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Abstract

The global spread of COVID-19 has affected both the health and economic condition of countries, with major health system impacts. There has been an immediate need to invest in clinical services to treat patients and mount an effective public health response, requiring substantial increases in health spending. But the impact of the pandemic on the global economy also raises challenges for future health spending, with potential impacts on commitments to universal health coverage. In this working paper we outline a broad research agenda that would help countries deal with the health financing challenges they are facing, and emerge from the COVID-19 crisis with stronger health financing systems. While recognising that research priorities must be tailored to the needs of specific countries, we argue there is much to be gained by starting from a common agenda, which could enable a coordinated approach and maximise the potential for cross-country comparative work. Such a body of research will enable lessons to be drawn for (i) managing the current crisis; (ii) ensuring resilience of health systems to future shocks; and (iii) enhancing medium-term progress towards UHC.

Introduction

The global spread of COVID-19 has affected both the health and economic condition of countries. In low- and middle- income countries (LMICs), where health resources were already scarce, policy makers face unprecedented difficulties in financing health. Even relatively affluent countries have faced major financing challenges, with governments having to rapidly pivot resources, and bring in extra protections for groups at risk of financial hardship while seeking care for COVID-19, with mixed success.

The pandemic has necessitated major health system responses. All countries have needed to invest more in their health care systems, including procuring ventilators, oxygen, and personal protective equipment; scaling up COVID-19 testing; building and equipping new temporary health care facilities or reconfiguring existing facilities; setting up virtual systems for service provision; and reimbursing and incentivizing health workers to work extra hours under challenging conditions. In addition, public health services have been ramped up, as countries have sought to establish new cadres of health workers responsible for contact tracing and quarantine enforcement, as well as the provision of information to the general public and the oversight of infection control measures in public and private spaces. Beyond these health investments, there has been a need to finance the public health-related response of other sectors, from supporting COVID-19 related controls at borders to providing adequate food supplies to communities under lockdown and reorienting the education system to manage remote learning. Going forward, financing of vaccine delivery will be an important priority for national governments. In this paper, we focus on financing the health system, broadly conceived to include both the provision of health care and public health functions.

While the need for additional resources to finance new services is the most obvious demand that COVID-19 places on health financing, there are at least two other important dimensions to this issue. First, the COVID-19 pandemic has clearly brought in its wake a massive, global economic recession. It is estimated as of October 2020 that the global economy will shrink by 4.4% in 2020[1], with as many as 100 million people pushed into poverty[2], and the ILO has warned that the pandemic has severely threatened the livelihoods of many outside the formal sector, estimating that 1.6 billion informal sector workers globally may lose their livelihoods due to COVID-19[3]. This economic impact undermines health financing systems by reducing the income households have available to pay for health care services, and, for systems financed by health insurance premium contributions, reducing the number of people contributing to risk pools and (depending on scheme design) the number of people covered by health insurance. While government spending on health has significantly increased in 2020, financed by a combination of borrowing and quantitative easing, it is unclear how long such increases can be sustained with government revenues curtailed due to recession.

Second, it seems likely that progress on the historic global commitments to universal health coverage[4] (UHC) may be undermined by the pandemic. For obvious reasons the attention of health policymakers has pivoted towards COVID-19 and this, combined with the global recession, may hamper progress along the path to UHC. Conversely, the pandemic could provide a window of opportunity to accelerate UHC progress, by highlighting existing limitations in the financing of public health and community health care, vividly demonstrating the relevance of health to the national and global economy, and generally raising the profile of health on the policy agenda and highlighting the synergies between solidarity and health security.

Purpose

The purpose of this paper is to take a first step in outlining a broad research agenda that would help countries deal with the health financing challenges they are facing, and emerge from the COVID-19 crisis with stronger health financing systems. While valuable exercises have been undertaken to define COVID-19 research priorities in general[5,6], and for health policy and systems research[7], we believe this is the first systematic identification of health financing research questions for the COVID-19 era.

