Government Preparedness Towards Ebola and Covid-19 Health Crises in Ghana

Joseph Antwi-Boasiako[1] · Griselda Asamoah-Gyadu[1]

Abstract

The African continent has witnessed most health crises including yellow fever, meningitis, cholera, and Ebola. Two recent health crises faced by Ghana have been the Ebola virus and the Covid-19 virus diseases. This paper attempts to compare these two crises to understand what preparedness approaches were used by the government of Ghana during these two crises. Also, the paper attempts to identify what the similarities and differences have been and why these similarities and differences existed in the preparedness towards these crises that happened over different periods and whether Ghana's Covid-19 preparedness was based on lessons from Ebola. Through the policy legacies analytical framework and a review of the literature, the paper argues that Ghana's preparedness shows a lot of similarities from the training of healthcare workers, the health infrastructure introduced, approaches to public engagement, and political decisions made to fight both crises.

Keywords Covid-19 · Ebola · Ghana · Health crises

Introduction

In the last decade, various parts of the world have been hit with different health crises. The African continent has witnessed most of these health crises over the years. These include yellow fever, meningitis, cholera, Ebola (Tenkorang, 2018; World Health Organization, 2021) and more recently Covid-19 (World Health Organization, 2022). The Ebola virus and the Covid-19 diseases have been associated with a high fatality

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rate and a very wide spread of the disease (Ofori-Adjei & Koram, 2014). Countries such as Senegal, Nigeria, Liberia, Sierra Leone, and Guinea have all witnessed these diseases in their countries. Through both health crises, Ghana was predicted to be one of the hardest hit as it is the centre of the West African region with Ghana serving as the gateway and connecting most of the West African region.

Scholars have long proposed that Ghana could leverage the history of previous health crises to draw on its preparedness for future health crises (Ofori-Adjei & Koram, 2014). It is therefore important to understand this preparedness by Ghana in addressing some of the major health crises that it has faced over the last years. To this end, this paper compares two major crises: the Ebola virus disease and the Covid-19 disease. The paper seeks to answer the question of what preparedness approaches/ policies were used by the government of Ghana during these two crises. Also, what are the similarities or differences adopted in these two different health crises? The last question this study tries to answer is why similarities and differences existed in the preparedness towards these crises that happened over different periods.

The paper argues that in Ghana's preparedness[1] against both the Ebola virus disease and the Covid-19 disease, similar approaches were used (Asante, 2022; Obern, 2020). This is after Oleribe et al. (2015) predicted that it would be good for West African countries like Ghana to document lessons from Ebola to be well-prepared for future pandemics. The paper argues through the policy legacy analytical framework and subscribes to the fact that history indeed matters. This is because the paper identified that the main causal factor for the similarities between the two preparedness approaches is as a result of Ghana's history of dealing with previous health crises. This paper argues that there is evidence to show that Ghana's Covid-19 preparedness had a lot of lessons from its previous Ebola preparedness. For instance, as Asante (2022,18) indicated "Ghana already had a public health emergency response infrastructure in place from the 2014 Ebola outbreak, which was quickly reactivated and repurposed for the COVID-19 response". Obern (2020) also reiterated a similar point that the Ebola virus disease prepared Ghana to prepare and respond before Covid-19 first appeared in the country in March 2020.

Methodologically, the paper is a desk research drawing from secondary data sources including peer-reviewed articles, government report and documents, reports from international organizations like the World Health Organization, and electronic media reports, among others. The rest of the paper is scheduled as follows: the next section examines the analytical framework which underpins this study and is followed by a description of Ebola and Covid-19 health crises in the African context. An overview of Ghana's Ebola and Covid-19 disease preparedness is presented in the subsequent section. The next section discusses the similarities between the two crises drawing from the policy legacy analytical framework to make a case. The final section concludes the paper with implications and limitations as well as proposes some recommendations for future studies.

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[1] Preparedness is defined in this paper as before Ghana recorded its first case of Covid-19 on 12th February 2020. This is to ensure a fair comparison as Ghana did not record an Ebola Virus Disease even during the peak of the outbreak in the sub-Saharan Africa in 2014.

