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Health Financing in Times of Multiple Crises: Analysis and Recommendations

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Summary

The COVID-19 pandemic has exposed the fragility of health systems and highlights the need for renewed efforts to finance pandemic preparedness, prevention and response (PPR) mechanisms, and universal health coverage (UHC). Two lessons emerge from this global health challenge. First, it has shown that global problems need global solutions, as well as the agency of local and national actors to make them work, so **it is recommended that public health be considered a global public good**. This requires solidarity between rich and poor countries to attain a globally "highest attainable standard" for managing pandemics and other public health emergencies.

The provision of such a global public good requires substantial public resources. Furthermore, the focus should not only be on preventing the spread of diseases but also on detecting and fighting infectious diseases at their source. The second lesson is that **prevention is a good investment**, as it costs less than remedial interventions at later stages. Health systems can be considered as the means by which health priorities, such as pandemic PPR and UHC, can be operationalised. Studies show that health systems that could effectively leverage both robust health security core capacities (e.g. laboratories) and fundamental UHC interventions (e.g. accessible health facilities) were often in a better position to protect their citizens against the negative impacts of the COVID-19 pandemic.

Focusing on the landscape of health financing in low- and middle-income countries (LMICs), it becomes clear that during the COVID-19 pandemic there was a substantial increase in international health financing. However, **continued high out-of-pocket expenditure (OOPE) in LMICs points to a structural imbalance in health financing**, which is one of the major barriers for achieving SDG3. Further contribution from international development assistance and an increase in domestic government expenditure by LMICs through improved mobilisation of domestic resources is therefore imperative. Funding gaps to achieve PPR and UHC in LMICs are small in relation to the projected costs of a pandemic such as COVID-19. However, as global debt levels soar, fiscal spaces to close these funding gaps become smaller. The following policy options for governments and international development partners should be considered to protect and improve spending on health in times of shrinking fiscal spaces: **reallocation within budgets towards health, better priority-setting of health financing, and greater use of debt-to-health swaps, health taxes and national health insurance schemes.**

Importantly, investment in health is critical not just for the health benefits, but also because of the positive socio-economic impacts that result, in excess of the level of investment. Improved well-being and health outcomes translate into higher productivity and income, with a benefit–cost ratio of nine for low-income countries and 20 for lower-middle income countries. Given the high rates of unemployment in many LMICs, investments that create jobs in the healthcare sector are also beneficial for other sectors. Evidence shows that for every healthcare professional job that is created, 3.4 jobs are created on average in other sectors. As a large proportion of healthcare workers is female, these new jobs can be an opportunity for young women, in particular, and can help to promote female empowerment and gender equality. Altogether, these long-term benefits affirm that investment in health can enable large spillover effects on the social and economic dimensions of sustainable development and the implementation of the 2030 Agenda for Sustainable Development.

Background

Given the multiple crises and their substantial costs, functioning health systems are not only a basic human right, but are also a crucial element of being prepared for future global shocks. Consistent levels of public spending on health are central to progress towards health security and universal health coverage (UHC), which depends on access to comprehensive, appropriate, timely and quality health services, without financial burden. The COVID-19 pandemic has shown that preparedness is always cheaper than control. Yet pandemic prevention, preparedness and response (PPR) are still underfunded. Pandemic PPR requires the rapid deployment of further resources, specifically for the Pandemic Fund, a future Medical Countermeasures Platform and the implementation of the pandemic agreement.

Germany has invested heavily in health sectors in recent years. In addition, the Federal Ministry of Economic Cooperation and Development (BMZ) of Germany, has declared global health to be a political priority, with its core theme “Health, Social Protection and Population Policy”, thereby sending a well-founded signal that it will be even more active as a viable partner in health in the future.

Given this political priority, it is critical to understand the global challenges in health financing and the potential socio-economic benefits of investing in health, particularly for low- and middle-income countries (LMICs). This policy brief summarises key studies, insights and latest statistics that have been derived from health-related research aimed at answering the following questions: What lessons from the past global health challenges should we consider for investing in the future financial design and strengthening of health systems? What is the current level of investment in health financing and what would be the financing needs and options in order to achieve UHC and pandemic PPR in LMICs? What are the socioeconomic impacts of investments in health systems in LMICs?