Clearly, priorities for research vary across and within countries, depending on the design of the health system, its wider context and the underlying values that it reflects, making it extremely challenging to develop a universal set of priorities. However, we argue that there is much to be gained by scoping out the broad range of relevant questions that can then be tailored to each setting. We hope that by making this thinking explicit, public and open for comment we can promote discussion, solicit additional ideas, stimulate high quality research and funding for this area, and through a coordinated approach, maximise the potential for cross-country comparative work. Such a body of research will enable lessons to be drawn for (i) managing the current crisis; (ii) ensuring resilience of health systems to future shocks; and (iii) enhancing medium-term progress towards UHC.

The ideas presented below emerged from a series of discussions, initially between a small group of researchers (in universities and research institutes), health financing advisors (at the World Bank, the World Health Organization, and OECD) and research advisors (at the Alliance for Health Policy and Systems Research). Subsequently, a broader group of researchers were engaged with a primary aim of ensuring that this document was informed by diverse country perspectives. While the paper builds upon our knowledge of the existing literature it has not benefitted from a systematic review, nor consultative processes within individual countries[8].

We have sought to identify research priorities that may be relevant to low and middle-income countries, though many will also apply to high income settings. While the questions may be relevant to the sub-national, national, regional and global levels, our primary focus is on the financing of country health systems as opposed to, for example, financing research and development for new vaccines.

This paper is structured around the following four themes:

A. Resource mobilization required for the health system to respond to COVID-19, and be prepared for future epidemics;
B. Resource allocation and purchasing processes to effectively and efficiently manage the response to COVID-19 and to future epidemics;
C. Protecting people from health-related financial hardship and the exacerbation of inequities in the context of COVID-19 and its aftermath;
D. Sustaining and enabling continued progress towards UHC.

For each theme, we summarise the current context and key developments, and then identify a set of related research questions. Implicit in the specified research questions is a recognition of the value of comparative analyses that allow us to understand how different country health financing systems, or different responses during the epidemic, have influenced outcomes.

Resource mobilization

Country governments have had to mobilize significant additional resources to finance the COVID-19 response. For example, in the US, the government through the CARES Act provided an additional US$175 billion for hospitals and health care providers[9], and India established the PM CARES fund to

channel national and foreign donations and government money to the pandemic response[10]. Increased spending on COVID-19 has been financed in part by reallocations within existing budget envelopes – with spending shifting across budget lines, both within the health sector and from other sectors – and in part by additional aggregate spending[11]. The latter has been facilitated by higher fiscal deficits (few governments have sought to raise resource from increased taxation, at least not yet) which in turn are financed from: (i) drawing on reserves; (ii) higher government borrowing, from domestic financial markets (supported by loosening of monetary policy and QE); and (iii) from external sources, both private capital markets (mainly in middle-income countries) and from international financial institutions and development partners. The ease with which spending can be reallocated will depend on public finance regulation: in some countries it is relatively easy to move funding across government budget lines, while this is much harder in other contexts[12].

For many LMICs, development partner funding may be a significant component of the overall response. The West Africa Ebola virus epidemic in 2014 stimulated international organizations to establish separate funding pots for such outbreaks, including the Pandemic Emergency Financing Fund (PEF) at the World Bank and the Pandemic Financing Facility at the International Monetary Fund. The PEF, in particular its insurance window component, has however has been controversial: established as a public/private partnership with support from private reinsurance firms and backing from select high income countries, during the current pandemic pay-outs have been criticized for being too little and too late, and the World Bank has decided against issuing further pandemic financing bonds[13], illustrating the ongoing need for better global financing to support country level efforts.

Country governments may also be experimenting with innovative sources of domestic financing, such as government guarantees for private sector investment in COVID-19 test manufacturing capacity[14], but this has not been systematically documented, nor are there current data that reveal the relative importance of public and private sources of finance in battling the pandemic. While data are scarce, it appears that typically countries are mobilizing resources from multiple sources, leaving open questions about the fragmentation and lack of coordination of health financing mechanisms for COVID-19, and potential negative effects on equity between geographical areas and socio-economic groups. This may particularly occur in decentralized contexts where local authorities pursue their own strategies to raise resources, as well as receiving funding from the national level.

