

RESEARCH ARTICLE

Leveraging COVID-19 pandemic response for improved health system financing: Lessons from Ghana

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Abstract

The COVID-19 pandemic has exposed health system funding challenges across many developing countries. The needed infrastructure to effectively respond to the pandemic was absent in many developing countries. This has resulted in policymakers resorting to various strategies to mobilise sufficient resources in response to the pandemic, especially in the early stages. This paper reviewed Ghana's efforts to mobilise domestic and external resources for the health sector in response to the pandemic. The paper also assessed lessons from these strategies and highlights how these lessons could be leveraged to sustain financing for the health sector. Using evidence from desk reviews, we demonstrate the existence of fiscal space through external sources, partnership with non-state actors, and effective public financial management (budget space). We also show that the COVID-19 pandemic presents an important momentum to drive future investment in health infrastructure across developing countries.

KEYWORDS

coronavirus, Ghana, health financing, health infrastructure

Highlights

- COVID-19 has prompted discussions about resource deficits in the health sector
- A mix of external and domestic resources were used in response to the pandemic

- Effective public-private partnership also raised additional resources
- A pandemic response strategy will ensure quick and efficient response

1 | INTRODUCTION

Health care systems across the globe have been stretched following the outbreak of the novel coronavirus.¹ The pandemic created significant uncertainties across countries and raised concerns about how best to deal with it.² Indeed, countries that are less resilient and responsive to health shocks are expected to suffer more during and after the pandemic.^{3,4} While the response strategies have varied across countries, legitimate concerns have been raised about the wide economic inequalities across countries and the capacity of some countries to cope with the pandemic.⁵

In sub-Saharan Africa (SSA), the majority of the countries have been classified as highly vulnerable in responding to the coronavirus pandemic.⁵ The recent Ebola outbreak in countries like Sierra Leone and Liberia, as well as the resultant strain on health systems, was expected to send red alerts to other countries in the sub-region.^{6,7} Unfortunately, this has not translated into improved investments to prepare health systems for future pandemics in the region.

Effective pandemic response requires that a health system must be responsive and resilient to shocks or unexpected events.⁶ To achieve this, significant amounts of investment are needed, especially at the early stages of the pandemic. Such investments include improved infrastructure development which, in this case, would include emergency response units and laboratories with sufficient expertise to perform large-scale tests. Also, investments in the health workforce in terms of training and remuneration are seen as a strategic step in preparing the health system for a pandemic. However, health financing across countries in SSA has been relatively low compared to other regions of the world. The average current health expenditure in SSA was 5.2% of GDP in 2018, compared to a global average of 9.9%. Similarly, per capita health expenditure (PPP, current international \$) in SSA was USD205.4 compared to USD1,458.6 global average.⁸

The need to prepare for such pandemics is even more important in the context of SSA given the numerous peculiarities of the region. Aside from the high levels of impoverishment and inequality within and between countries, health outcomes are poor. This implies that, in most countries, health systems are already weak and vulnerable, even without pandemics.⁹ Moreover, in the absence of effective public health insurance systems in many of these countries, the cost of health care can be catastrophic. With health insurance markets largely underdeveloped, the consequences of health financing out-of-pocket could also be devastating.¹⁰

In Ghana, the situation is not different. Even though the country operates a national public health insurance scheme that seeks to remove financial barriers to health care across the population, out-of-pocket health spending remains high with 12 million people (about 40% of the population) covered under the scheme as of 2018 (<http://www.nhis.gov.gh/News/nhis-active-membership-soars-5282> [Accessed January 18, 2022]). The country's health system also suffers from insufficient infrastructure and workforce and this limits the extent of responsiveness or resilience to pandemics. The situation is reflective of relatively low and inconsistent levels of investment in the health sector. Available estimates suggest that about 3.5% of GDP was committed to the health sector in Ghana, relatively lower than the 5.2% SSA average in 2018. Per capita health expenditure (PPP, current international \$) in the same year was USD168 compared to an average of USD205.6 for SSA.⁸ Recent assessments of pandemic readiness in the country indicate significant room for improvement. For instance, the WHO Joint External Evaluation (JEE) report average scores for the three main categories to be 2.4 (prevent), 2.5 (detect), and 1.8 (respond) out of a maximum

score of 5 for each category.¹¹ This pattern calls for a renewal of commitment to the health sector through identifying opportunities to increase investments.