Lessons from global health challenges for health financing

During the previous decade, there have been at least three major pandemic outbreaks, namely Zika virus, Influenza H1N1 and the recent COVID-19 pandemic. Despite the substantial increase in spending on health, national health systems and health coordination on the multilateral level have been inadequate to effectively respond to these outbreaks as well as to the rapidly increasing prevalence of other communicable diseases, threats posed by emergence of anti-microbial resistant pathogens and other health impacts of global environmental changes (Soucat, 2019). This calls for renewed efforts to fulfil the global commitment under the International Health Regulations (IHR) and the future Pandemic Agreement/Accord to maintain the functioning of health systems at the level of preparedness required to manage pandemics and other public health emergencies. In general, two main lessons emerge from these global health challenges:

First, for global health security to be achieved, it is necessary to treat public health as a global public good. The multiple global health challenges have shown that global problems need global solutions, which in turn rely on the agency of local and national actors. Assuming that global socio-economic inequalities have led to different levels of health services in different countries, the globally “highest attainable standard” that secures a level of health services for managing pandemics and other public health emergencies can only be reached through transregional solidarity across countries of different income levels (Kickbusch et al., 2022), including, in particular, equitable financial contributions of high-income countries. One example of such health standards is the effective control of infectious diseases. Seen from this perspective, health as a global public good would be an instrument for improving “health security for all”, and not only the security of non-affected world regions from the spread of diseases from infected regions. This implies a focus which is not only concerned with preventing the spread, but which also accounts for the global availability of a

minimum standard of health services to detect and fight infectious diseases at source and to reduce the prevalence of endogenous persistent diseases. Importantly, this should be achieved by health systems strengthening that simultaneously leverages health security and UHC to ensure long-term resilience and equity (Lal et al., 2022). Studies show that health systems able to effectively leverage both robust health security core capacities (e.g. surveillance, laboratories, and risk communication) and fundamental UHC intervenetions (e.g. primary health care, affordable medicines and supplies, accessible health facilities, and health workers) were often in a better position to protect their citizens against the social and economic impacts of the pandemic (Assefa et al., 2021; Malik et al., 2021; Shroff et al., 2021).