Preliminary research questions identified

i. How have country governments increased health expenditure for the COVID-19 response, including through reallocating resources from other sectors to health, reallocations within the health sector, and supplemental budgets? Where governments have increased overall expenditure, how has this been financed (increased taxes, debt financing, or monetary financing of the deficit)?
ii. How effective have existing pandemic global financing mechanisms been in terms of resource mobilization, disbursement, and their influence on country responses to COVID-19?
iii. What have been the relative roles of government and private sources of financing for COVID-19 and non-COVID health services during the pandemic period, and how successful has this financing profile been in mobilizing resources?
iv. To what extent have public financial management regulations facilitated or constrained reallocation across government budget lines?
v. To what extent have resource generation been coordinated across different levels and agencies (eg. between government budgets and social health insurance agencies, and between central and sub-national levels) versus exacerbating fragmentation in mobilization and allocation of resources for health?

vi. How will the contraction in national economies and knock-on effects on total public spending affect future resources for health?

Allocation and purchasing

Countries have needed to make rapid decisions about which COVID-19 interventions to purchase, from who, and how, while also continuing to support general essential health services. Early in the pandemic countries struggled with procuring sufficient quantities of personal protective equipment for healthcare settings and scaling capacity for advanced critical care from basic items such as oxygen and pulse oxymeters)[15,16] and new intensive care units and additional ventilators. Other questions about purchasing have focussed on the extent to which existing financing systems supported the purchase of digital or virtual health services. Many countries (for example, Indonesia, Japan, Korea and the US) had policies that prevented public health insurance schemes from reimbursing patients for health services received virtually[17,18], but many of these rules were rapidly changed. In several instances, governments have stepped in to regulate private insurance schemes with the aim of ensuring that they take steps to improve the affordability of diagnostics and treatment[19].

One critical area in terms of purchasing concerns support to public health. The relatively successful containment of the epidemic in many Asian countries is likely explained in part by effective and well-funded public health systems that rapidly scaled up control methods such as surveillance, contact tracing, border controls and quarantine[20]. Funding for essential public health functions is often strongly debated and uncertain, with countries under-investing in public health during 'normal' years and then being inadequately equipped to deal with emergencies. There is also debate about whether resources for public health functions should be channeled through ministries of health (where it may be prioritized but disconnected from other sectors) or through local government (where it may be deprioritized)[21].

In many cases, in order to rapidly scale up response to COVID-19, health authorities have sought to purchase services from the private sector, including both the direct purchase of health services from private hospitals (as under the Ayushman Bharat scheme in India[22]) and various non-clinical services (for example, the use of school and hotel buildings for isolation and quarantine). In some cases, this has involved considerable change and innovation in how private providers have been selected and contracts negotiated, and little is known about the efficiency, quality and equity implications of such purchases.

Besides making decisions about what to purchase, there are also important questions about the efficiency of spending during the pandemic. There are many examples of competition driving up the price of essential supplies which have affected government authorities, health care providers and consumers[23]. In some cases, regulatory agencies have intervened to prevent price hikes[24] and enforce quality standards. But rapid procurement also led to allegations of corruption[25], raising questions about how procurement regulations to protect against corruption and other poor practices have been adapted to facilitate more rapid purchasing. The implications of this for accountability, quality and efficiency have yet to be explored.

Preliminary research questions identified

i. How have benefit packages and services purchased by government authorities changed during the pandemic (including entitlements, services included, and rationing mechanisms) and what factors have driven these prioritization decisions?

ii. How have purchasing, payment and accreditation mechanisms been changed in response to COVID-19 for both publicly and privately provided services, and how have these performed?
iii. How have public health interventions (e.g. surveillance, contract tracing, border controls) been financed and organized during the pandemic, and what are the implications for longer term policy?
iv. How will governments finance purchase of vaccines, and prioritise groups to receive a vaccine once it becomes available?
v. How have existing financing arrangements in a country, and their associated purchasing practices, enabled or disabled an effective response? For example, to what extent have challenges arisen due to multiple overlapping schemes focused on the same population, or fragmented patient information systems?
vi. In terms of public financial management, what adaptations and work-arounds have been made to budgeting, procurement, payment management etc. to facilitate rapid responses to COVID-19? What is known about the transparency and accountability of public funds used in the COVID-19 response, and how have changes to allocation and purchasing /procurement processes affected this?

