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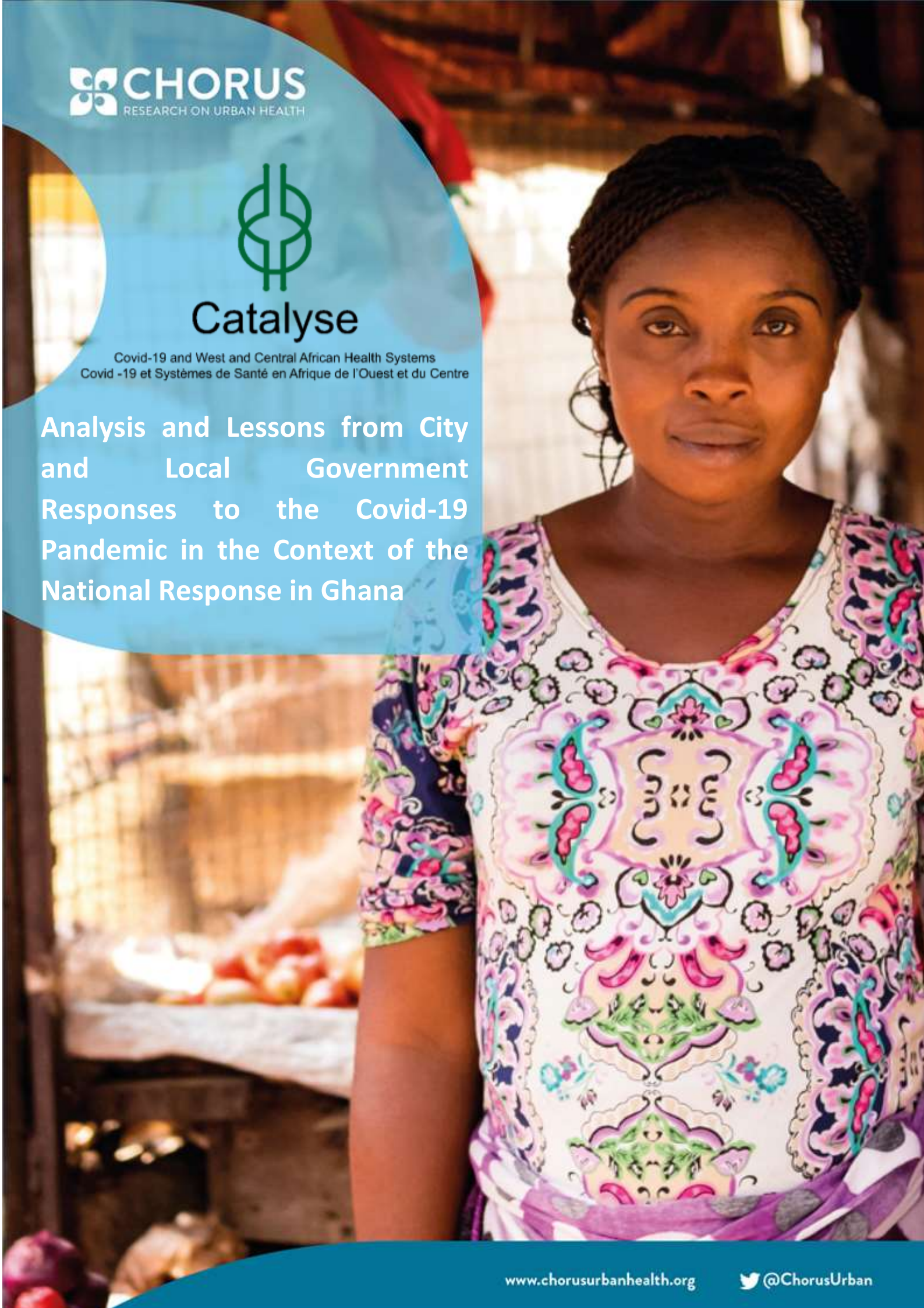
Covid -19 et Systèmes de Santé en Afrique de l'Ouest et du Centre

Analysis and Lessons from City and Local Government Responses to the Covid-19 Pandemic in the Context of the National Response in Ghana



Analysis and Lessons from City and Local Government Responses to the Covid-19 Pandemic in the Context of the National Response in Ghana

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List of Acronyms

CATALYSE	West and Central African Health Systems and Covid-19
CAP	Coronavirus Alleviation Programme
CARES	Covid-19 Allevitation and Revitalisation of Enterprises Support
CDC	Centre for Disease Control
CHORUS	Community-Led Responsive and Effective Urban Health Systems
CSO	Civil Society Organisation
DP	Development Parter
EOC	Emergency Operations Centre
FAO	Food and Agriculture Organisation
FBO	Faith-Based Organisation
FDA	Food and Drug Administration
GHS	Ghana Health Service
GES	Ghana Education Service
GDP	Gross Domestic Product
GoG	Government of Ghana
GWCL	Ghana Water Company Limited
GSS	Ghana Statistical Service
HIV	Human Immunodeficiency Virus
HSWG	Health Sector Working Group
IMCC	InterMinisterial Coordinating Committee
JHS	Junior High School
KII	Key Informant Interviews
KPMG	Klynveld Peat Marwick Goerdeler
LEAP	Livelihood Empowerment Action Programme
MoH	Ministry of Health
MMDA	Metropolitian, Municipal and District Assemblies
MHMT	Municipal Health Management Team
NADMO	National Disaster Management Organisation
NAS	National Ambulance Service
NBSSI	National Board for Small Scale Industries
NGOs	Non Government Agencies
NMIMR	Ngouchi Memorial Institute for Medical Research
NTCC	National Technical Coordinating Committee
PCR	Polymerase Chain Reaction
PI	Principal Investigator
PPE	Personal Protective Equipment
SHS	Secondary High School
UN	United Nations
UNICEF	United Nations International Emergency Fund
USAID	United States Agency for International Development
WHO	World Health Organisation

Contents

Background

The COVID-19 pandemic has had a substantial impact on the lives and wellbeing of people globally. The impact of Covid-19 in low and middle income countries such as Ghana is likely to be substantial, placing health and economic systems that are often already stressed under even greater strain. The impact of Covid-19 on the health and livelihoods of populations is likely to be highly variable across different socio-economic groups in these settings. Cities are particularly vulnerable to outbreaks of infectious diseases due to the high concentration of people and activities. Populations in urban areas, particularly those living in informal settlements (which are often more population dense), often live in cramped conditions close to other households and markets, rely on crowded transport, and have to contend with high levels of other communicable and non-communicable disease, with limited access to hand-washing and sanitation facilities (Sharifi & Khavarian-Garmsir, 2020).The urban poor are at particularly high risk of contracing Covid-19 and suffering economic consequences as a result of the pandemic. Whilst middle income and wealthier groups are often able to continue their employment from home, the lack of an adequate social safety-net, inflexibility of employment, and reliance on informal and cash economies means that the urban poor will suffer potentially catastrophic loss of income and must continue to seek work in places that do not permit physical distancing (Guven et al., 2021).

The interventions put in place to mitigate the effects of the pandemic are likely to affect more people than the virus itself and have the potential to either offer transformative opportunities or to further exacerbate existing social, economic and health inequalities. Measures that are designed to reduce Covid-19 infection rates across the general population may instead exacerbate transmission and economic and social hardship in urban settings. The governance and co-ordination of the response at national and sub-national levels will play an important role in determining the trajectory of the pandemic in urban settlements and the impacts on the urban poor.

As urbanization continues to increase globally, city-level governments, in particular, play an important role in responding to complex challenges such as health emergencies since they are responsible for acting on the wider determinants of health which sit outside the traditional remit of the health system (Elsey et al., 2019). City-level governments' coordination with national level governments in addressing outbreaks of infectious diseases is important to avoid conflicts and confusion and ensure effective and efficient use of limited resources. Different priorities between different levels of government, conflicts between actors, often over limited resources, and solely top-down and state-centric measures to direct and coordinate activities can contribute to the limited success of containing the virus in some contexts (Connolly, Ali, & Keil, 2020; Steele, 2020). More success has been attributed to approaches to governance that integrate the responses of multiple sectors and combine top down and state centric measures with community-based activities, and strong, democratic city level governance (Sharifi & Khavarian-Garmsir, 2020).

This study documents the scope of the polices and health system responses to Covid-19 in Accra, Ghana during the first wave of the pandemic with a focus on exploring the governance and

coordination of the response at different levels and the differential impacts on the urban population, particularly the urban poor.

Research Questions and Objectives

1. How have city/local governments and national responses been coordinated? Are responses synergistic or have they undermined each other? What have been the facilitators and barriers to this?
2. What has the role of city governments been in the response and what are the facilitators and barriers to an effective short-term and long-term response by city government?
3. Have city governments played any role in coordinating or managing the responses of public, private, NGOs providing health-care or other services (water, sanitation, phone networks, public transport etc) in the response in the short and long-term?
4. How has Covid-19 and the national/city response affected, or is likely to affect, the health, wellbeing and livelihoods of poor urban populations? Any difference for informal settlement and other urban poor? Short-term (weeks/one month) and long-term (months/years)?

General Objective

To explore the scope of the polices and health system responses to Covid-19 in cities (metropolitan and municipal level) in the first few months of the pandemic, how and why city/local governments have specifically responded to Covid-19, and coordinated their responses with national government responses, the differential impact on sub-groups of the urban population and lessons for local government health security preparedness and response.

Specific Objectives

1. To explore and describe the local government response to Covid-19 at municipal /metropolitan level and how local government responses have been coordinated (or not) with national government responses including any facilitators and barriers to synergistic local and national government responses.
2. To explore and describe coordination roles (if any) of city local governments in managing the responses of public, private, NGOs providing health-care or other services (water, sanitation, phone networks, public transport etc) in the Covid-19 response.
3. To analyze how and why the local government response to Covid-19 at municipal level has affected, or is likely to affect, the health, wellbeing and livelihoods of poor urban populations including informal settlements.
4. To understand the trajectory of the epidemic in Ghana, over the period of study (12 March 2020 to Sept 30, 2020).

Methods

Overall approach and study sites

This study is an exploratory case study. The case is defined as the trajectory of and policy and system responses to Covid-19 in Ghana at local government level in Greater Accra and the intended and unintended effects of these responses on the population. The qualitative analysis is based on a review of documents and media starting from January 1, 2020, the period leading up to and following WHO's announcement of a Public Health Emergency of International Concern (on 30th January 2020), through to September 30, 2020.