This paper argues that the coronavirus pandemic provides an opportunity for the needed investment in the health sector. In this regard, the paper identifies important interventions necessitated by the outbreak of the virus that could be leveraged to improve health system investment and reform. Against this backdrop, the objective of this paper is two-fold: (i) first, to identify financial mobilisation efforts by the government of Ghana at the early stages of the pandemic, and (ii) second, to identify future investment momentum for the health sector created by the pandemic.

2 | COVID-19 IN GHANA: A BRIEF BACKGROUND

Ghana recorded its first COVID-19 case on 12 March 2020. By 6 May 2021, the country had recorded over 32,437 positive coronavirus cases. Fortunately, the country also witnessed a high recovery with 28,927 recovered cases as of the same date.¹² Unfortunately, there were also some fatalities from the virus with official figures suggesting about 783 deaths from the coronavirus as of 6 May 2021. These numbers implied that Ghana, at the time, had the fourth-highest in Africa, after South Africa, Nigeria, and Egypt.¹³ Figure 1 shows the evolution of the pandemic in Ghana. The figure plots trends in cases recorded, active cases, and recoveries. There appears to be a drop in the number of active cases from mid-June. The distribution of the cases also shows unequal burden across administrative regions of the country (see Figure 2). Figure 2 shows the cumulative case count by region as of 6 May 2021. It is evident from the figure that the Greater Accra and Ashanti regions have the highest burden of the virus. (While these numbers are the official statistics from the Ghana Health Service, we acknowledge the limitation that this is subject to the country's capacity to trace, test, and report cases at every point in time.) This is expected as the regions are the largest commercial centres and relatively densely populated. The Ashanti region has a population of 5,432,485 and occupies 10% of the country's land area. The Greater Accra region covers 1.4% of the land area and has a population of 5,446,237.¹⁴ Poverty in the Greater Accra and Ashanti regions are 2.5% and 11.6%, respectively. Similarly, inequality is higher in the Ashanti region (Gini coefficient of 37.9) compared to the Greater Accra region (Gini coefficient of 35.1%).¹⁵ Available evidence suggests that the greater Accra region also hosts about 27.8% of business establishments in Ghana while the Ashanti region hosts 19.4%.¹⁶

Following the first positive case, the government responded swiftly by banning all public gatherings including workshops, conferences, weddings, funerals, political rallies, and churches. This was followed by travel restrictions

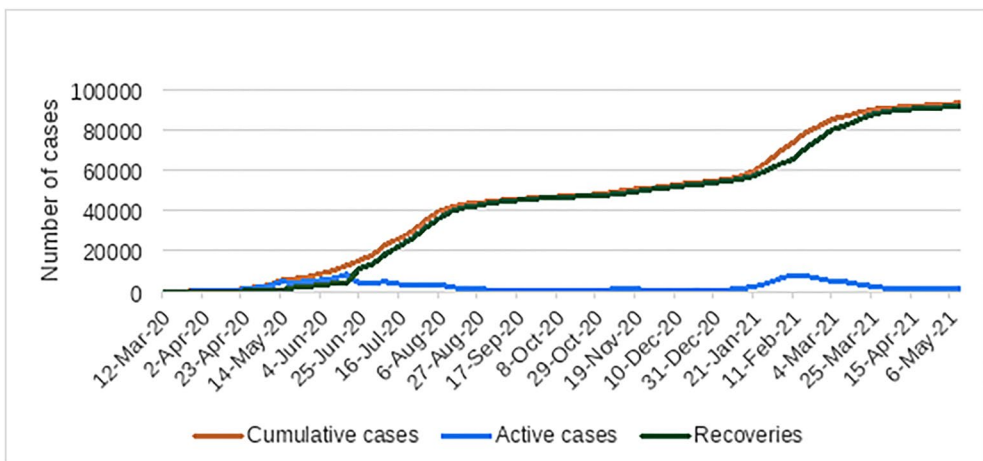


FIGURE 1 Active Covid-19 cases and recoveries, March 2020–May 2021. Source: Worldometers.info (<https://www.worldometers.info/coronavirus/country/ghana/>) [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