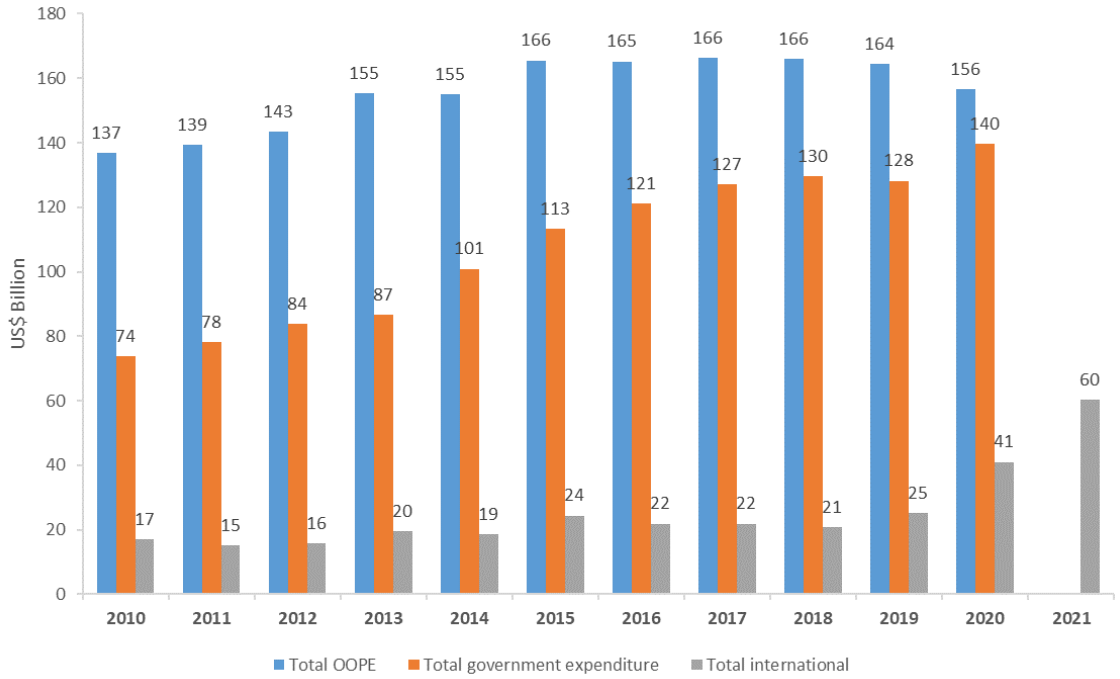
Second, preparedness and prevention are good investments as it costs less than compensating for deficits with remedial interventions at later stages. This is critical, in particular, for investments in pandemic PPR. Experience with COVID-19 and earlier outbreaks such as Ebola and Zika clearly show that investments in pandemic preparedness are likely to generate significant returns for LMICs that far outweigh the costs. These returns are mostly generated due to the reduction of costs that would have been incurred without investment in pandemic preparedness. A major modelling study points to returns on pandemic preparedness investments from averted healthcare costs. The investment of US$1 could save on average up to US$1,000 if a pandemic like COVID-19 were to strike again within the next decade (The Global Fund, 2022). This extraordinary return on investment derives from avoiding the economic disruption of lockdowns and travel restrictions, keeping schools and other vital institutions open, and averting infections and deaths. However, investments in pandemic PPR should not come at the expense of basic health system financing. It is recommended that future pandemic preparedness and response mechanisms prioritise health system strengthening strategies focused on UHC to ensure resilience and equity in the long term (Lal et al., 2022). UHC is an equally important, although often overlooked, element in pandemic preparedness. In the first six months of the COVID-19 pandemic, about 90% of countries reported disruptions to essential health services, and many individuals were unable to access nearby health centres or afford testing. These disruptions can largely be attributed to inadequate progress on UHC and its poor consideration in pandemic PPR (Mustafa et al., 2022).

Landscape of health financing and implications for future investments

Financial resources are an essential input to health systems. These are necessary to purchase medicines and supplies, build health facilities, and pay health workers. Tracking financial resources for health is a prerequisite for assessing the performance of health financing systems. Figure 1 shows total international funds for health financing (including ODA, other official flows (OOF) that consist of official transactions for commercial purposes from private companies, and funds from private donors such as the Bill and Melinda Gates Foundation), in comparison to domestic funding sources such as government expenditures and households' out-of-pocket expenditure (OOPE) between 2010 and 2020. Domestic OOPE continues to be the most popular means of financing, accounting, on average, for 55% of the total value of health financing in LMICs. This value slightly decreased in the first phase of the pandemic between 2019 and 2020, due to the economic downturn in many LMICs, which typically leads to a decline in use of health services that require payment.

Focusing on total international funds for health, there has been a substantial increase, from US$25 billion in 2019 to US$41 billion in 2020 and to US$60 billion in 2021, which is a relative increase of 136% between 2019 and 2021 (64% between 2019 and 2020). Most of the additional international funds were used for the COVID-19 health response (Micah et al., 2023). At the same time, total government expenditure on health (including COVID-19 response measures) moderately increased by 11%, from US$128 billion in 2019 to US$140 billion in 2020. The majority of governments