The case study is focused on the response to and the impacts of Covid-19 within municipalities in Greater Accra Region. Greater Accra Region is an ideal site within which to understand the response to and impacts of Covid-19, since it is the region in Ghana that has been most affected by Covid-19, with the largest number, 65,154 cases from Greater Accra Region, and the second largest number 20,240 from Ashanti Region, as of Sept 1, 2021 (GHS, 2021).

Summary of objectives and data collection methods by research question

Research Question	Research Objective	Data collection methods
RQ1. How have city/local governments and national responses been coordinated? Are responses synergistic or have they undermined each other? What have been the facilitators and barriers to this?	RO1 To explore and describe the local government response to Covid-19 at municipal /metropolitan level and how local government responses have been coordinated (or not) with national government responses including any facilitators and barriers to synergistic local and national government responses	Document Review. Media content analysis. Meeting observations*. Key Informant (KI) interviews*
RQ2. What has the role of city governments been in the response and what are the facilitators and barriers to an effective short-term and long-term response by city government?	RO2 To explore and describe coordination roles (if any) of city local governments in managing the responses of public, private, NGOs providing health-care or other services (such as water, sanitation, phone networks, public transport) in the Covid-19 response	Document Review. Media content analysis. Meeting observations* KI interviews*.

Research Question	Research Objective	Data collection methods
RQ3. Have city governments played any role in coordinating or managing the responses of public, private, NGOs providing health-care or other services (water, sanitation, phone networks, public transport etc) in the response in the short and long-term?	See above	Document Review. Media content analysis. Meeting observations*. KI interviews*.
RQ4. How has Covid-19 and the national/city response affected, or is likely to affect, the health, wellbeing and livelihoods of poor urban populations? Any difference for informal settlement and other urban poor? Short-term (weeks/one month) and long-term (months/years)?	RO3 To analyze how and why the local government response to Covid-19 at municipal level has affected, or is likely to affect, the health, wellbeing and livelihoods of poor urban populations including informal settlements.	Document Review. Media content analysis. Meeting observations*. KI interviews*. Quantitative analysis of Data on Covid-19 tests and results from samples sent to Ngouchi Memorial Institute for Medical Research (NMIMR)
	RO4 To understand the trajectory of the epidemic in Ghana, over the period of study (12 March 2020 to Sept 30, 2020).	Quantitative analysis of Data on Covid-19 tests and results from samples sent to Ngouchi Memorial Institute for Medical Research (NMIMR)

**Key informant interviews and meeting observations have not yet been concluded. Analysis of these will be published in a subsequent report/peer reviewed journal articles*

Search and sampling strategy: Media and Desk Review

Data came from a desk review focused on media and other grey literature (reports, briefing notes, strategies, guidelines, etc.). Online portals of 2 newspapers (Daily Graphic, Daily Guide) and 2 radio stations (Citi News, My Joy Online) were searched, using the Factiva (Dow Jones) database. Online portals were chosen rather than paper-based newspaper sources as they are considerably easier to search and extract information from. Factiva is an online database of current global news produced by Dow Jones and Reuter that was used in order to increase the efficiency during the online search process and in the extraction of information.

These newspapers and radio stations were selected to prioritize both public and private news outlets with large readership. It was important to select at least one privately owned newspaper, in order to

control for any bias in reporting from government-owned sources. Articles that contained Covid* or corona* in the title or in the lead paragraph over the period of the first global wave of the pandemic (30th January, when the WHO announced COVID-19 as a Public Health Emergency of International Concern through September 30th, 2020) were included. For reports, strategies and guidelines, the team compiled lists of government ministries, departments and committees, bilateral and multilateral organizations, and non-governmental organizations (NGOs) involved in the COVID-19 response and their websites. Each website was searched and relevant documents downloaded.

A total of 2586 (2521 media articles and 65 other documents) were retrieved. Eligibility of media reports and official documents for inclusion was determined by a quick scan of the media report, or the executive summary, respectively to determine if mention was made of issues related to the response of local government agencies to Covid-19 or processes of coordination/collaboration between authorities at various levels. Media reports that did not focus on Covid-19 in Ghana, or were not relevant to the covid in cities research questions (for instance, focused on infections in celebrities and prominent persons) were excluded from the analysis. Documents not containing information on governance or response activities at sub-national level, or describing specific effects on vulnerable populations, such as guidelines which were solely clinical in focus were also excluded from the analysis. A total of 2013 documents were excluded (1995 media reports and 18 other documents), with 573 (526 media reports and 47 other documents) being included.

Data Analysis: Media and Desk Review

Media articles were analyzed separately from policies, reports and meeting minutes. Analysis was completed by the PI. Information was coded by tagging relevant information by research question and cutting and pasting this information into a table together with the author, date, source and title.

Quantitative analysis of the trajectory of the epidemic

On 29th May 2020, the Ghana Health Service entered into a collaboration with researchers in the CHORUS project (UG-SPH) as well as the Ngouchi Memorial Institute for Medical Research (NMIMR) and Ghana Statistical Service (GSS) to work together with its technical team to answer critical questions on an ongoing basis drawing on the evolving surveillance data in real time to provide inputs into national and sub-national decision making and response to the Covid-19 pandemic. The collaboration was to have included Oxford Policy Management. The intent was to analyze the full national data set to provide information to input into decision making. However, there have been persistent challenges with the completeness of the data provided by the GHS Surveillance unit. It appears it is not going to be possible to obtain the complete data set. What are available are the data from the situational reports. These are highly aggregated data that make it impossible to do any detailed analysis (i.e. by sex, location of infections, occupation, etc). When data is incomplete many assumptions have to be made during analysis that can influence the accuracy and validity of predictions.

In this preliminary report, we present analysis based on data from samples sent to Noguchi. The data in this report is based on analysis of epidemiological data from 194,162 samples tested at NMIMR between 12th March and 29 June 2020 for Covid-19. The limitation of this data is that there were other two laboratories in Greater Accra doing testing during this time period (the National Public Health Reference Laboratory and Veterinary Services Laboratory. The estimates for the effective reproduction number and the growth rate should be interpreted with caution since we only relied on data from the Noguchi Memorial Institute for Medical Research and our results may not be representative of the Region at large. However, at the time, Ngouchi was one of the most common testing sites in Ghana, and the data we obtained represents approximately 63% the total case count in Ghana over the period of observation. We still hope that going forward it will be possible to get more complete national data to enable a better answering of all the questions raised to inform national and sub-national decision making.

Results

We have structured the presentation of our findings in four sections in relation to our research questions and objectives. The first section presents our findings on central (national) government structures for leadership and governance of the response and decisions taken and interventions put in place at that level as part of the response. The second section presents our findings related to the same issues at the local (city) government level. The third section presents findings on anticipated and observed effects of the central and local government interventions on the urban poor and other vulnerable populations. At the community and household levels populations experience the effects of interventions as a combined whole regardless of whether the intervention was initiated by the central or the local government. This is the reason why we do not break this section down by local and central government.

1. Central (national) Government Structures and Responses

There are clear multisectoral structures for the management of public health emergencies at all levels of government – national, regional, district, sub-district, and community levels which provide clear roles for stakeholders at the national and sub-national levels and emphasize coordination and communication between the various levels of government and stakeholders involved in the response.

The National Strategic Covid-19 Response Plan has a strong emphasis on the “whole of government” and “whole of society” approach to managing the response (MoH, 2020 p. 25). The national response plan was validated through a series of consultative meetings between the Ministry of Health and the nominated representatives of collaborating Ministries, Departments and Agencies as well as representatives from the private sector. The strategy contains an extensive list of collaborating ministries and agencies and their role organised by objective and thematic area.

The implementation principles of the national plan place specific emphasis on a balance between a decentralised and centralised response, with a focus on both national level policies, guidelines and

protocols as "essential to ensuring uniform standards of implementation", alongside "decentralization of service delivery, testing, contact tracing and case management using the existing decentralized health systems of the GHS at the Regional, District and Sub-district levels" and support for the development and implementation of regional and district-specific response plans (MoH, 2020 p. 25).

1.1 Structures for leadership and coordination of the central response

At the national level, leadership is at three levels: The Interministeral Coordinating Committee/National Co-ordinating Committee together with a Covid-19 coordinating secretariat, chaired by the President of Ghana, and the National Technical Co-ordination Committee (NTCC) and the Emergency Operations Centre, chaired by the Hon. Minister of Health and the Director General, GHS, respectively (GHS, WHO & CDC, 2019; MoH, 2020)

The Interministeral Coordinating Committee (IMCC) or National Coordinating Committee (NCC) is composed of ministers of key ministries, including Local Government and Rural Development, Interior, Finance, Health, Food and Agriculture, Transport and Communications, Information, Water and Sanitation etc. in addition to representatives of key Development partners (including the resident co-ordinator of the UN, WHO, CDC, UNICEF, USAID, FAO, IEO, Red Cross etc). The primary role of the IMCC is to provide policy and political direction and to provide general co-ordination of operations during epidemic prevention and control activities, as well as mobilisation of needed resources.

The NTCC is made up of technical experts from Ministries, Departments and agencies, and health partners. Its primary roles are to provide a technical backup to the NCC, to develop and oversee the execution of a detailed plan of action for the response to the epidemic, organise the mobilisation of resources in collaboration with partners, and monitor and evaluate performance (GHS, WHO & CDC, 2019; MoH, 2020).