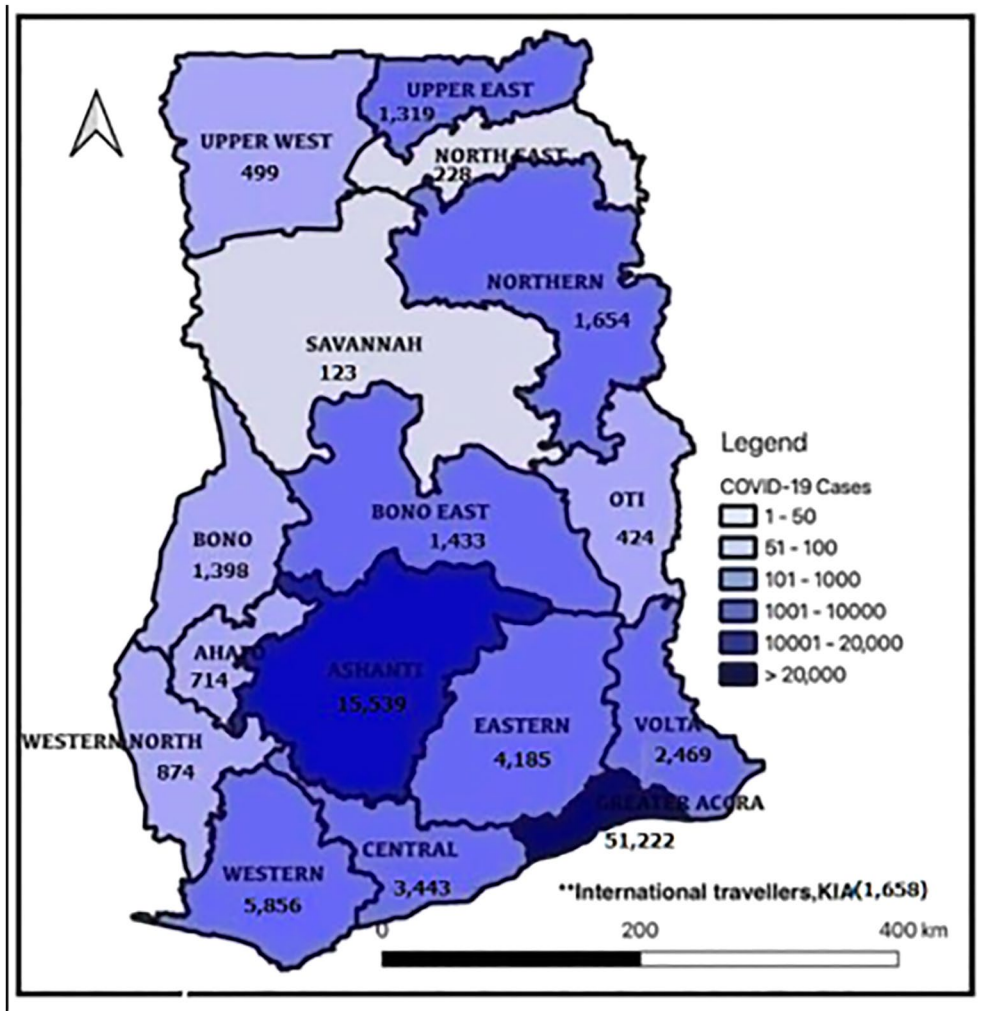


FIGURE 2 Cumulative cases of Covid-19 in Ghana by region, 6 May 2021. Source: Ghana Health Service [Colour figure can be viewed at wileyonlinelibrary.com]

on entry into Ghana and the closure of all air, land, and sea border checkpoints. As the situation evolved, the government eventually announced partial lockdown of some major cities on 27 March 2020, about 14 days after the first case was reported. These were areas considered to be high risk due to the high concentration of commercial activities. The lockdown was a relatively swift response in an attempt to limit the spread of the virus and was a common strategy across many countries in the region. For instance, while South Africa also enforced its first lockdown on the same date, this was about 3 weeks after the first case was reported in that country. The first lockdown in Nigeria also came into force on 30 March 2020, about 4 weeks after the first case was reported (27 February 2020).¹⁷ The idea of the lockdown across these countries was to understand the epidemiology of the virus to guide government response as well as effective contact tracing and testing. The lockdown restricted movement within and between affected regions. The lockdown also encouraged people to stay home to avoid the spread of the virus. To achieve this, the government attempted to feed poor and vulnerable individuals as well as provide subsidies for utility bills.¹³ A detailed evolution of policy options in response to the pandemic is discussed elsewhere.³²

Even though the pandemic is still lurking, the economic impact has already been overwhelming. At the micro-level, the pandemic and subsequent lockdowns have affected labour supply and incomes. It is estimated that about