Financial risk protection and equity

A key health system goal is providing financial protection and equity in service use. Globally, 12.7% of households incurred catastrophic health spending in 2015[26]. Even in countries with well-established systems of financial protection, all citizens are not well-covered; for example, in Brazil, China and Singapore the share of out-of-pocket payments in total health spending is 27%, 36% and 32%, respectively[27].

Providing financial protection to households becomes all the more important in the time of epidemics like COVID-19. COVID-19 patients can experience increased household health expenditures because of payments for consultations, diagnostics, drugs, and hospitalization. Yet some national systems exclude vulnerable populations such as migrants, refugees, and people employed in the informal sector. Many of these groups are at heightened risk of COVID-19 given their employment and living conditions. Some governments, such as that in Singapore, have pro-actively reached out to such groups seeking to improve both the services they have access to and their living conditions[28], after a major outbreak highlighted systematic neglect in the past[29]. COVID-19 has also exposed the limitations of health financing systems which link entitlement to contributions, and which rely on employment-based contributions as a funding source. However, countries face challenges in expanding tax-based financing systems at a time of overall greater financial need and dwindling resources.

In addition to direct healthcare expenditure, COVID-19 patients are also likely to experience productivity losses due to days of lost work and job losses due to the economic shock triggered by COVID, and may feel compelled to adopt risky coping strategies at household level. Mortality of earning family members due to COVID-19 will also have devastating effects on the financial well-being of households.

Further, financial barriers often deter patients from seeking the health care they need and increase inequities in access for vulnerable groups. Faced with high costs of health services, many COVID-19 patients might choose to forego treatment, exposing them to the possibility of prolonged illness or even death. Equity of utilization for COVID and non-COVID related care may also be affected by non-financial factors, such a concern about COVID-19 infection risk, social stigma and lockdown policies. Understanding how governments can continue to provide, or increase, financial protection and equity of health care access for vulnerable populations is therefore crucial.

Preliminary research questions Identified

i. How has use of COVID-19 services and public and private expenditure on these varied across vulnerable groups (by gender, ethnicity, age, socio-economic status, location, and health status)? What is the socioeconomic distribution of public subsidies for these services?
ii. How has use of and spending on non-COVID-19 related services changed during the epidemic and how has this varied across vulnerable groups? Have there been explicit efforts to protect funding for facilities / services used mainly by the poor and vulnerable?
iii. How have COVID-19-specific services- such as testing, isolation or quarantine, case management (institutional or home based), and death related expenses - been paid for, and to what extent have different groups experienced catastrophic health expenditures or impoverishment as a result?
iv. Have financing arrangements reinforced pooling arrangements (for example, by bringing in previously uncovered groups) or undermined them (through increased fragmentation).
v. Have public safety nets (health-related or more general social protection schemes) protected vulnerable households from health-related costs?
vi. What have been the productivity losses experienced by households due to COVID-19 illness and lockdown measures across vulnerable groups?
vii. How has the economic recession affected care seeking, insurance coverage, and financial protection of individuals?

Sustaining and enabling progress towards UHC

Prior to the current pandemic, many countries had made important commitments towards achieving UHC. These commitments took the form of global agreements such as the UN Political Declaration on UHC[30], aligned to SDG 3.8, as well as individual country commitments, such as the launch of the Ayushman Bharat scheme in India[31], or the National Health Insurance policy in South Africa[32]. There are a number of reasons why the COVID-19 pandemic may affect - both positively and negatively - these commitments. The pandemic implies two significant shocks for the health system including, first, substantive new demands upon the health system and a need to reallocate resources rapidly to deal with the pandemic, and second, the global recession that will strain fiscal space, reduce the proportion of the population in formal sector employment, and possibly erode financial support for UHC. However, crises such as the COVID-19 pandemic can also stimulate innovations that may support progress to UHC, from the adoption of digital technologies, to streamlined procurement systems, greater intersectoral collaboration, and the extension of free health care services to marginalized populations. The crisis could potentially also alter the set of fiscal policy options considered, for example, creating policy windows to consider new taxes, such as on sugar sweetened beverages, tobacco or alcohol. More generally, the crisis may create opportunities for greater political support for solidarity in health care financing, and greater attention to health security, nationally and globally.