1.2 Central (National) government Responses Measures

Ghana's Covid-19 response has strongly emphasised a whole of society, multisectoral approach with recognition of the need to mitigate the effects of the disease on both public health and socio-economic development. The overall goal of Ghana's National Strategic Covid-19 Response Plan: 'reducing the incidence, and mortality of COVID-19 pandemic and the negative impact on the socio-economic lives of the people' reflects this holistic approach. Ghana's National Covid-19 Response plan has six strategic objectives:

1. Limit and stop the importation, detect & contain the Virus

2. Slow down and manage community spread
3. Provide adequate medical and psychosocial care for COVID-19 cases
4. Strengthen Governance, Coordination and Accountability of COVID-19 Response
5. Minimise Impact of COVID-19 on Social & Economic Life
6. Increase Domestic Capacity & Self-Reliance including building and strengthening capacity for health research and Innovations (MoH, 2020)

1.2.1 Public health measures

The government of Ghana announced social distancing measures and travel restrictions on March 10, including, the suspension of international travel by public officials, and restrictions on public gatherings, including the closure of schools. In mid March, (following Ghana's first confirmed case of Covid-19 on March 12), the government restricted foreign nationals from entering the country and implemented a mandatory 14-day self-quarantine for entering travellers. Starting on March 22, all air, land and sea borders were closed, and beginning on March 27, a three-week partial lockdown was imposed in parts of Greater Accra and Ashanti Regions. Beginning on June 5th, a phased approach to easing the restrictions commenced, including a lifting of some restrictions on social gatherings, including an abridged format for religious services with limitations on the numbers of attendees, and the decision was taken by the government to re-open schools and universities to allow for final year junior high, senior high and university students to resume classes ahead of the conduct of their respective exit examinations. University students were permitted to return to school to finish the academic year on August 24, and on October 5, SHS 2 and JHS 2 students returned to school to complete their academic year. As of January 2021, the remaining students (SHS 1, nursery, kindergarten and basic schools) will return to schools.

Specific public health measures have been taken to reduce the risk of Covid-19 transmission during the re-opening of schools. For instance, senior and junior high schools were provided with logistics including Veronica buckets[1], hand sanitisers, tissue paper, liquid soap and thermometer guns. School and dormitory buildings were also fumigated. Each student, teaching and non-teaching staff, invigilator and school administrator, was provided with three reusable face masks. Other measures included reduced class sizes, and a shortened school day, with students reporting to school at 9am, and closing at 1pm, in addition to the banning of assemblies and sporting events. Each school has also been mapped to a health facility and isolation centre. A Covid-19 sensitisation programme for all head teachers and their teaching staff has also been organised to clarify the protocols to be enforced and followed by teachers.

[1] A Veronica bucket is a bucket with a tap near the bottom that is perched above a basin to catch runoff. It was invented by biological scientist, Veronica Bekoe, in Ghana in the 1990s,

Further easing of the restrictions on transport have taken place, culminating in the opening of the air borders on September 1st with passengers arriving in the country required to be in possession of a seventy-two (72)-hour old negative PCR test. Arriving passengers are subject to a mandatory COVID-19 test (antigen fluorescent immunoassay) at a cost of $150 per passenger. Children under the age of five are exempt from testing and children between the ages of five and 12 years undergo testing on arrival free of charge (GoG, 2020).

1.2.2 Health System Measures

Healthcare facilities and laboratories

The Government of Ghana has taken a number of measures to strengthen the capacity of the health system to respond to public health emergencies. One of the six main strategic objectives of Ghana's national Covid-19 response plan is to provide adequate medical and psychosocial care for Covid-19 cases and for the early detection of cases in order to reduce morbidity and mortality. As such, major investments into healthcare facilities and laboratories have been made over the period of the pandemic. Regional and district tuberculosis gene expert laboratories were recalibrated to work towards the situation of one testing centre per region. Expansion of and additions to networks of Covid-19 treatment and isolation centres were also undertaken. Notably a 100-bed Ghana Infectious Disease Centre, located at the Ga East Hospital, was constructed through the support of the Ghana Covid-19 Private Sector Fund in a period of less than 100 days. The President also announced the establishment of three infectious disease control centres for each of the Coastal, Middle and Northern zones of the country and the construction of 111 new 100-bed district hospitals in districts without hospitals, and seven new regional hospitals through Agenda 111.

Provision and production of necessary medicines and logistics

The National Covid-19 Response plan also places a high priority on the provision of appropriate medicines and supplies for the treatment of cases. This includes placing a high priority on the procurement of Personal Protective Equipment (PPE) and other necessary logistics for the response including specific focus on increasing domestic capacity and self reliance for local production of logistics (GoG, 2020).

For instance, within the first month of the pandemic, the GoG resourced specific local garmet manufacturing companies for the production of PPE, including face masks, medical scrubs and gowns, in order to both strengthen the response to Covid-19 and increase local content in government procurement of goods and services. The Covid-19 Alleviation and Revitalisation of Enterprises Support (CARES) programme (further details below) will provide additional support for the local garmet industry by upgrading machinery and training workers in 2021. In addition, since the pandemic has exposed Ghana's vulnerability to global shortages of essential drugs and the weaknesses of Ghana's pharmaceutical industry (including access to finance, high water and electricity costs, delayed NHIA payments, and lack of skilled personnel), the revitalisation phase of CARES program will also work to address these issues to strengthen domestic capacity for the production of pharmaceuticals (MOFEP, 2020).

Human Resources

Attention was also focused on increasing the numbers of available health workers and incentivising them to perform. At the start of the first wave, the Ministry of Health mobilised new and retired healthcare professionals to augment preparedness in dealing with the surge in infections. During the first few months of the pandemic when extensive contact tracing was taking place, and staff were facing a high workload, additional contact tracers were hired in hard hit regions, including Greater Accra to assist with testing and tracing and a daily allowance was paid to them.

Further, an insurance package for frontline health personnel and allied health professionals was put in place. Frontline health workers were also incentivised with an additional allowance of fifty percent of their basic salary, beginning in the month of March through December 2020 and a waiver on their income taxes for the same period (GoG, 2020).

1.2.3 Social and economic measures

Minimizing the impact of Covid-19 on social and economic life is one of the six key strategic objectives of the National Strategic Covid-19 Response Plan (MoH, 2020). The GoG introduced numerous measures to mitigate the negative social and economic impacts of the Covid-19 pandemic. After indicating that it was highly under-resourced to handle the crisis, and that prospects of a solely government-funded response to the pandemic would not be possible, GoG secured an IMF rapid credit facility of US $1 billion, a World Bank concessional facility of US $100 million and US $10 billion from an asset purchase from the Central Bank of Ghana (UN, 2020). In addition, the Ghana Covid-19 Fund, a private sector led initiative was also established in April to complement government efforts at fighting the pandemic in the country and the hardship and suffering arising from the pandemic (Ghana Covid-19 Private Sector Fund, 2020). As of Nov 25, 2020, a total of GH¢57,023,092 cash donations had been received by the Fund since its establishment in April, 2020. So far the fund has expended GH¢41,738,987 in the provision of materials and financial support to various medical facilities and vulnerable groups across the country (“Covid National Trust Fund”, 2020).

Initial social and economic support (March-June 2020)

Immediately following the announcement of the partial lockdown measures, on 5th April, the GoG announced a number of interventions to mitigate the adverse effects of the restrictions on movement. These included a number of measures targeted at individuals and households, including the absorption of water bills for all Ghanaians from April to June, and the mobilisation of all public and private water tankers to ensure the supply of water to all vulnerable communities. Government also fully absorbed electricity bills for the poorest of the poor, or ‘lifeline’ consumers and for all other consumers, residential and commercial, absorbed 50% of their electricity bill over the same period.

Other economic measures were also announced to mitigate the adverse effects of the pandemic on the most vulnerable, and to support the adherence of vulnerable populations to public health measures. The Bank of Ghana prescribed a number of measures to promote digital payments and contain the impact of Covid-19 on the economy, this included Telecos removing charges on mobile money transfers (April-June), and, in collaboration with the National Board for small scale industries

(NBSSI), business and trade associations and selected commercial and rural banks, the roll out a soft loan scheme for micro, small and medium scale businesses (GoG, 2020), with a specific prioritization of businesses owned by women or by persons with a disability.

After porters (also called kayayei)[2] from Accra attempted to flee from the city to their hometowns prior to the start of the partial lockdown, the GoG announced that 10 cedis was to be provided daily to each kayayo during the partial lockdown period in affected districts (Entsie, 2020). Further, in April, the GoG transferred additional monies (50.2 million) to the 400,000 most vulnerable individuals under the Livelihood Empowerment Against Poverty (LEAP) Programme. These extraordinary cash payments were intended to help alleviate economic pressures on very poor and vulnerable households, and to enable them to apply safe health and hygiene behaviours and were delivered through a collaboration between UNICEF, the Ministry of Gender, Children and Social Protection and the World Bank (Zurek, 2020; UNICEF 2020). In addition, according to the National Covid-19 Response Plan, the MOGCSP was to implement a COVID-19 social support programme to affected households including vulnerable aged women and alleged witches[3] by targeting and select extreme poor COVID-19 affected households not covered under the LEAP using the MOH/GHS data and disbursing cash grants to them. In addition, the MOGSP was to be resourced to design and implement alternative livelihood support programmes to selected COVID-19 affected households

Specific attention was also paid to food security within lockdown affected areas, and the GoG, through the Ministry of Gender and Social Security and NADMO, and in collaboration with MMDAs and Faith Based Organisations, provided 54.3 million dry food packs and hot cooked meals to vulnerable persons within Accra (1,827,581 packs) and Kumasi (917,142 packs) respectively to approximately 470,000 families (Zurek, 2020). According to the National Covid-19 Response Plan, specific focus was to be paid to the provision of hot meals to Kayayes and street children as an avenue for orientation for skills development training, and also to provide psycho-social counselling and support (MoH, 2020).

Numerous individuals and organisations donated to the Covid-19 Private sector Fund, with some partnering the fund to provide interventions to specific vulnerable groups. For instance, KPMG Partners Ghana partnered the Fund to Roll out the "Feed a Kayayo project" from April 1-12th to provide meals to head porters in partial lockdown areas in Greater Accra and Ashanti Regions. A total of 145,746 packs of food were provided to beneficiaries during the period (KPMG, 2020).

There were several other non-governmental initiatives that focused on improving the lives and livelihoods of the kayayei. For instance, UNFPA Ghana's Kayayei Assistance Project (KASPRO), aimed

[2] Kayayei is a term for a woman who carries goods and wares on her head for shoppers and traders in and around commercial centers for a petty fee, and live 'hand to mouth'. Many of these women are unskilled migrants who have moved from a rural community to urban areas in search of work. They often live in informal settlements with poor sanitation.