35.7% of businesses closed during the partial lockdown with about 16% closing even after the lockdown was lifted. Consequently, job losses that were recorded during the period amounted to about 1.4% of the workforce (an estimated 41,952 workers).¹⁸ At the macro level, the impact of the virus was felt in every sector of the economy with significant revenue and job losses across the various sectors.¹⁹ This led to a fiscal deficit estimated to be about GH¢30.2 billion (7.8% of GDP). Government revenues are expected to fall short of targets by about 3.5% of GDP while expenditures were to increase to about 3.1% of GDP.¹⁹ The result of this is a combined adverse fiscal impact of about 6.6% of GDP.

3 | MATERIALS AND METHODS

The study primarily conducted a desk review of relevant documents to distill the needed information. Evidence extracted from the review of these documents provided the basis for our evaluation of the government of Ghana's response to the pandemic. The approach was therefore largely a retrospective review of the strategies adopted by the government in securing the needed financial resources to tackle the COVID-19 pandemic, particularly in the early stages. The study covers the period from the start of the pandemic to 23 July 2020, when the mid-year budget review was presented in parliament. This study mainly reviewed information from the following resources:

- First is the 2020 mid-year budget statement available at the Ministry of Finance, Ghana. This document highlights the economic and social impacts of the COVID-19 pandemic in Ghana. Moreover, it provides information on the financial resources raised and spent with details on how the resources were received.
- The second source of information for this paper is the website of the COVID-19 Private Sector Fund. This is the official mouthpiece of private-sector efforts to mobilise resources to support the government's fight against the virus. The website provides details about the objectives of the fund, the amount mobilised as well as activities supported.
- The third and final source of information for this review was the website of the Ministry of Health. The website captures information related to the health sector in the country. Specifically, details about the government's intentions to improve health infrastructure are captured on the website. The government's announcement to reform the health sector in preparation for future pandemics through major infrastructure investment is also available on the website.

We synthesise this information to highlight the various gains that could be made by the health sector through lessons learnt in handling the COVID-19 pandemic. While we relied on the 2020 mid-year budget for financial information, we acknowledge that there may have been extra-budgetary resources that are not captured in this study. It is therefore possible that our study underreports Covid-related financial support to the public sector. Moreover, funding beyond the scope of the 2020 mid-year budget was not captured as part of our early-stage financing strategies.

4 | RESULTS

4.1 | Government response to COVID-19: Resource mobilisation

An important step in the fight against the spread and impact of the coronavirus pandemic in Ghana was to mobilise sufficient resources to support the various strategies of the government. This was a random shock and, as such, there was no budgetary allocation. The minister of finance was expected to raise a significant amount of money within the shortest possible time to tackle this shock. While the fundraising itself was challenging, the uncertainties surrounding the pandemic in the early stages also posed further problems. For instance, it was not clear exactly how much will be

needed to address the problem as no one could safely predict how many people will be infected or the cost of which strategies will be used.

Indeed, at the very early stages of the pandemic, the exact strategies were also not known. This means that there was the need for urgent and innovative resource mobilisation strategies to raise enough resources to support the fight. In ideal situations, this should not be a major challenge as there would have been sufficient reserves to tackle random shocks of this nature. Unfortunately, this was not the case for Ghana and across many countries in the region. There were no pre-existing plans or strategies for shocks of this magnitude. In this section, we discuss some of the strategies adopted by the government to circumvent this daunting challenge. We consider this necessary for, at least, two reasons; first, it highlights the need for countries (especially in developing regions) to prepare detailed strategies for uncertain times like these. Second, there are important lessons for domestic resource mobilisation strategies that could be leveraged for the health sector.

4.1.1 | External financing

The first resource mobilisation strategy discussed here is the reliance on external sources to raise resources to fight the pandemic. We define external sources to cover official financial assistance received from international financial organisations and exclude in-kind donations. Three main institutions provided financial assistance to Ghana to support the COVID response strategies at the early stages. These were the World Bank (WB), the International Monetary Fund (IMF), and the African Development Bank (AfDB). Among the three, the IMF was the largest source of financing to fight the pandemic. The funds received from the World Bank and the IMF were concessional loans, that is, credit with substantially reduced conditionalities as compared to market loans (<https://stats.oecd.org/glossary/detail.asp?ID=5901>). The AfDB assistance, on the other hand, was a grant with no condition for repayment.