In understanding the implications of the economic recession for the UHC agenda, there is a prior literature that may yield insights. For example, a recent review found evidence of governments withdrawing from UHC commitments when financial austerity measures were put in place[33]. Counter examples exist, however; to provide one instance, some of the key Thai health financing reforms were put in place in the wake of the 1997 Asian Economic crisis[34]. In general, policy analysis theories point to the importance of windows of opportunity that may be created by elections, conflict or pandemics and economic recession[35]. What we understand less are the factors that determine whether countries are able to take advantage of such policy windows in ways that move the UHC agenda forward, though the nature of the political settlement, country capacity, and coherence of international support are likely important influences[36,37].

One element that will likely affect the future of UHC reforms in the post-pandemic world is the extent to which policy and decision-makers see UHC as a package of policy solutions comprising not just the financing of individual health care services but also a strong public health system with effective surveillance and response capacities, versus seeing these as two competing agendas. UHC advocates will likely need a strong understanding of how politicians are framing these ideas in order to target advocacy efforts effectively.

Even more broadly, analysis of health system resilience will assist in the design of health systems able to withstand shocks whilst preserving core functions. Documenting the health financing arrangements different countries have employed to address COVID-19, how these new measures were agreed, coordinated and implemented, and the effects that they have had on health outcomes, financial protection and the health system more broadly, offers a means to better understand what it takes for health financing systems to be truly resilient[38].

Preliminary research questions Identified

i. How has the pandemic and subsequent reallocation of resources affected country level plans and processes for expanding UHC?
ii. Looking to the future, how can national health services or insurance programs seek to sustain pre-COVID levels of health care financing in the face of economic recession?
iii. To what extent has the COVID-19 pandemic changed the political economy of health financing policy discussions, in terms of the acceptability of different fiscal policy options, pooling and purchasing mechanisms, and the framing and importance attached to health and UHC?
iv. What lessons can be drawn from the COVID-19 experience to inform the future design of health financing arrangements in ways that enable greater health system resilience, including capacity for pandemic response, and how do these vary across country contexts (for example, high income versus LMICs, and more stable versus those already fragile and shock-prone before COVID-19)?

Conclusion

COVID-19 presents a unique challenge for health financing both because of the size and scale of its impact on the health sector as well as its significant economic ramifications at national and global levels. Evidence on the impact of COVID-19 on health financing, as well as the adaptations that different countries have made to health financing systems to accommodate this impact, is needed to both inform ongoing measures to fight the pandemic as well as to ensure long-term planning for future pandemics and greater resilience within health financing systems.

We have outlined starting points for a research agenda for health financing for COVID-19, identifying a preliminary set of priority questions addressing four thematic areas, namely resource mobilization, allocation and purchasing, financial risk protection and equity, and sustaining and enabling progress for UHC. Each question would require further elaboration and unpacking, with development of appropriate research approaches using a mixture of quantitative and qualitative methods. While there is clearly a need for tailoring of research questions and country-specific analyses to inform local decision-making, there will also be great value in larger cross-country comparative research initiatives to address these questions, allowing learning about how different systems, contexts, values and responses to the epidemic have shaped health financing outcomes and how these can be strengthened.

While the research questions identified are mainly empirical in nature, we also encourage the health financing community to reflect on how the pandemic may challenge our current framing of health financing debates, and the frameworks and paradigms that we use. For example, should we rethink

the boundaries of the "health system", or move toward frameworks that integrate health and broader social protection?

We hope that this paper will stimulate policy makers, researchers and development partners to discuss these suggested research questions within their communities, and contribute to further developing this agenda – please comment on our blog post at https://healthsystemsglobal.org/news/health-financing-in-response-to-covid-19-an-invitation-to-contribute-to-a-collaborative-research-agenda, or contact us directly with your additions or critiques (please email Sophie Witter: switter@qmu.ac.uk). Next steps should include (i) the development of programmes of research to address country-specific priorities and provide scope for common research across countries; (ii) development of funding modalities to ensure this agenda is well-supported, and (iii) establishment of a platform and community to share research approaches and results, and enable comparative analysis to identify lessons learnt. COVID-19 has hugely challenged our health financing systems, and illuminated the fault lines in the health sector, but it also provides opportunities for innovation, reflection and advocacy, and the potential to ensure health systems are better prepared for future crises and reinvigorated in the journey towards UHC.

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