[3] 'Witches' are women accused of using supernatural power to harm individuals and bring misfortune to their communities. These women are often socially ostracized by their families and communities, and can be subjected to violence

to complement the focus in the Covid-19 National Response plan on providing training and skills development for kayayei and street children, undertaking comprehensive community sensitization on the protection of the rights of children, women, girls & boys in COVID era, and intensifying campaigns to combat domestic, sexual and gender based violence in COVID-19 era (an activity under the MOGCSP) (MoH, 2020; UNFPA, 2020). A six-month programme of training and skills development for kayayei and street children to improve their livelihood generation began in June 2020. Five hundred kayayei were enrolled and provided with sexual and reproductive health education, essential items including hygiene products, face masks and sanitisers, and skills training in topics such as soap making, bakery, bead making, yoghurt making, shea butter making in order to enable them to start independent businesses (UNFPA, 2020).

The CARES Programme (July 2020-Dec 2023)

The Covid-19 Allevitation and Revitalisation of Enterprises Support (CARES) Programme, also called 'Obattan Pa' Programme, is a 100 billion Public-Private Partnership initiative to mitigate the impact of the pandemic on lives and livelihoods and to ensure that macroeconomic gains are not eroded, and that the country emerges from the pandemic with a stronger and more resilient economy (UN, 2020). The initiative is a three and a half year programme (July 2020 -Dec 2023) structured into a two phase approach: Stabilisation (July-Dec 2020) and Revitalisation and Transformation (2021-2023).

Stabilisation Phase (July-Dec 2020)

The stabilisation phase is intended to extend the duration or coverage of some of the programmes already put in place to provide relief and support lives and livelihoods. Some of the key areas of focus included: extending the free electricity supply for lifeline users for three additional months (until Sept 2020), extending the provision of free water supply for all Ghanaians for another three months (until Sept 2020), and absorption of water bills for consumers who use less than 5 cubic metres of water/month (Jan-March 2021); increasing the funding to the Coronavirus Allevitation Programme Business Support Scheme (CAP-BuSS); Establishing a National Unemployment Insurance Scheme through the Ministry of Employment and Labour Relations in collaboration with Social Partners and Faith-Based Organisations; and setting up seed funding for a retraining programme to help workers who are laid off to either improve their skills or acquire new skills to improve their changes of finding new employment.

This phase also focused on ensuring food security by intensifying support for farmers through the Planting for Food and Jobs and Rearing for Food and Jobs Programmes, facilitating access to financing for rice millers to enable them to purchase paddy from rice farmers, and establishing a food security monitoring committee made up of relevant government ministries and agencies and market queens and food transporters to enable the GoG to monitor food security and take appropriate action (KPMG, 2020). Furthermore, after reports in August that some students were going hungry as a result of complying to the coronavirus safety protocols in various schools, the President of Ghana announced

that JHS students, and staff, both in public and private schools, be given one hot meal a day (GoG, 2020).

2. Local (City) government structures and responses

The objective was to explore and describe coordination roles (if any) of local governments in Accra in managing the responses of public and private actors, including NGOs, government agencies or businesses providing health-care or other services (water, sanitation, phone networks, public transport etc). in the Covid-19 response.

2.1 Structures for leadership and coordination of the Sub-National Response

At both the Regional and district levels, Public Health Emergency Management Committees (PHEMCs) were convened, in addition to regional and district Public Health Emergency Rapid Response Teams (PHERTs).

PHEMCs

The regional PHEMC group is convened by the Regional Minister under the leadership of the Regional Coordinating Council to oversee the Regional response to the outbreak, with the Regional Minister as the chairperson. At the District level, the Chief Executive convenes the District Emergency Response committee.

The PHEMCs meet weekly when there is an outbreak, and quarterly when there is no outbreak. Similarly to the NTCC at the National level, the PHEMCs are responsible for planning prevention and control interventions (risk mapping, coordinating communication and education of health workers, ensuring the availability of competent laboratory support, etc.) and identifying and quantifying important resources and capacities needed for rapid response (including vaccines, medicines, transport, etc), producing daily situation reports, and monitoring and evaluating preparedness and response.

The PHECMs are both composed of representatives from Ghana health service, including representatives from public health, health promotion office, disease control/surveillance, environmental health, information services, etc. and representatives from key agencies, including regional/teaching hospitals, the FDA, NAS, NADMO, GES, Ghana Water Company, Medical services under military and police, NGOs, mission hospitals, faith based organisations, Traditional council, Academic and Research institutions, Private Sector, etc. (GHS, WHO & CDC, 2019).

PHERTs

A PHERT is a technical, multidisciplinary team readily available to deploy rapidly (within 24 hours of a suspected case). The PHERTs provide support during the earliest phase of the outbreak and also provide surge capacity during the outbreak. The membership of PHERTs depends on the nature of the emergency (GHS, WHO & CDC, 2019). While the PHEMCs provide governance and have decision-making authority, the PHERTs are responsible for the clinical management of suspected and confirmed cases. PHERTs both take direction from the PHEMCs and provide on the ground investigative support to inform decisions taken by the PHEMC.

Municipal Metropolitan and District Assemblies (MMDAs)

MMDAs were tasked as important structures in the response to the outbreak. The Covid-19 local economies and business tracker survey (GoG, GSS, and UNDP, 2020) indicates that district assemblies were a main driver of social and economic initiatives and direct support for adverse effects on households. Media reports and the national Covid-19 response plan indicate that various Ministries and Agencies were tasked with collaborating with MMDAs to implement national interventions (MoH, 2020)

2.2 Local (City) government response measures

The responses of local government for the most part, seem to primarily have focused on implementing interventions identified in the national Covid-19 response plan, although there appears to be regional and local level variation in the exact nature of interventions implemented and the actors involved at the sub-national level, depending on the mix of actors engaged in the response in various contexts.

Social and Economic Measures

Numerous examples of collaboration between MMDAs and national government were reported in the media and in national plans, including the distribution of food packs to vulnerable persons in Accra and Kumasi, through a collaboration between various national and sub-national entities, including NADMO, the Ministry of Gender and Social Protection, and MMDAs, and Faith Based organisations. MMDAs were tasked with putting together plans to distribute food, and involving opinion and religious leaders and NGOs and FBOs in the distribution. According the National Covid-19 response plan, MMDAs, together with the Ministry of Local Government and Rural Development and the Ministry of Gender, Children and Social Protection were also responsible for the provision of social protection and psychosocial support services to the vulnerable (MoH, 2020).

Preventative Protocols

The Ministry of Local Government and Rural Development, in collaboration with Zoomlion Ghana Limited, military, police, the Regional Co-ordinating councils and MMDAs embarked on multiple

phases of a mass disinfection exercise in markets and lorry parks across the country. Together with relevant ministries, MMDAs were to improve hygiene standards and social distancing in all markets, lorry parks and other places with market associations, in collaboration with traditional authorities, and faith-based organisations. MMDAs were encouraged to take a leadership role in the exercise and to properly engage with their communities, especially market women, and monitor the implementation of the exercise (MoH, 2020). MMDAs also formed Covid-19 safety task forces, together with the military, police, and Zoomlion and penalised citizens who were not adhering to measures such as mask wearing. In addition, MMDAs received donations from individuals and organisations for the prevention of Covid-19, including equipment and consumables (such as face masks, sanitiser and soap, Veronica buckets, etc) and distributed them to health facilities, Municipal Health Management Teams (MHMTs), and directly to communities. Some MMDAs also made direct financial or in-kind contributions of preventative logistics to communities and MHMTs.

The National Strategic Covid-19 response plan puts a strong emphasis on community engagement and empowerment in order to strengthen community ownership and adherence to preventative protocols (GoG, 2020). Besides MMDAs, other local groups and individuals who were often mentioned in the media and documents reviewed were faith-based organisations and other civil society organisations and associations such as women's groups, market associations, youth groups, as well as opinion and religious leaders, queen mothers, and Covid-19 survivors. According to the National Covid-19 response plan, CSOs, in particular had important roles to play in social and behaviour change communication. For instance, the GHS Health Promotion department (GHS-HPD) was to engage with NGOs and CSOs at both national and district levels on a quarterly basis to ensure community ownership and participation in all community-based interventions at all levels.

CSOs were, together with traditional authorities and community leaders to assist with community mobilisation in order to slow down and manage community spread. The GHS HPD, together with CSOs, including faith based organisations, youth groups and Covid-19 survivors, and traditional leaders, also embarked on stigma reduction campaigns. The Ministry of Gender and Social protection provided skills development and training to faith-based organisations to intensify education and sensitization around Covid-19. In addition, through the Ministry of Chieftancy and Religious Affairs, sensitisation workshops were organised for selected focal queenmothers to encourage market women to adhere to Covid-19 protocols to capacitate them to carry out advocacy at selected market places. In collaboration with traditional council registrars, the GHS-HPD also carried out sensitisation workshops with selected traditional leaders (members of the regional house of chiefs) on how to ensure adherence to safety protocols at funeral ceremonies and other events in their traditional areas.

Case management

MHMTs were responsible for overseeing surveillance and case management in their municipality; this included convening and directing Rapid Response Teams (RRT) and overseeing case management of patients in treatment and isolation facilities. MHMTs were the lead agency in the municipality for the Covid-19 response; however, they worked in close collaboration with the assemblies. Municipal assemblies facilitated a number of case management and surveillance activities in collaboration with MHMTs, including assisting the central government and Municipal Health Directorates to set up treatment and isolation centres. Besides FBOs' roles in Social and Behaviour Change Organisation and

implementing social and economic relief measures, they assisted with case containment. For instance, the Pentacost Convention Centre in Accra was used as an isolation facility.

While the national and regional government was to provide support to the local government to develop and implement district-specific response plans, at least based on the initial desk review, the responses of local government seem to be, for the most part, primarily focused on implementing interventions identified in the national Covid-19 response plan. However, the mix of private sector actors, civil society organisations, and development partners engaged in the Covid-19 response varies between specific regions and localities. This has resulted in some regional and local variation in the types of actors involved in the implementation of interventions, and the exact nature of the interventions; this seems to have been especially true in Accra and Kumasi, the hotspots of the epidemic, where much of the response was focused. For instance, as discussed above, KPMG partnered with the Covid-19 Private sector Fund, to Roll out the "Feed a Kayayo project" in Greater Accra and Ashanti Regions, although it is unclear the exact roles of MMDAs in facilitating the implementation of this intervention (KPMG, 2020).