The Mid-year budget presented to the parliament of Ghana by the Minister of Finance shows that the WB provided a total of about GH¢2.6 billion (Exchange rate with USD was about 1USD: GH¢5.8). A breakdown of this shows that an amount of GH¢580 million was sourced from the WB as part of the bank's support for COVID-19 preparedness and response plan while another GH¢2.0 billion was from the bank's development policy operations. On the other hand, the IMF through its Rapid Credit Facility provided about GH¢5.8 billion to support the COVID-19 response in Ghana. Further, the AfDB facility amounted to about GH¢406 million. The total amount raised from these development partners in response to COVID-19 was about GH¢8.8 billion (see Figure 3). This comes to about 35% of the fiscal deficit created by the pandemic.

4.1.2 | Domestic resource mobilisation by the public sector

The second option available to the government of Ghana in response to the COVID-19 pandemic was to look within to raise additional funds. Available options included existing public financial management (PFM) structures as well as budgetary allocations. This means that some budgetary allocations needed to be reprogrammed to support the pandemic response.²⁰ In this sub-section, we discuss some of the strategies adopted by the government.

One of the main sources of financing was the Ghana stabilisation fund (GSF). The GSF was established under the petroleum revenue management Act (Act 815) in 2011. The primary objective of the GSF was to 'cushion the impact or sustain public expenditure capacity during periods of unanticipated petroleum revenue shortfalls'.²¹ The GSF is designed to receive 70% of all petroleum revenues allocated to the Ghana Heritage Fund (GHF). The Act also allows the minister of finance to cap the GSF at a pre-determined amount and the excess funds transferred into a debt service account or used for other contingencies. To avoid abuse, the Act also makes room for parliament to provide oversight responsibilities for the Minister of finance in capping the fund. Further details on the GSF is provided elsewhere.²¹

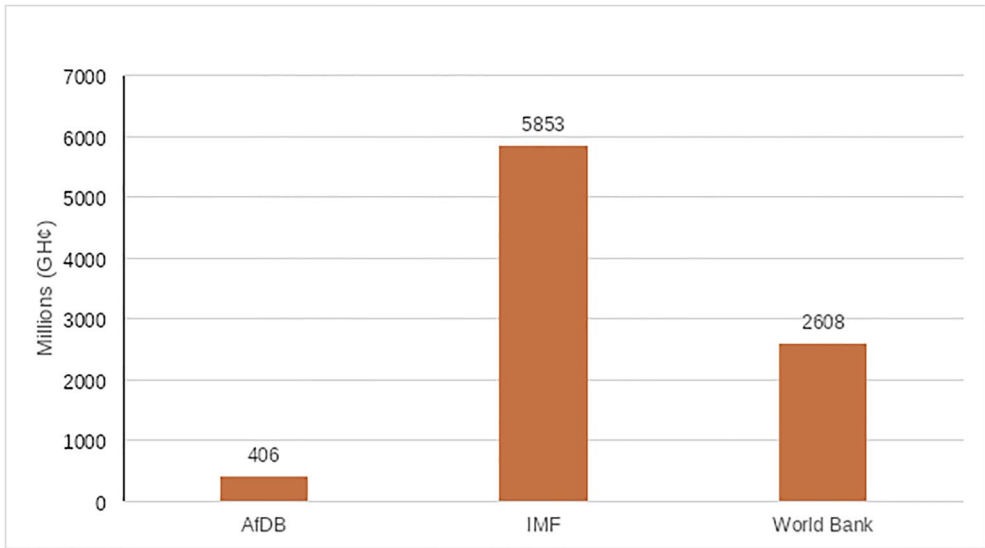


FIGURE 3 External revenue mobilisation for COVID-19. *Source:* Authors construct with data from 2020 mid-year budget statement (Ministry of Finance) [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