Figure 1: Health financing in LMICs between 2010 and 2020

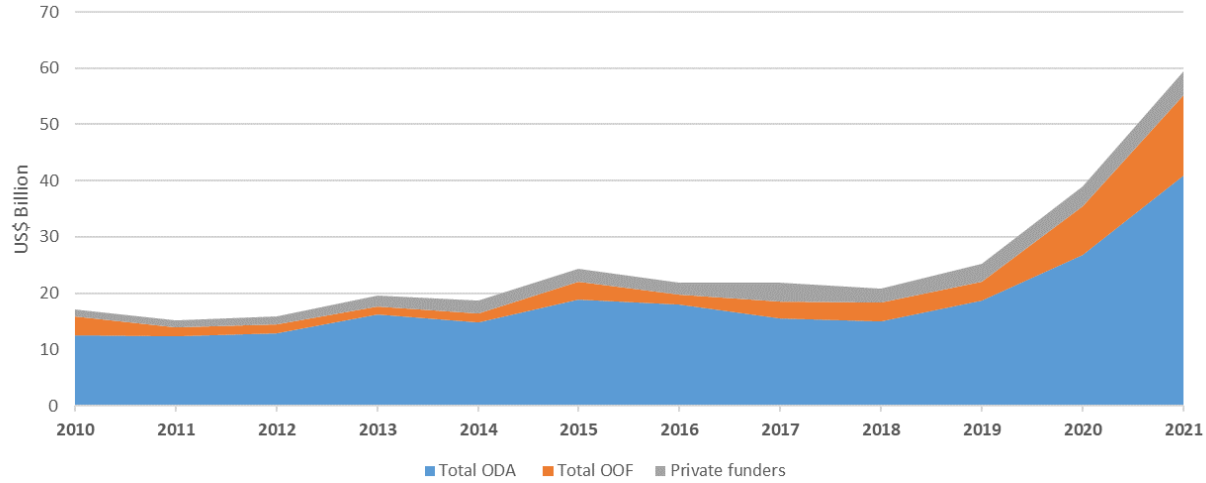


Note: OOPE: out-of-pocket-expenditure. Data for total government expenditures and total OOPE in 2021 is missing.

Source: Authors own illustration, based on OECD.Stat; WHO Global Health Expenditure Database. Values reported in 2020 inflation-adjusted US$.

in LMICs have been willing and able to increase their spending on health, despite declining economic output and government revenue during the COVID-19 pandemic. Even before the pandemic, one can observe an increase in government health expenditure. Importantly, within LMICs such expenditure varies widely (Vrijburg & Hernández-Peña, 2020). Countries with similar income levels often have different levels of government health expenditure. The policy choices each government makes in the organisation of its health financing system, as well as differences in epidemiological patterns, have important implications for health spending levels and explain much of the observed variation. Nevertheless, even in the time of the COVID-19 pandemic, the largest funding source is still OOPE. This substantial reliance on OOPE is one of the major barriers for LMICs to achieve SDG3, as the main source of funding for healthcare in many households in these countries is still their disposable income, which exacerbates inequalities in access to affordable and quality healthcare. In order to understand the development of total international funds for health financing over time, Figure 2 depicts the components of this indicator separately, i.e. ODA, OOF and private donors. Considering the period between 2010 and 2018, the total volume of health-related ODA provided by the OECD DAC remained stagnant. However, during the COVID-19 pandemic there was an increase in ODA targeted at health from US$20 billion in 2019 to US$40.9 billion in 2021, while OOF increased from US$3.3 billion to US$14.3 billion, which is mostly due to official transactions for commercial purposes from private companies. The substantial increase in ODA payments by more than US$20 billion is related to spending for the COVID-19 health response, which shows that the mobilisation of substantial additional resources for health support is possible when political commitment is present. **However, significant funding gaps still appear, in particular with regards to regular spending on pandemic PPR in LMICs.** In 2018 and 2019, US$411 million and US$477.4 million of international development assistance were spent on pandemic PPR, while in 2021 this amount increased to US$786.6 million in LMICs (Micah et al., 2023). At the same time US$21.8 billion was provided in development assistance

Figure 2: International health financing for LMICs between 2010 and 2021



Note: OOF: other official flows, including official transactions for commercial purposes and funds in support of private investment; DAC: Development Assistance Committee; Private funders: Private and philanthropic foundations such as the Welcome Trust, The Rockefeller foundation, Bill and Melinda Gates foundation etc.