3.1 Anticipated effects of central and local government responses and interventions on the urban poor

3.1.1 Economic and Social effects

The pandemic is expected to have negative macro economic and micro economic effects in Ghana. Measures to contain the virus globally and nationally have resulted in a number of negative economic impacts, including a decrease in economic activity, disruptions to economic inflows from tourism and hospitality revenues, decreased exports, reduced foreign direct investment, major disruptions to the supply chain and rising inflation. GDP growth is expected to decline by 5.9% in 2020 – a forecast which suggests the lowest growth rate in 37 years (UN 2020; Van Vuuren & Dontoh, 2020). The significant National investments and borrowings (from the IMF and others) required to provide a holistic National response that both addresses health challenges and mitigates social and economic impacts have implications for debt sustainability and are projected to pose a severe strain on sustainable resource flows to key social sectors in the medium and long term. Internally generated funds in MMDAs are likely to be negatively affected due to reduced economic activity locally and nationally (UN, 2020).

In urban areas in Ghana, the impact of Covid-19 is expected to be highly variable across different socio-economic groups. Urban populations that are particularly vulnerable to the impacts of the pandemic include those living in informal settlements, informal sector workers (including market sellers, transport operators, street hawkers, head porters, small shop owners, etc.). Whilst middle income and wealthier groups are often able to continue their employment from home, the lack of an adequate social safety-net, inflexibility of employment, and reliance on hand to mouth existence means that those the informal sector are more likely to suffer potentially catastrophic loss of income and must work in places that often do not permit physical distancing. Inequities in wellbeing in urban areas are affected by intersectional social identities (such as gender, class, and race), which create overlapping and interdependent systems of privilege or disadvantage (CHORUS, 2021).

The UN's common country analysis of the impacts of Covid-19 in Ghana and its associated containment measures projects that the economic impacts of Covid-19 on households will be worse for the working population in the informal sector (UN, 2020). Between 80 and 90% of Ghanaians earn a living in this sector, with a significant proportion of these workers employed in urban areas. The informal sector is already characterised by a lack of decent work conditions, participation in vulnerable employment (such as domestic care workers with limited access to labour rights and social protection) and irregularity of income flows. In urban Ghana, women, and other already marginalised populations, including persons with disabilities, children and adolescents – who are vulnerable to child labour, trafficking, pregnancy and forced and early marriage, out of school and lacking access to remote learning opportunities – and migrants (including kayeyei, refugees, stateless and internally displaced persons) were expected to be more vulnerable to the deleterious social and economic effects of the pandemic (UN, 2020). The impacts on informal sector workers, including job losses and wage cuts in Ghana are expected to be gendered, since women make up the majority of the population of informal sector workers (men are twice as likely as women to be wage employed than women) (GSS, 2017; UN, 2020).

3.1.2 Health and Health System Effects

Sub-Saharan Africa was the last region of the world to be hit by the pandemic. From the observation of the chaos the pandemic caused in health systems elsewhere there was concern about the possibility of extreme scenarios. Originally, the dominant thinking at the start of the pandemic was that it was only a matter of time before intensive epidemics occurred everywhere, and that hundreds of thousands of lives would be lost across Africa due to Covid-19. At the outset, the WHO (2020a) warned that the virus could kill over 300,000 on the continent and push 30 million into desperate poverty and that health systems would be overwhelmed. These ideas were perpetuated by predictive mathematical models based on data largely from the global north which were subsequently picked up by mainstream media (Van Damme, et al. 2020).

3.2 Actual observed socioeconomic effects of interventions to mitigate negative social and economic impacts

3.2.1 Economic and Social

Despite the focus on alleviating the negative social and economic consequences of the pandemic, hardship was still experienced by households. Unfortunately, due to the lack of disaggregated data available in reports and briefing notes from the national surveys conducted by Ghana Statistical Service and other actors, it is difficult to understand how the experiences of urban populations in Greater Accra are affected by social stratifiers such as age, race, ethnicity, disability, socioeconomic status and geographic location.

Violence

Surveys by both UNICEF and GSS conducted in May and June 2020 revealed that crime within localities and violence and abuse within households increased in the first few months of the pandemic. The GSS household tracker survey reported that nationally, 34.1% of localities saw an increase in crime, with lockdown localities experiencing the highest increase in crimes. Theft and burglary were the two most common crimes, followed by domestic violence and assaults (GoG, GSS & UNDP, 2020). UNICEF and UNFPA report that one third of adolescent and young people felt that abusive or violent behaviour had increased in the first three months on the pandemic, including economic abuse (34%), verbal/emotional abuse (32%), physical abuse (17%), sexual abuse (10%) and mental/psychological abuse (7%) (UN, 2020). Further, a stocktaking exercise conducted by UNICEF and the Office of the Head of Local Government Service on the impact of Covid-19 on social service delivery suggests that there was also been an increase in child abuse cases. Directors of the departments of community and social welfare in MMDAs who participated in the stocktaking exercise indicated that alongside these increases in household violence there has been a reduction in social welfare services and violence prevention programming (UNICEF, 2020).

Sexual and reproductive health

UNFPA and others have reported a rise in adolescent pregnancies in some constituencies. The rise in adolescent pregnancy is expected to be caused by several issues, including increases in the loss of livelihood by parents, parental neglect, sexual exploitation and abuse, curiosity and risky adolescent behaviours, as well as a lack of adolescent and reproductive health education in communities. These issues have had outsize effects on young girls and have been amplified as a result of the preventative measures to stop the spread of Covid-19, including the lockdown and closure of schools, which provide an environment where girls and young women may be more likely to be protected from abuse and from sexual activity (UN, 2020).

Education

Despite the government of Ghana's roll out of distance learning programmes, challenges remained in ensuring equitable access to education. The GSS Covid-19 household tracker survey indicates that in the month of June 2020, 35% of basic school children and 28% of SHS students were not engaged in any form of learning while at home (GoG & GSS, 2020). Access to computers or phones for remote learning challenging and many households do not have access to the internet, or regular access to electricity. According to the 2017/18 Multiple Indicator Cluster Survey indicates, while TV coverage is higher across the country (60.4%) only 22% of households in the country have access to the internet at home and only 15% have access to a computer (GSS, 2018). A lack of access to infrastructure and logistics for home learning is expected to deepen inequality since children without access to remote learning or a supportive home environment for learning will be disadvantaged once schools re open (UN, 2020).

Effects on businesses and employment

The Covid-19 households and job tracker survey (conducted in June 2020) reported that the majority of households nationally, and in the Greater Accra Region, suffered reductions in household income, with 70.2% of households in Greater Accra reporting decreased income (GoG & GSS, 2020). In May and June 2020, the majority of businesses experienced reductions in production (72%) and sales (90%). This was due to several issues, including disruption to major supply chains and distribution networks, which led to shortages of parts and goods, a reduction in the supply of labour, especially for women who need to look after children or other dependents during school closures, and increases in the prices of almost all products, with food products undergoing the highest price increases (4.8%) (GoG, GSS & UNDP, 2020).

Micro, small and medium enterprises were affected the most significantly by economic challenges. During May and June, 71.6% of Micro businesses were fully open. However, 92.2% of micro firms were facing, on average, a 60.9% decrease in sales. In addition, 75.2% were facing cash flow problems. Although only 1.4% of workers in micro enterprises had been laid off, 27.2% of workers faced reduced hours worked and 35% faced reduced wages (World Bank, GSS & UNDP, 2020a). By August and September 2020, the outlook for businesses had improved, with fewer firms (of all types) facing a decrease in sales, difficulties in finding inputs, cash flow problems, and decreased access to finance, and with fewer workers facing reduced hours of work and reduced wages (World Bank, GSS & UNDP, 2020b).

Food insecurity

During the partial lockdown and in the months following it (April to June 2020), food insecurity was common, and was closely intertwined with the financial constraints faced by households, and the inflation of food prices. Nationally, 33.6% of respondents indicated that in the 30 days prior to the interview they 'were worried about not having enough food to eat' and 8.9% 'went without eating for a whole day'. Nationally, 15.9% of households reported not being able to buy at least one staple food in the seven days prior to being interviewed. The main reasons for not being able to buy staple foods were the increase in price (62.7%) and financial household constraints (19.2%). The increase in the price of major food items was experienced as the most common household shock. To cope with the cost of Covid-19, nationally, over half of households reduced food consumption (GoG & GSS, 2020).

The extent of implementation of the government's economic relief measures

Subsidies on utilities

Electricity and water interventions were perceived by the public to be needed and relevant interventions (SEND, 2021). However, our desk review suggests that there was a limited reach of the subsidies on utilities. The Covid-19 local economies tracker survey reported that nearly 25% and 78% of localities did not actually benefit from the subsidies on electricity and water (GoG, GSS & UNDP, 2020). Within lockdown districts, most localities are connected to the national grid and could benefit from the electricity subsidies, however, nearly 50% of localities (such as informal urban settlements) do not rely on piped and metred connections from recognised water utility providers such as GWCL, but rather purchase resold water from alternative sources such as water tankers, and pushcart vendors; these households were therefore unlikely to benefit from the free water provided by the government. In addition, in urban areas, especially in informal settlements, households often rely on public bathrooms, called 'showers' which are accessed for a fee; however, these showers were not addressed in the free water guidelines (see Smiley et al., 2020). A social audit of the Government of Ghana's Coronavirus Alleviation Program (CAP) conducted by the CSO SEND Ghana also reported that some private water sellers such as owners of mechanized boreholes with standpipes were not reimbursed in a timely manner and therefore refused to provide free water, since they relied on immediate cash payments from sales revenue to finance routine expenses (such as electricity payments for pumping water).

Food relief

Food relief reportedly reached thousands of families. Despite the large numbers of individuals and households reached, some dissatisfaction with the initiative was reported by the public. The selection of beneficiaries and distribution processes were perceived to have been biased. Political affiliation with the ruling government influenced food distribution and contributed to the ineffective manner in which food was shared, which resulted in limited access to food by the vulnerable. In some cases, the distribution was reportedly not done in a way that was safe or enabled proper physical distancing protocols, with some individuals engaging in fights at overcrowded distribution venues (Adom, Adu-

Mensah, Sekyere, 2020). The types of institutions distributing food reportedly impacted the fairness of food distribution. SEND Ghana's social audit of the CAP suggested that NADMO was not the ideal agency to coordinate food distribution. In settings where faith based organisations and NGOs assisted with the distribution of food relief; items seemed to be more fairly distributed (SEND, 2020).