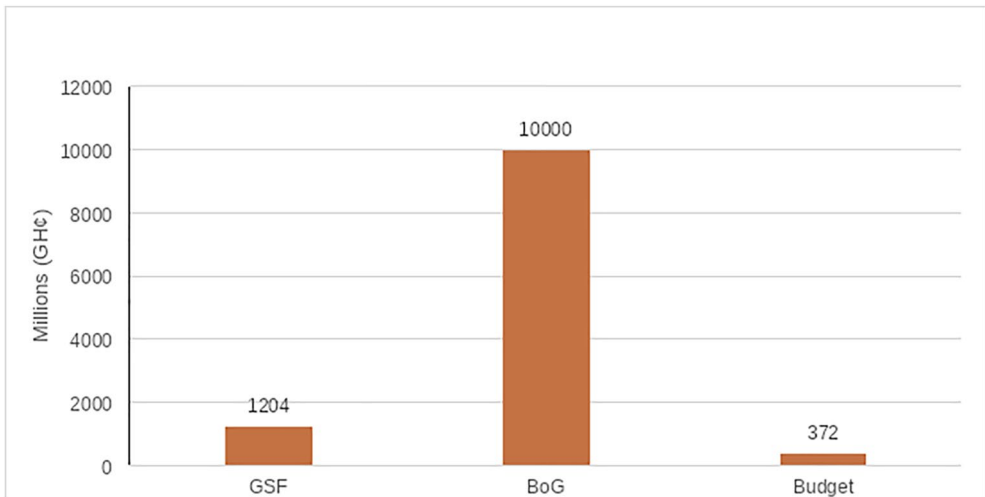


FIGURE 4 Domestic revenue mobilisation for COVID-19. *Source:* Authors' construct with data from 2020 mid-year budget statement (Ministry of Finance). Budget figures are allocations from the budget to support COVID-19 related activities as of end-June 2020. BoG, Bank of Ghana; GSF, Ghana Stabilisation Fund [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

In response to the pandemic, the minister of finance exercised this discretion and lowered the threshold of the GSF from USD300 million to USD100 million. This generated an additional fiscal space of about GH¢1.2 billion which was directed towards funding the government's coronavirus alleviation programme. There was another GH¢10 billion raised through the asset purchase programme of the Bank of Ghana which was part of the bank's COVID-19 relief programme. There were also other allocations from the budget that amounted to about GH¢372 million (see Figure 4). Since the 2020 budget did not originally have provisions for the coronavirus response programme, there was a need for reprogramming and reallocation of funds within the budget. These include realigning resources

from other sectors and expenditure items. As noted by Barroy and Gupta²⁰; this strategy is much easier where PFM systems are well organised and effective.

4.1.3 | Domestic resource mobilisation by the private sector

The other source of financing for coronavirus response was through partnerships with the private sector. Raising additional resources through public-private partnerships (PPP) has previously been identified as a potentially useful tool for developing countries.²² Private investors typically build private health facilities for profit while national health problems are considered a responsibility of the government. However, with the novel coronavirus, the government of Ghana created an opportunity where private investors and individuals can contribute to the fight against the virus. This was achieved through the creation of the COVID-19 National Trust Fund (CNTF). In April 2020, through an Act of parliament (Act 1013), the CNTF was birthed with a 7-member Board of Trustees. The focus of the fund was to mobilise domestic resources from private entities such as individuals, churches, corporate bodies, staff of organisations, non-governmental organisations (NGOs) among others. As of 30 June 2020, a total amount of GH¢53,911,249.87 had been accumulated through the fund to support the COVID-19 response.

Aside from the CNTF championed by the government, the private sector also, independently, initiated their response strategy. This was to raise extra funds to support the government's response efforts. In this regard, the COVID-19 Private Sector Fund (<https://ghanacovid19fund.com/>) was established. The fund was managed by representatives from the business community and entirely funded by the business community as well as individual donors. As of 30 June 2020, the fund had raised over GH¢35.0 million.

4.2 | COVID-19 and health infrastructure

In this sub-section, we discuss the notable infrastructure developments in the health sector that were initiated as part of the pandemic response. As noted earlier, a key component of any effective pandemic response is the availability of the needed health infrastructure and workforce. Unfortunately, many developing countries lacked in this area and were therefore left with limited pandemic response options. For instance, in countries where health facilities and bed spaces were limited, coronavirus patients were made to self-isolate and recover from their homes when available bed spaces were full. While this challenge had generated several public discussions even before COVID-19, the effort to address it was rather low.