Source: Authors own illustration, based on OECD.Stat; WHO Global Health Expenditure Database. Values reported in 2020 inflation-adjusted US$.

funding for the health response to COVID-19, including contributions to the ACT-Accelerator in 2021, which are not considered as regular spending on pandemic PPR. According to the High Level Independent Panel (HLIP), US$15 billion should be invested regularly on an annual basis by development partners in LMICs for the next five years (G20 High Level Independent Panel, 2022). As a total of US$786.6 million was contributed towards regular PPR in 2021, only 5% of this amount is covered. In order to close this funding gap of US$14.2 billion the total volume of health-related ODA should have been increased by 35% in 2021. Considering pre-pandemic ODA levels from 2019, an increase of 76% would have been necessary. Additionally, the HLIP recommended that national governments of LMICs should dedicate an additional 1% of their country's GDP towards health over the next five years, inclusive of the tools and surveillance necessary to prepare for and prevent another pandemic. Projections show that LMICs would have to increase their health-related expenditures on average by 18% every year, and almost none of them will meet the target (Micah et al., 2023).

Even larger funding gaps exist for achieving UHC in LMICs. According to an influential modelling study by Stenberg et al. (2017) additional investments of US$54 billion per year are necessary to achieve UHC in LMICs. Comparing this funding gap to annual government expenditure on health in 2020, an increase by 37% would have been necessary. A similar comparison to the total volume of health-related ODA would result in a needed increase of 90% in 2021. As described above, ideally investments in pandemic PPR and UHC should be coordinated with each other in order to avoid investments in one area being made at the expense of those in another. The studies do not provide a clear cut-off between investments to achieve PPR and UHC, however 30% of the needed additional investments for UHC (a total amount of US$16 billion) cover costs for infrastructure (laboratories, etc.) and policy interventions to curb the rise of communicable diseases (TB, HIV, neglected tropical diseases, etc.), which indicates the large potential for generating synergies between investments in pandemic PPR and UHC (Lal et al., 2022).

Altogether, the substantial funding gaps and the large imbalance in health financing, with OOPE still accounting on average for 55% of total health financing, show that **LMICs and international development partners need to mobilise more resources for health.** However, deteriorating macro-economic conditions, high debt burdens and mounting pressure from inflation constrain

public and aid spending on health (Kurowski et al., 2021). LMICs currently have to spend more on servicing their debt to foreign creditors than on financing their health systems (Federspiel et al., 2022). In Sub-Saharan Africa, 22 countries are already in, or at risk of, debt distress. With interest payments driven by the high cost of borrowing, the health systems of LMICs will face significant fiscal pressures. The risky macro-fiscal outlook requires effective policy options to protect essential health coverage and improve spending in the face of intensifying budget pressures.

Below are a non-exhaustive list of **policy options for governments and international development partners**.

- **One obvious way for LMICs to spend more on health is for governments to actively prioritise a larger share of their budget for the health sector** (reallocation within existing budgets). Governments in LMICs prioritised health less than higher-income countries in their budgets even prior to COVID-19. For instance, in 2019, governments of LMICs spent 7% of their budgets on health compared to 11.5% in upper-middle-income countries (Kurowski et al., 2021). Any de-prioritisation of health spend could stunt recovery from COVID-19 and lead to additional backsliding on key health indicators, including immunisation coverage. Furthermore, from a socio-economic perspective, investments in health systems are very beneficial (see next section) and can lead to economic growth and further macro-economic stability in the medium- to long-term.
- **International development partners can achieve efficiency and effectiveness gains via better priority-setting of their health-related development assistance and by avoiding parallel funding**. They can maximise resources and avoid duplicative efforts by integrating investments in health systems to support both pandemic PPR and UHC. Investment in pandemic PPR can potentially cover up to 30% of the needed additional investments for UHC if both endeavours are better integrated (Lal et al., 2022). For example, investment in infrastructure such as laboratories can be made in a way that helps curb the rise of communicable diseases such as tuberculosis, HIV/AIDS and neglected tropical diseases, which is part of achieving UHC but can also be used for PCR testing in times of pandemic. Donors can also improve spending efficiency by increasing the allocation of spending towards essential health services that are most vulnerable during health emergencies such as pandemics. Several LMICs have participated in efforts to identify and model the costs of essential health services packages, and identifying spending priorities in these countries should build on these earlier tools and activities.
- **Another viable option to create fiscal space for LMICs would be debt-to-health swaps.** Debt swaps combine the cancellation of debt obligations with a bilateral agreement between debtor and creditor governments. The latter waives all or part of the outstanding debt obligations and interest claims, and the debtor government agrees to use the earmarked funds for supporting pre-determined objectives and projects, such as in the health sector. Doing so could help make debt relief a meaningful mechanism for contributing to closing funding gaps in the health sector. The Global Fund has provided effective debt conversions for health, with 12 transactions involving three donors (Australia, Germany and Spain), generating US$226 million in health funding for 10 debtor countries. However, this mechanism requires efficient coordination between creditors (bilateral, multilateral including the World Bank and regional development banks, or commercial) and indebted countries – and should be sufficiently tailored for specific contexts and uses.
- **A further option is to raise health taxes in order to allocate additional resources to health budgets in LMICs.** Taxes on products that negatively impact health such as tobacco, alcohol and sugar-sweetened beverages, so called “health taxes”, would have a dual benefit: discouraging the consumption of unhealthy products and raising the much-needed additional revenue for health. Estimates suggest