Loans for businesses

During May and June 2020 only 3.5% of all types of firms (micro, small, medium and large) reported having received some form of governmental support. A survey conducted by GSS of 4000 businesses and household firms reported that 7% of firms who had not received loans in May/June 2020 indicated that it was too difficult to apply. The main reasons that firms reported not having received support were lack of awareness (35.1% of firms that did not apply), and the belief that they would not actually receive support if they applied (12.2% of firms that did not apply) (World Bank, GSS & UNDP, 2020a). Specific challenges were reported with the registration and screening process for the business support scheme, which were thought to make the process unfriendly for micro and small enterprises ('Agriculture can revive economy', 2020). Micro enterprises constitute about 80% of the MSME sector in Ghana, while small businesses constitute 15 per cent, and medium enterprises one per cent (Ayeh, 2020). In general, micro firms (0-4 employees) are least likely to be already registered with relevant institutions, such as the Registrar General, Department of Cooperatives, and District Assembly (52.4%) compared to the rest - small (5-19 employees) 70.5%, medium (20-99 employees) 89.5%, and large (100+ employees) 93.0% (UN, 2020). The loan application requirements that were put in place, such as the need for a tax identification number (TIN), and the need to submit using a smart phone, were perceived to exclude low-income individuals with the most vulnerable businesses and/or led to the payment of middle-men to submit the application (see SEND, 2020).

The share of firms reporting that they received support improved by 6% (from 3% in May and June 2020 to 9% in a second survey conducted in August and September 2020). Lack of awareness of government support continued to be the primary reason why firms did not receive support, followed by the perception by firms that they would not actually receive support (19% of firms that did not apply). In addition, firms continued to indicate that the application process for support was difficult, with a rise in the share of firms indicating difficulty (from 7% to 18% between the two surveys). In August and September 2020, twenty eight percent of firms who had not received support indicated that they had applied for support but had not yet received it yet (World Bank, GSS & UNDP, 2020b).

Individual grants and social support programs

In a few articles written by the public in newspapers, there was some concern by citizens that the national interventions put in place, such as the extraordinary LEAP payments would not sufficiently impact the most vulnerable persons. It was noted that the current scope of LEAP (launched in 2008) transfers cover subsistence farmers and fisher folk, the extremely poor above 65 years, caregivers of orphans and vulnerable children, poor or disabled persons living with HIV and AIDS, and Pregnant women and lactating mothers with HIV and AIDS. However, 'the new poor' – those who suffer loss of

livelihood earning opportunities as a result of lockdowns or social distancing – would not benefit (see for example Amoako-Tuffour, 2020).

Both media commentators and formal reports (such as the UN Ghana Common Country Analysis) noted that a lack of comprehensive digital information base of citizens was a challenge for social and economic relief measures, and that there is a need to strengthen data collection among key institutions (such as MSMEs, GSS and the National Data Centre) responsible for identifying the socio-economic profile of citizens and delivering social protection schemes to the most deserving groups and individuals in order to build back better post Covid-19 (Amoako-Tuffour, 2020; UN, 2020).

Health and Health System

The trajectory of the epidemic has played out differently on the African continent, in countries such as Ghana, spreading more slowly and less intensively than originally predicted. As of January 11 2021, within Ghana, there have been 55, 772 cases with 33 deaths (GHS, 2021).

The trajectory of the pandemic and direct mortality due to Covid-19 in Ghana

As of 29th June, 2020, a total of 194,162 samples had been tested at the Noguchi Memorial Institute for Medical Research (NMIMR) laboratory of the University of Ghana College of Health Sciences which has been working closely with the GHS disease control in the Covid-19 response. Out of these samples 12,312 (6.3%) tested positive to COVID-19. Among the 12,312 that tested positive to COVID-19,6928 (56.3%) were samples taken from the hospitals, 5,358 (43.6%) were obtained through contact tracing and 105 (0.8%) were obtained from people who were quarantined at the various hotels. Thus the spread of Covid-19 in Ghana currently is predominantly community spread. These percentages represent the cross-sectional analysis as at 29th June. A week by week or month by month analysis will show a different picture of an epidemic evolving from imported cases to community spread.

On average, one infected person made an average of 11 contacts in the community and the probability that a contact led to effective transmission of COVID-19 was 4.4%. The highest number of cases recorded in a day was 550 (12th March-29th June 2020). The daily and cumulative distribution of COVID-19 cases in Ghana can be found in Figure 1a and 1b

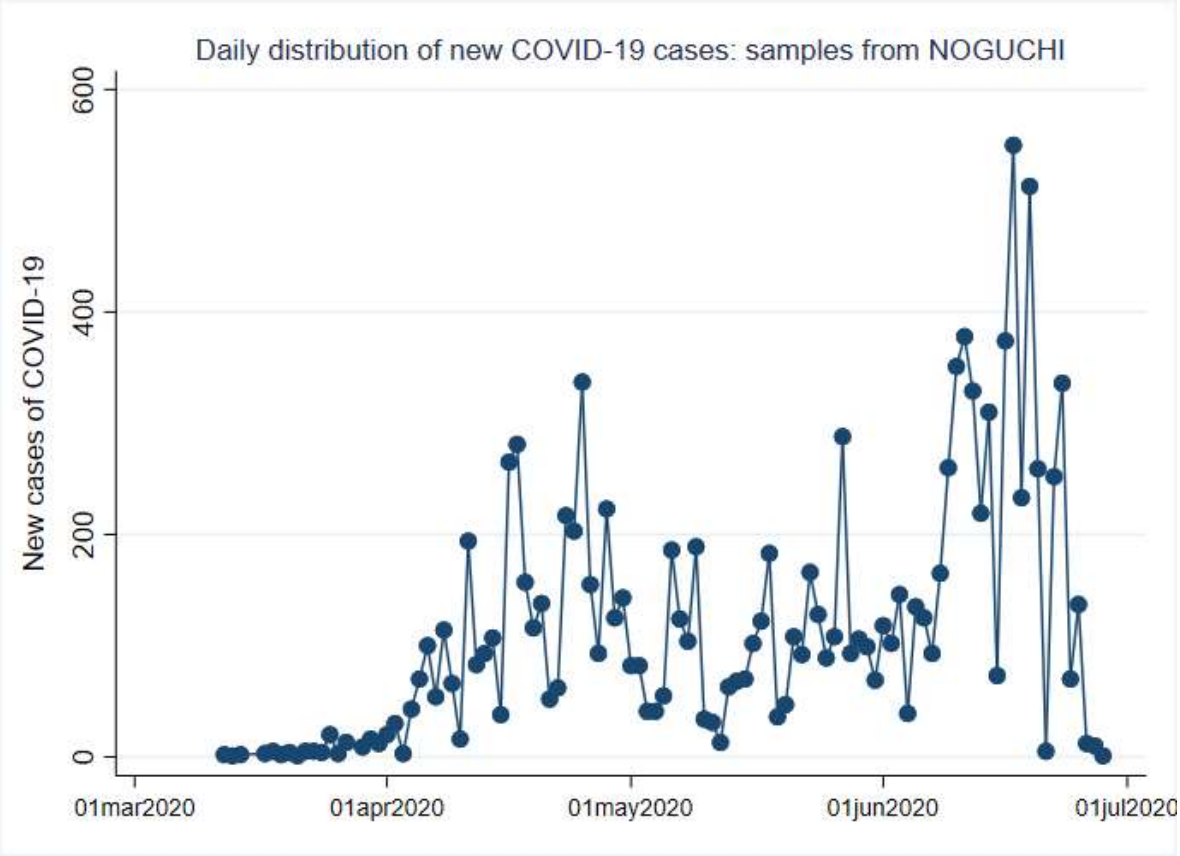


Figure 1a: Daily distribution of COVID-19 new cases: samples from NOGUCHI

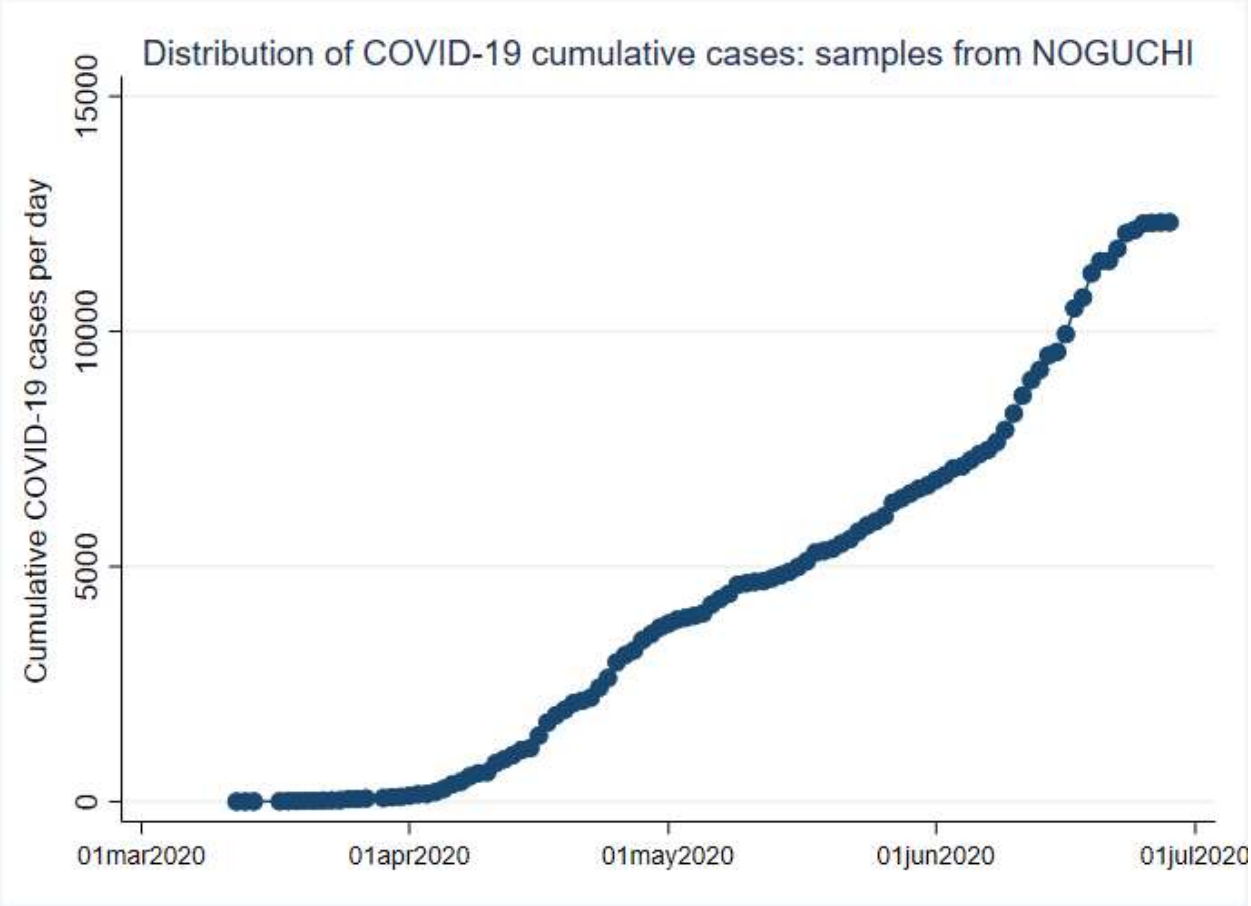


Figure 1b: Cumulative distribution of COVID-19 cases: samples from NOGUCHI

Assessing the effective reproduction number and the growth rate of COVID-19 in Ghana