At the beginning of the pandemic, the main testing centers were the Noguchi Memorial Institute for Medical Research in Accra and the Kumasi Center for Collaborative Research in Tropical Medicine in Kumasi. To reduce the burden in these institutions and make testing more accessible across the country, other centers were accredited. The number of testing centers was scaled up to 16 in total (12 public and 4 private). These include the veterinary services department laboratories (VSD) of the Ministry of Agriculture, the National Public Health Reference Laboratory (NPHRL), University of Health and Allied Sciences (UHAS), Council for Scientific and Industrial Research (CSIR) and the Cape Coast Teaching Hospital.²³ The number of ventilators in Ghana as of March 2020 was 67, which was equivalent to a ventilator capacity of around 0.22 ventilators per 100,000 people.²⁴ With some donations from the private sector as well as procurements made by the government in response to the pandemic, this number increased to about 200 by the end of 2020 (<https://citinewsroom.com/2020/04/covid-19-ghana-has-67-ventilators-health-minister/>).

In terms of health facilities, the MoH reported a total of 9293 health facilities around the country. Out of this number, there were 87 district hospitals and 6 regional hospitals, with community-based health planning and services (CHPS) compounds (6131) and clinics (1340) forming the majority.²⁵ Table 1 shows the distribution of health facilities as of 20 May 20.^{24,26}

TABLE 1 Regional distribution of health facilities and ICU beds in Ghana

Region	Public health facilities	Total ICU beds	Total ICU beds per 100,000 population
Ahafo	185	0	0
Ashanti	1672	17	0.3
Bono	463	0	0
Bono East	367	0	0
Central	665	5	0.2
Eastern	1128	6	0.2
Greater Accra	1400	93	1.9
North East	128	0	0
Northern	459	22	1.2
Oti	229	0	0
Savannah	164	0	0
Upper East	491	0	0
Upper West	433	0	0
Volta	518	6	0.3
Western	638	0	0
Western North	353	0	0
Grand total	9293	149	0.5

Note: ICU beds include both adult and paediatric beds.

Source: Health facility data was sourced from the Ministry of Health. ICU bed capacity was sourced from Siaw-Frimpong et al.²⁴.

The statistics show a limited and unequally distributed health infrastructure across the country. The majority of the health infrastructure and ICU beds are concentrated in a few regions with most regions not having any ICU bed capacity. The onset of the pandemic further highlighted this infrastructure deficit and generated some momentum towards bridging this gap. Ghana's first infectious disease centre was constructed in response to the COVID-19 pandemic and was entirely led and financed by the business community through the COVID-19 Private Sector Fund (CPSF).

On the part of the government, there have been some efforts to build additional health facilities. The government has announced the construction of 111 health facilities (also known as Agenda 111) across the country. Including 101 district hospitals, 6 regional hospitals in the newly created regions, 2 specialised hospitals in the middle and northern belts, as well as a regional hospital in the Western Region and renovation of the Effia-Nkwanta Regional Hospital.²⁷ The government has secured about \$100 million to push this agenda and construction of some of these hospitals has started. If fully implemented, this investment drive will help in solving one of the major challenges faced by the health sector in Ghana. It will also place the country on a better footing to respond to future pandemics or health-related negative shocks.

5 | DISCUSSION

This paper sought to review pandemic response strategies to mobilise the needed financial resources. We used available information from the website of various stakeholders as well as the 2020 mid-year budget review statement from the Ministry of Finance. We demonstrate that while Ghana, like many developing countries, faced the daunting

task of raising sufficient resources to fight the pandemic in its early stages, some innovative strategies deserve attention. We identified the following main sources of financing to support Ghana's pandemic response strategy:

- External finance: This includes financial facilities from major development agencies such as the World Bank, The International Monetary Fund, and the African Development Bank.
- Domestic finance (public sector): The main sources of financing within the public sector were budget realignment, as well as the stabilisation fund.
- Domestic finance (private sector): The private sector played an important role in fighting the COVID-19 pandemic in Ghana. This includes exclusive efforts by the business community to mobilise resources to support the government's efforts as well as the government initiating a fund-raising campaign from private entities.

Aside from the financing strategies, we also noted that the pandemic has triggered a momentum to increase infrastructure investment in the health sector. In response to lessons from the pandemic, the president announced plans towards the construction of 111 new health facilities across the country. The pandemic also propelled the building of the country's first infectious disease control centre and this was entirely initiated and financed by the business community with some donations from the public.