that such health taxes could close half of the funding gaps for health of LMICs in the near term (Lane et al., 2021). If revenues from taxes on health-harming products were channelled back into health systems of LMICs, these could fill critical fiscal gaps in countries' medium-term revenues. However, improving tax administrations in many LMICs is needed in order to ensure that revenues raised from these taxes can flow into the health sector.

- **Fostering national health insurance is another way to generate additional resources for health and is still an untapped source of revenue in many LMICs.** It is recommended that LMICs opt for mixed national health insurance schemes that are funded through payroll deductions from formal sector employees, through tax payments on certain goods and services, and premiums for informal sector workers. This is in order to take into account LMICs' large informal sector, which makes the collection of revenue when only relying on this sector particularly challenging.

Socio-economic effect of investments in health systems

There have been important advances in health economics that have quantified the value of investing in health systems. In particular, increasingly strong evidence, summarised in this section, shows that investment in health systems can have substantial socio-economic impacts. Investments in health systems can be linked to *direct outcomes*, such as health outcomes (e.g. measured in terms of mortality, life expectancy etc.), and more *indirect outcomes*, such as income, (health) employment, economic productivity and growth.

Health outcomes

Investments in health systems can directly affect population health by facilitating better access to healthcare services. A study of 67 LMICs projected that investing US$30 per capita in health systems, especially in primary health care (PHC), can lead to an increase in life expectancy of between six and seven years and would avert up to 64 million deaths (Stenberg et al., 2019). Furthermore, investing in public health systems can save the lives of thousands of mothers and children in LMICs. Recent evidence shows that scaling up integrated maternal, newborn and child health packages from below 50% to 90% coverage in LMICs could avert annually 149,000 maternal deaths, 849,000 stillbirths, 1,498,000 neonatal deaths, and 1,515,000 additional child deaths (Clark et al., 2020). These reductions are about half of the global maternal deaths and 60% of the newborn and child deaths, and the cost would only be between US$4.6 and US$5.4 per capita for LMICs (in total between US$6.2 billion and US$12.4 billion) until 2035. Another cross-sectional study that covers many LMICs shows that a 10% increase in government health expenditure per head leads to a reduction of between 2.5% and 4.2% in mortality for children younger than 5 years and between 4.2% and 5.2% in maternal mortality rates (Moreno-Serra and Smith, 2012). Findings from another cross-sectional study exploring, in particular, PHC coverage in LMICs, show that larger coverage of PHC was significantly associated with longer life expectancy (+2.5 years) (Hsieh et al., 2015).