The effective reproduction number R_e is the number of people infected, on average, by a single infectious person in Ghana in the presence of integrated and individual level interventions. This figure was estimated over the course of the epidemic in Ghana. The R_e helps us understand the intensity of the disease and by extension the effectiveness of interventions put in place to curb the spread of the infection: $R_e > 1$ means that the epidemic will grow, $R_e = 1$ means we are plateauing, $R_e < 1$ means that the COVID-19 epidemic will decline. *The effective reproduction number provides a* more natural way for understanding strength of intervention needed to stop an epidemic, better for planning control measures. We used the Sequential Bayesian (SB) method of estimating the effective reproduction number to explore the intensity of the disease spread vis a vis the variations of interventions put in place over the epidemic period. The SB estimates of the Re gives us an overview of the intensity of the infection per day for the entire duration of the epidemic. We then used the Maximum Likelihood method to estimate the exact effective reproduction between specific time periods. In the estimation of the R_e using all the three different methods, we assumed that the generation time follows a gamma distribution a mean generation time of 7 days and a standard

deviation of 1.5 days (the generation time is the time duration from the onset of infectiousness in a primary COVID-19 case to the onset of infectiousness in a secondary case infected by the primary COVID-19 case). Between 12th March to 12th April 2020, Ghana's effective reproduction number was 3.5 [95% CI: 3.2-3.9]. The R_e reduced to 1.15 [95% CI: 1.10-1.20] in 12th May, 2020 but increased to 1.21 [95%CI: 1.17-1.24] between 12th March-12th June, 2020. This means that each newly COVID-19 infected person will pass on the disease to at least more than one more person, on average, and consequently the disease will take off sub-exponentially.

Trend analysis of the effective reproduction number

This section assessed the effectiveness of government and individual level interventions over the period based on the effective reproduction number estimated at different time points. The graph from the sequential Bayesian analysis showed that the effective reproduction number has declined over time but is still currently greater than 1, an indication that the epidemic will grow. The results showed that between 12th March, 2020-20th April, 2020, the effective reproduction number was far higher than 1 but has declined constantly to a figure closer to 1. This is an indication that the integrated interventions have been effective to some extent but the growth rate which is time dependent still remains very high

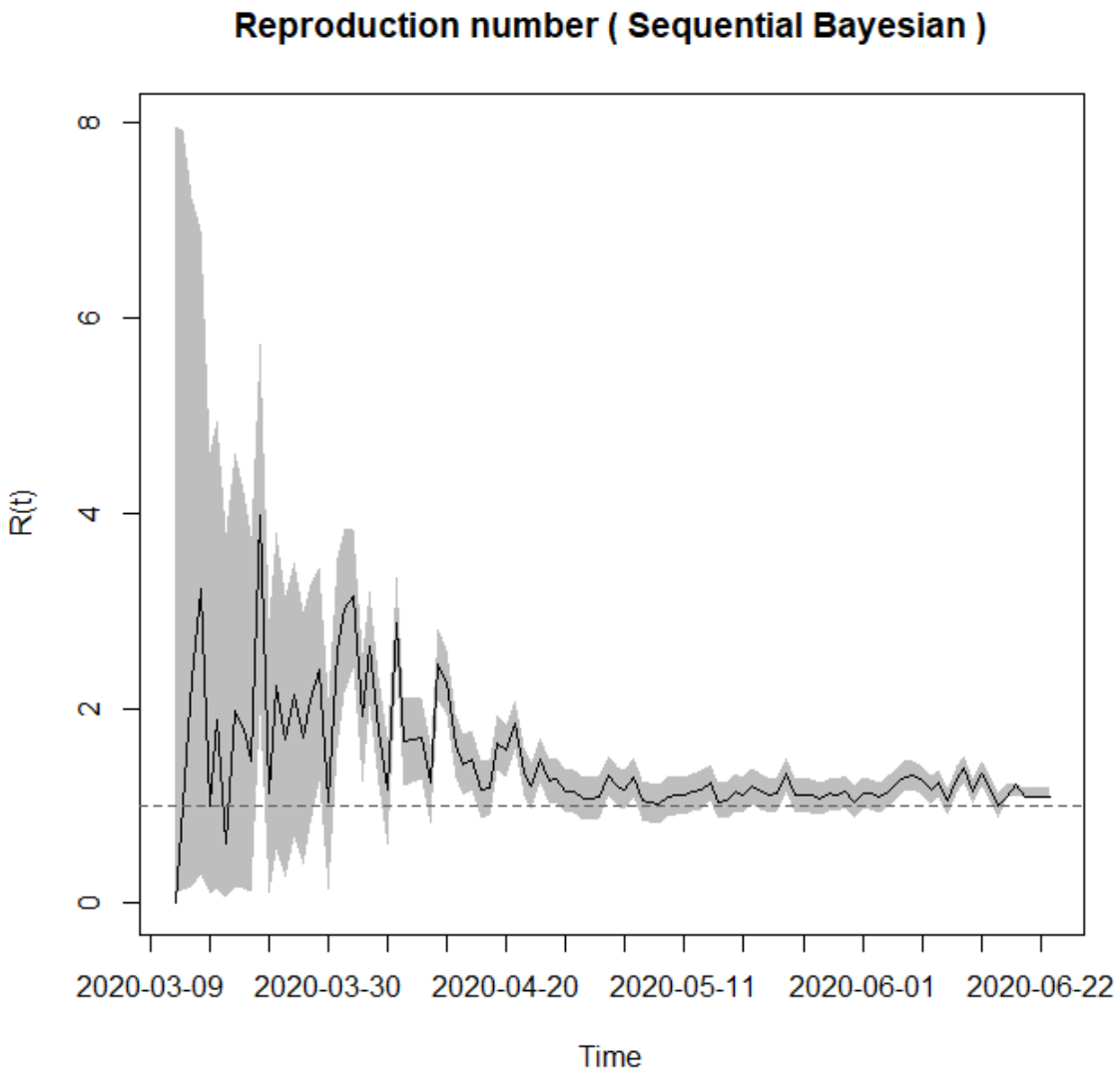


Figure 2: Trend analysis of the effective reproduction number: the horizontal dashed line corresponds to the threshold reproduction number of 1. The effective reproduction number above the horizontal dashed line indicate that epidemic will grow. The shaded area represents the confidence interval.

Growth rate of COVID-19

We estimated the growth rate from the effective reproduction number using the linear equation $\mathbf{R_e} = 1 + rT$ (Ferguson et al, 2005) where T is the generation time assumed to be 7 days in Ghana. The *growth rate* of COVID-19 is a natural way to capture how quickly the number of new infections are changing day by day. The growth rate provides a more natural way of how cases change over time. The growth rate of COVID-19 in Ghana has reduced from 0.36 between 12th March to 12th April to 0.02 between 12th March to 12th May, 2020. Between 12th March to 12th June, the growth rate increased to 0.03 indicating that cumulative cases were increasing 3% per day. The R_e does not tell us how quickly COVID-19 cases are changing over time since the Re is not a rate and there is no timescale involved. For instance, the current R_e for COVID-19 in Ghana is 1.21 an indication that the epidemic