The findings provide some useful lessons for health financing strategies in resource-constrained settings like Ghana. The need for fiscal space for the health sector across developing countries cannot be over-emphasised and this has been well documented in the literature.²⁸ However, the fact remains that investment in the health sector is grossly inadequate across these countries. The first lesson here has to do with the need for countries to realise the role of external finance in the health sector. Indeed, previous studies have shown that external health financing significantly impacts health financing and outcomes in developing countries.²⁹⁻³¹ These types of finance typically come as loan facilities that will be repaid at a later date. In some cases, repayments come with interest. In this regard, it is important to exercise caution in relying on such sources. This is particularly important for countries with already high debt levels and at risk of debt distress. For such countries, additional external facilities may be challenging for debt sustainability. In such cases, external sources may be used in times of emergencies, such as the COVID-19 pandemic, where there is an urgent need for resource mobilisation. In the long term, it is advised that countries should ensure fiscal discipline to keep debt levels under control. This will make the use of external sources of finance for the health sector more feasible.

The second lesson hinges on the need for more flexible public financial management systems that allow for easy realignment and reprogramming during emergencies. The budget space should allow for resources to be moved from other sectors and programmes to support the health sector during uncertain events like the pandemic. Barroy and Gupta²⁰ pointed out that the process of realignment is much easier when budgets are designed along programme lines. Aside from the budget, the findings highlight the need for a national emergency fund for health and other unexpected negative shocks. For countries that do not have such emergency funds in place, the lessons from COVID-19 and Ebola suggest it has become inevitable. In the case of Ghana, the stabilisation fund, even though its primary objective was not for the health sector, became a handy and important source of financial support. It is also important to ensure that where these funds already exist, they are designed to guarantee efficiency. Identifying dedicated sources of revenue for the fund will also ensure its sustainability and effectiveness.

The final set of lessons has to do with ensuring effective partnership with the private sector. While these partnerships have been highlighted in the past as a healthy support base for the health sector, not many countries have sufficiently explored them. Identifying the business community as important stakeholders of the health sector and engaging them where necessary will be an important step.

In sum, it is important to ensure that the momentum created through the COVID-19 response doesn't fade away soon. Governments should be held responsible for strategies developed to prepare the health sector for future pandemic responses. In countries where this momentum does not exist yet, this may be an opportunity to ramp up financing and investment in the health sector. Further, it is also important to ensure accountability for the financial

resources mobilised to support COVID-19 response strategies. This will consolidate public trust and strengthen partnerships with various development agencies as well as the private sector.

Going forward, a pre-determined comprehensive pandemic response strategy will be useful. This will ensure quick response as well as efficiency in the use of resources. When decisions are taken under emergencies, without guiding principles, there may be inefficiencies that could have been avoided. For instance, the risk of completely bypassing public procurement arrangements is high in pandemic situations. However, there could have been pre-existing arrangements that ensure maximising outcomes without compromising on efficiency in the use of resources.

Moreover, while this study does not explicitly access the impact of pandemic financing on other sectors of the economy, it is expected that spillover effects will exist. This is particularly the case where there are no predetermined resource mobilisation strategies. For instance, as shown earlier in the case of Ghana, there was a need to realign budgetary allocations from other sectors to support financing in the health sector. Where clear pandemic financing strategies exist and are implemented, such realignments may be minimised.

Another caveat worth mentioning is the fact that innovative financing strategies also come with transaction costs. These costs may be significant if care is not taken and may end up being inefficient options. We recommend that these financing options should be designed in ways that minimise the resulting transaction costs and promote efficiency.³²

As noted earlier, this study does not answer all questions relating to the COVID-19 pandemic response in Ghana. Several extensions to this study could be the focus of future studies. This includes research into how these pandemic financing strategies compare to those in countries at similar levels of development. Such studies will also broaden the scope of lessons to be learnt across countries. The current study focuses on lessons only from Ghana which is not exhaustive. Secondly, future studies could consider documenting fiscal consolidation strategies to stabilise and revitalise economies following the economic impact of COVID-19.

6 | CONCLUSION

The paper highlights Ghana's COVID-19 pandemic financing strategies and identifies important lessons that could be leveraged to improve financing for the health sector. The findings show that, under the circumstances, Ghana's funding options include external partners, domestic mobilisation by the public sector, and domestic mobilisation by the private sector. The pandemic also generated increased momentum towards infrastructure development in the health sector. Lessons from the findings include an effective partnership with the private sector in pandemic response and a flexible but efficient PFM system to enable quick response for resource mobilisation. Ultimately, developing pandemic response strategies will be a step in the right direction. This will limit the uncertainties surrounding resource mobilisation strategies when such shocks occur.

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CONFLICT OF INTEREST

No conflict of interest.

ETHICS STATEMENT

Not applicable.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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