Investment in health systems that aims to strengthen PHC can be critical to improving health system efficiency. A 1% increase in per capita health spending for PHC in LMICs (approximately US$2.5 per capita) can prevent about US$1000 in future per capita healthcare costs due to an increase in healthy life years (Daroudi et al., 2021). Specific investments in preventive healthcare can also lead to reduced total health care costs. An overview study estimates that the scale up of childhood immunisation programmes for vaccines related to ten antigens in LMICs results in 16 times lower healthcare costs than the initial investments. In other words, the net benefit of averted healthcare cost across the lifespan of immunised cohorts due to lower duration/rates of hospital admission and the cost of medication and diagnostics, compared to those of unimmunised

cohorts, was worth 16 times the required investment (Ozawa et al., 2016).

Economic outcomes

There is strong evidence that improved health outcomes have significant economic benefits, as highlighted in several landmark reports – for example, the WHO commission on macroeconomics and health, the Lancet commission on investing in health systems and the UN high-level commission on health employment and economic growth. To estimate the economic benefits of health improvements is challenging from an ethical and a methodological perspective, and can be done in multiple ways. One common method is to model the value of better health (reduced mortality and morbidity) in the notion of "full income". Economic growth in a country's "full income" is defined as the sum of the income growth measured in the national income accounts, plus the value of the change in mortality or life expectancy due to investments in the health system. The value of these additional life-years can be estimated as value multiplied by the gross domestic product (GDP) per person. Using the "full income" approach, the recent WHO–UNICEF–Lancet Commission report has summarised **the economic benefit–cost ratios of investments in the health system** (Clark et al, 2020). Investments considered include the scaling up of health interventions for leading infectious diseases such as HIV, tuberculosis, and malaria; a range of maternal and young child health conditions; immunisation; child health, including treatment for diarrhoeal diseases and pneumonia, and the elimination of neglected tropical diseases. In addition, the analysis incorporates the costs of system-wide investment, including investment to strengthen health systems and enable sufficient absorptive capacity to deliver the above-mentioned interventions at scale. Table 1 depicts the benefit–cost ratios for low and lower-middle income countries for such investments.

The economic (e.g. productivity) and social benefits (e.g. health) of the described investment in health systems are nine times more than the costs in low-income countries and 20 times greater in lower-middle-income countries. Investing just in maternal and child health has an economic benefit–cost ratio of 7.2 for low-income countries and 10.3 for lower-middle-income countries. The difference between low-income and lower-middle-income countries is due to the better economic outlook in lower-middle-income countries, allowing the generation of a larger benefit–cost ratio from investment in health systems. Hence, from an economic perspective, investment in health systems is very beneficial.

Table 1: Economic benefit–cost ratios (returns on every US dollar invested)

Domain of investment	**Health system**	**Maternal and child health**
Low-income countries	9.0	7.2
Lower-middle-income countries	20.0	10.3

Note: The benefit–cost ratios are calculated by dividing the monetary benefit of the investment by the monetary cost of implementing it. *The benefit–cost ratios are only available for low-income and lower-middle-income countries.

Source: Clark et al. (2020)

Besides estimating benefit–cost ratios, a growing number of empirical studies have examined the links between health and income at the macro- and micro-economic level. **A review of the historic, micro-economic and macro-economic studies concluded that about 12% of economic growth in LIMCs in the period 1970–2000 resulted from reductions in levels of adult mortality due to public investments in health systems** (Jamison et al., 2005)**.** Further reviews of microeconomic studies suggest that there is an association between nutritional status and labour outcomes, particularly productivity. Better nutritional status in early childhood due to child and maternal healthcare interventions is associated with an increase in the number of school years completed and in height of the child, which correlates with earnings. A 1% increase in height due to a better nutrition and health status as a child is associated with a 5% increase in earnings for adults (Thomas & Frankenberg, 2002).

There is no question that investments in health workers and, in particular, in community health workers are critical for advancing health. Health workers are an important part of local economies, especially when they offer stable and well-remunerated jobs and pathways for accessing continuing education and employment. The WHO projects a shortfall of 10 million health workers in LMICs by 2030 and calls for large investments in health workers. Evidence shows that for every professional job in healthcare that is created, 3.4 jobs are created on average in other sectors (Scheil-Adlung & Nove, 2016), which provides a substantial opportunity to reduce the high rates of unemployment in LMICs. These new jobs can be an opportunity, in particular, for young women and can promote female empowerment and gender equality.