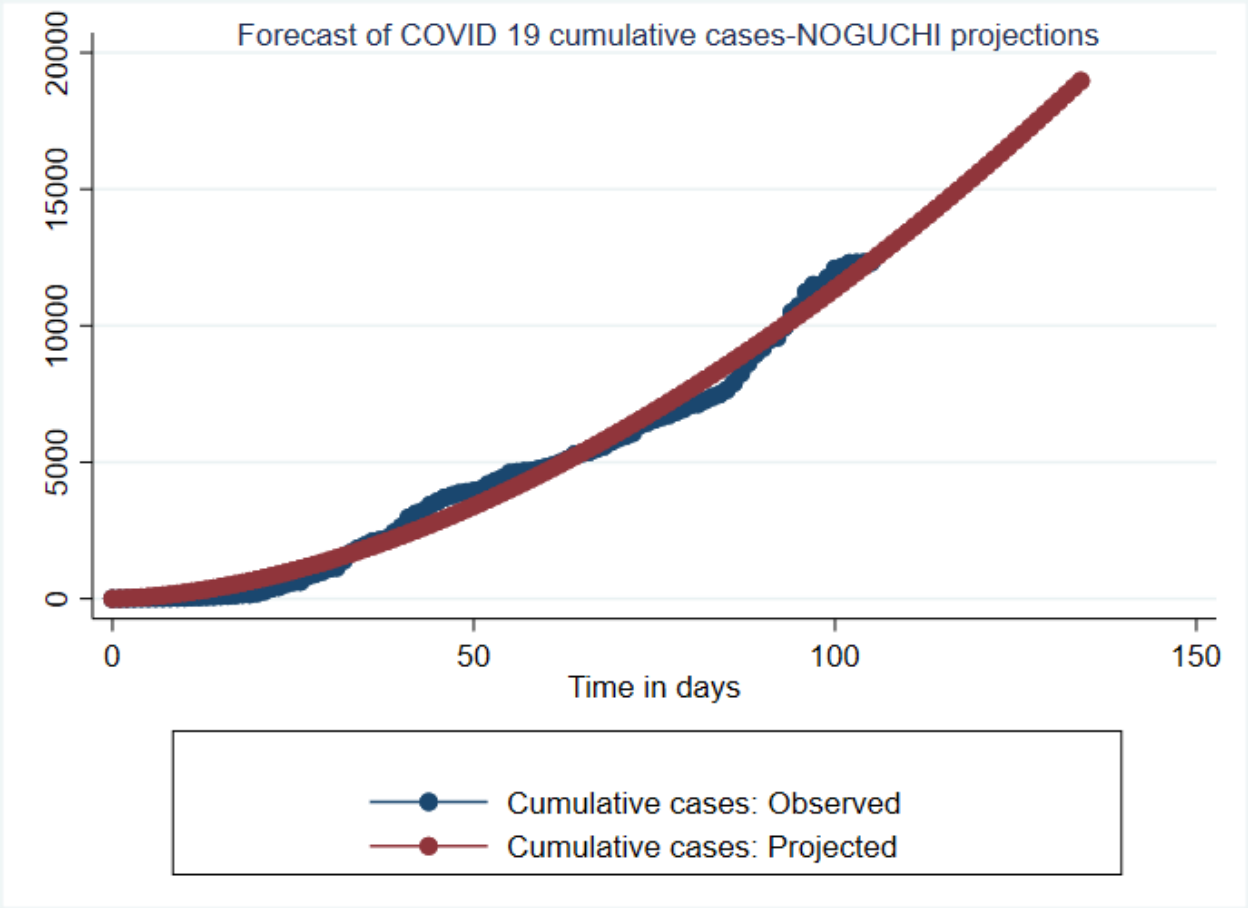
will grow (because R_e>1), but we cannot tell how quickly. The growth rate tells us how quickly COVID-19 is spreading in Ghana.

The estimates for the effective reproduction number and the growth rate should be interpreted with caution since we only relied on data from the Noguchi Memorial Institute for Medical Research and our results may not be representative of the country at large.

Projections for samples obtained from NOGUCHI – Not Nationally representative

Short term forecast was provided using phenomenological models that characterize transmissibility and forecast patterns of COVID-19 in Ghana. The study employed a two-parameter generalized-growth model (GGM) (Viboud, Simonsen, & Chowell, 2016) to characterize COVID-19 epidemic growth in Ghana. The change in the number of new cases per unit time is given by $\frac{\mathrm{dC(t)}}{dt} = rC(t)^p$ where r is the intrinsic growth rate and $p \in [0,1]$ is the deceleration growth parameter. The solution to the differential equation $\frac{\mathrm{dC(t)}}{dt}$ is C(t), that is, the cumulative number of cases per unit time (days). We jointly estimate both r and p using the non-linear least square estimation procedure in Stata 16 (StataCorp, College Station, TX, USA). This was achieved by fitting the model to cumulative time series data between 12 March 2020 to most recent data available. The estimated parameters of the model were then used to provide short-term forecast the early growth profile of the epidemic in Ghana.

We relied on the data from 12th March, 2020 to 28th June, 2020 to project the cumulative number of cases to be recorded by the end of July, 2020. We could not make projections for August because we do not have actual observed daily distribution of cases in July. We anticipate that NOGUCHI alone will record on average 18964 cases on average by the end of July, 2020 assuming that there are no backlog of untested sample by the end of July. The forecast is as shown in figure 2.



Impacts on routine health care

Negative impacts on routine health services were reported in the first few months of the pandemic. This was due to the redeployment of resources and attention to the frontline of the Covid-19 response, a disruption in outreach activities, and on the demand side, a decrease in the uptake of services and outpatient attendance due to the fear of contracting Covid-19. An analysis of routine data for 2020 (against routine data for the same months in 2019) conducted by the Global Financing Facility, the World Bank, and Development Research, in partnership with Ghana Health Service, which was primarily focused on RMNCH services, indicates that in the first few months of the pandemic, utilisation of many routine and elective services decreased. This included a disruption in total hospital admissions with a decrease of 10% in March, 24% in April, 26% in May, 23% in June, 19% in July and 18% in August. ANC attendance to the 4th visit decreased by 11% in May and the number of children weighed declined by 9% in April and 7% in May. Childhood vaccinations were also affected. For instance, in April and May, there was a 7% and 6% decrease in the number of 2nd doses of measles vaccination given. The households and jobs tracker survey conducted by GSS in June also reported similar negative impacts on child vaccinations. In June, 27.0% of children scheduled for a vaccination since March 16 missed it due to COVID-19 related reasons (GoG and GSS, 2020).

Discussion and Conclusions

This exploratory case study set out to understand the trajectory of and policy and system responses to covid-19 at local government level in Accra, and the intended and unintended effects of these responses on the population. The mixed methods analysis is based on a review of documents and media (12 March to Sept 30, 2020) and quantitative analysis of data on covid-19 tests and results (12 March to June 30, 2020) over the first several months of the epidemic in Ghana. While the qualitative data provides insights into 1) the local government response and the extent of their coordination with national government responses, 2) their coordination roles in managing the responses of public and private actors involved in the response 3) the anticipated and observed effects on the health, wellbeing and livelihoods of poor urban populations, the quantiative data provides insights into the trajectory of the epidemic in Ghana.

With regard to research objectives one and two, initial findings from the desk review suggest that general collaboration and co-ordination both horizontally, within districts, and vertically, between actors at the district level and national and regional levels, has been fairly strong. Clear multisectoral governance structures are set out for the management of public health emergencies at the national, regional and local government levels. MMDAs played important roles in response to the outbreak and were featured as key actors in media reports and in the National Covid-19 Response Plan. Various National Ministries and Agencies, in addition to Faith -Based Organisations, NGOs, market associations and women's groups, traditional and religious leaders and MMDAs collaborated to implement various measures. The responses of local government for the most part, seem to primarily have focused on implementing interventions identified in the national Covid-19 response plan, although there appears to be regional and local level variation in the exact nature of interventions implemented and the actors involved at the sub-national level, depending on the mix of actors engaged in the response in various contexts.

The Government of Ghana's public health approach to responding to covid-19 has been based on a targeted approach of the '3T's' i.e., Tracing, Testing, and Treatment, in combination with strategies to minimise the social and economic impact and increase self reliance and domestic capacity. In contrast to other African countries, who instituted national lockdowns, Ghana's government instituted only a partial lockdown and thus far, the case fatality rate has been minimal. Global actors such as WHO (2020b) have commended Ghana's response. Estimates for the effective reproduction number show that between 12th March, 2020-20th April, 2020, it was far higher than 1 but declined constantly to a figure closer to 1. This may be an indication that the integrated interventions have been effective to some extent.

However, the growth rate which is time dependent still remains very high and of late (Jan 2020), following the election activities, and Christmas festivities, there has been a rise in confirmed cases. The general population and heath workers have become complacent with adherence to the preventative measures, including facemask wearing and social distancing, which drastically reduced in communities and in health facilities following the initial months of the pandemic, and there has also been a lack of enforcement of these protocols by central and local government. There is evidence that it has been particularly difficult for the urban poor and informal sector workers to comply with

preventative protocols, even at the outset of the epidemic. For instance, Asante and colleagues (2020) observed that social distancing was very difficult to enforce in markets, and because of this many municipal authorities in Accra sacked traders and closed marketplaces using, at times, forceful and hostile relocation and decongestion exercises**.** Drawing on a phone survey of low-income settlements in Accra, in April, Durizzo and colleagues (2020) reported that although the urban poor seem to be willing to co-operate in social distancing and personal hygiene, they often did not have the ability to do so. For instance, when leaving the house, keeping a one metre distance was challenging due to the need to use public transportation and public toilets.

Much effort has been made made by the Government of Ghana, Private Sector, Faith-Based Organisations, and other actors to minimise the impact of Covid-19 on social and economic life, with considerable focus on mitigating the effects on businesses, households, and vulnerable groups within Greater Accra. Through CARES, numerous initiatives were implemented. Despite the focus on alleviating negative social and economic consequences of the pandemic and responses to it, hardship was still experienced by households. During the partial lockdown and the months following it (April to June), reductions in household income and food insecurity were common and instances of crime, and household violence and abuse increased. Social and economic impacts are likely to be felt most by vulnerable populations, especially by poor urban populations in Greater Accra, who are engaged in informal sector work characterised by vulnerable employment, including a lack of decent work conditions and hand to mouth living. There is also evidence that some of the government's social and economic interventions were not as equitably distributed as expected. However, due to the lack of disaggregated data available in reports and briefing notes from the national surveys conducted by Ghana Statistical Service, it is difficult to understand how the experiences of populations in Greater Accra are affected by social stratifiers such as age, race, ethnicity, disability, socioeconomic status and geographic location.

What also does not emerge from the desk review is a comprehensive understanding of the specific roles (or lack thereof) that were played by other district level bodies such as district standing committees, and the roles of sub-district structures such as community development committees. The specific facilitators and barriers to communication and coordination between national government and sub-national government (such as PHEMCs and PHERTs, and MMDAs) and between district and sub-district actors (such as PHEMCs, CSOs, private sector, health facilities, opinion leaders, district standing committees, etc.) are also not clear. Although the impression gained from the desk review is that in general, collaboration and co-ordination in the covid-19 response has been fairly strong, there may be a tendency for documents and media to present a more positive, and less nuanced view, which fails to highlight challenges in implementation, and policy gaps or contradictions.

One of the important roles of local governments is to be accountable to and engage with urban residents through participatory forms of decision making that involve citizens (Elsey et al., 2019). Yet, the approach to the distribution of relief items seemed to be centralised, with less than optimal engagement of communities and the leaders closest to them in planning and executing the interventions. This may also be a reflection of the politics of decentralization, in which a centralizing tendency towards the national government has persisted, despite supposed administrative, political and fiscal decentralization of local governments.

The desk review should also be complemented by in depth interviews with local government actors in order to gain a more detailed understanding of the responses in these specific districts, to understand the extent to which national policies were implemented (especially those focused on mitigating effects on health and social and economic wellbeing for the urban poor) and the facilitators and barriers to co-ordination across key actors within districts, and between local government and regional and national government.

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