be deployable in an emergency.

The pandemic toolkit has global, national, and health system dimensions. Global instruments can channel multilateral and regional efforts to support effective national actions (for example, surveillance and border control), set standards and frameworks (for example, diagnostics and monitoring), and mobilize resources across borders (for example, finance, workforce, and supplies). National frameworks and institutions enable prevention, detection, and response activities between public and private institutions. These include reliable budget and public financial management systems, enabling legal frameworks, credible and adequately resourced plans, and stress-tested capability across government. Health system strengthening is important for managing the health consequences of the pandemic as well as detecting and preventing pandemics.

Pandemic preparedness comes with a small cost relative to the potential global economic and social effect. Costs have been estimated to be as low as 1 percent of health budgets for LIDCs and a further \$15 billion per annum from international financing (G20 High Level Independent Panel 2021), with the global economic losses from COVID-19 in the trillions. However, pandemic preparedness requires long-term resourcing. Financing should support national ownership and achieve multiple benefits over the medium term (such as investments in primary health care that support both health and pandemic preparedness) to support this enduring focus.

¹ For a discussion of some of the channels between COVID-19 and economic outcomes, particularly for LIDCs, see Loko, Nembot, and Poplawski-Ribeiro (2022) and Miguel and Mobarak (2021).

² Agarwal and others (2022) highlight the need to (1) achieve equitable access beyond vaccines to encompass a comprehensive toolkit; (2) monitor the evolving virus and dynamically upgrade the toolkit; (3) transition from the acute response to a sustainable strategy toward COVID-19, integrated with other health and social priorities; and (4) create a unified risk-mitigation approach to future infectious disease threats beyond COVID-19.

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