Policy recommendations

The pandemic has unmasked the importance of public health and demonstrated how essential it is to human lives and livelihoods. The unavoidable impacts of climate change require additional efforts to prepare health systems for the future. Health and finance authorities must improve the resilience of health systems through larger investments in order to improve access to healthcare and to achieve UHC. Our summary of the latest evidence on health financing shows that substantial funding gaps need to be closed in order to avoid the situation of previous pandemics. It further indicates that investments in health are critical not just for the health benefits they deliver, but also because of the large, positive socio-economic impacts that exceed the level of investments. We want to emphasise three additional policy recommendations:

First, for global health security to be achieved, it is necessary to treat public health as a global public good. Taking into account the lessons from the COVID-19 pandemic, a large push is needed to establish a global minimum standard of health services, effective public health capacities, and interventions that serve all people while strengthening existing health system foundations to support preparedness for health security. Treating investments in health as investments in global public goods acknowledges the fact that global health problems need global solutions, and underscores the need for sustainable long-term funding.

Second, given the significant funding gaps for PPR and UHC, LMICs and international development partners need to mobilise more resources for health. The current risky macro-fiscal outlook for many LMICs requires effective policy options to protect essential health coverage and improve spending in the face of intensifying budget pressures. The following policy options for governments and international development partners should be considered to protect and improve spending on health:

- Reallocate within existing budgets: One way for LMICs to spend more on health is for governments to actively prioritise a larger share of their budget to the health sector. This would also contribute to reducing the imbalance in health financing, with OOPE accounting for a large share of the total health financing in LMICs, leading to systemic inequalities regarding access to healthcare, with the poor suffering disproportional losses.
- Better priority-setting of health financing: International development partners can achieve efficiency and effectiveness gains by better integrating investments for PPR and UHC. Investment in pandemic PPR can potentially cover up to 30% of the needed additional investments for UHC if both endeavours are better integrated. Donors can also improve spending efficiency by increasing the allocation of spending towards essential health services that are most vulnerable during health emergencies such as pandemics. These include reproductive, maternal, newborn, child health and immunisation services.
- Greater use of debt-to-health swaps: As countries restructure and renegotiate public debt, debt swaps linked to health offer a large lever to create fiscal space. Several positive examples from the Global Fund are available,

and donor governments should consider, in addition to conventional contributions, investing through debt swaps.

- Support LMICs to raise health taxes: Taxes on products that negatively impact health would have a dual benefit, discouraging the consumption of unhealthy products and raising the much-needed additional revenue for health. Such health taxes could close half of the funding gaps for health of LMICs, showing the large potential of this health-financing instrument.
- Fostering national health insurance schemes: Implementing and supporting national health insurance schemes is still an untapped source of revenue in many LMICs. To address the challenges faced by LMICs with large informal sectors, it is advised that they adopt mixed national health insurance schemes. These schemes would be funded through different sources, such as deductions from formal sector employees' pay, taxes on specific goods and services, and premiums paid by informal sector workers. This approach considers the difficulty of collecting revenues solely from the informal sector, and provides a more inclusive and sustainable funding solution for healthcare.

Third, health expenditure must be seen not simply as a cost, but as a substantial investment in productivity and economic growth. Local governments and donor countries that invest in health systems in low-income countries can expect on average nine times larger economic and social benefits as compared to their investments; in lower-middle-income countries the expected benefit is 20 times larger. At least 12% of past economic growth in LMICs has been the result of a reduction in the level of adult mortality due to public investment in health systems. Every health-care professional job created by investment in the health sector can generate on average 3.4 jobs in other sectors, which provides a substantial opportunity to reduce the high rates of unemployment in LMICs. These new jobs can be an opportunity for women, in particular, and can thereby promote female empowerment and gender equality. Considering these long-term benefits affirms that investment in health can enable large spillover effects on the social and economic dimensions of sustainable development.

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