Historical Institutionalism: Policy Legacies Analytical Framework

This research is underpinned by the policy legacy analytical framework. Some scholars have pointed to the fact that this analytical framework is borne out of ideational analysis and historical institutionalism. The literature on historical institutionalism has argued the importance of analysing the policy-making process with recourse to the historical context as the sequence of events that have happened can influence the outcome of policies (Mulvale et al., 2007). According to many historical institutionalists, it is evident that the past indeed influences the present (Foli & Ohemeng, 2022). Scholars like Béland (2005) also point to the fact in policy studies, history indeed matters, and it provides a foundation for understanding current policy choices. Béland et al. (2021) posit that under historical institutionalism, existing institutions and policy legacies can be both constraining and it can create opportunities for policy change.

Ellerman (2015) explains two main differences in the effects of policy legacies: the constraining effects of policy legacies as path dependence and the enabling effect of policy legacies as policy legacies. Ellerman (2015) posits that the notion of path dependence explains the challenges that arise from past policies and how they influence the policy preferences of policymakers. On the other hand, scholars have explained that under the enabling effect, policy legacies provide an avenue for policymakers to learn from experience (Ellerman, 2015). Critics have argued that policy learning mostly happens when the previous policies have failed. This argument has been countered by examples of when policy learning has also been from successful policies from the past. It is for this reason that Ellermann (2015) postulates that legacies can create opportunities for policy innovation within the constraints of paradigmatic path dependence.

Béland et al. (2021) have shown that policy legacies have been used to analyse the level and in other cases the stability or change of policy in each country in a crisis period and beyond. On Covid-19 specifically, the scope and design of policy responses during the crisis may vary from country to country and this may reflect at least in part existing national legacies (Béland et al., 2021; Foli & Ohemeng, 2022) have shown that policy legacy could possibly influence policy learning for Covid-19 by focusing on patterns of decision makings as the basic indicators to build on. Béland et al. (2021) also posit that it is very likely for policymakers to rely on existing approaches or programs associated with specific policy areas that were affected by the health crisis. Segatto et al. (2022) have shown that in Brazil during Covid-19, subnational governments relied on policy legacies and previous capacity to create and adapt subnational policies during the pandemic.

Ebola and Covid-19 Health Crisis Situation in Africa

The Ebola virus disease was previously referred to as Ebola haemorrhagic fever. The first case of the virus was identified in 1976 in West Africa (Laupland & Valiquette, 2014). The World Health Organization (2021) reports that there were two simultaneous outbreaks which happened in two towns (Nzara and Yambuku) in South Sudan

and the Democratic Republic of Congo respectively. The name of the Ebola disease is reported to come from a village near the Ebola River. Laupland and Valiquette (2014) assert that the simultaneous outbreaks led to 284 cases which resulted in 151 deaths in Sudan which shows a death rate of 53%. In the Democratic Republic of Congo, the disease led to 318 cases and resulted in 280 deaths showing a death rate of 88%. The Centers for Disease Control and Prevention (2021) have shown that the Ebola virus is a severe disease and is associated with a very high fatality rate. Since the outbreak of the Ebola virus emerged in 1976 in the two countries indicated above, the disease has been spreading to other African countries and infecting people from time to time (World Health Organization, 2021). From the two initial countries, countries like Gabon, Cote D'Ivoire and Uganda have all witnessed some influx of the disease in their countries.

In December 2013, the Ebola epidemic resurfaced but it was not until March 2014 that the World Health Organization was notified of the re-emergence of the virus in Guinea (Nishiura & Chowell, 2014). The World Health Organization (2021) posits that the 2014 outbreak was the largest outbreak of the Ebola virus. From Guinea, the Ebola virus crossed to its neighbouring countries like Liberia and Sierra Leone (Tsai et al., 2020). It has further spread to some other African countries. The Ebola virus was declared a public health emergency of international concern on the 8th of August 2014 (World Health Organization Media Center, 2014). This is after this 2014 outbreak had begun to spread not only by land but by air to countries such as Mali, Nigeria, Spain, the United Kingdom and the United States of America. Table 1 shows the number of countries that were affected by the largest outbreak of Ebola in 2014. From Guinea where the virus re-emerged, the virus was drastic in Sierra Leone and Liberia. This affected about 14,124 persons killing over 3950 with a death fatality rate of 28%. The second most affected country with the outbreak was Liberia with a case count of about 10,600 and but however with the highest recorded deaths of 4,809 persons.

To address the spread and impact of the Ebola virus, scientists and scholars have all been trying to identify where the virus comes from. The World Health Organization have been trying to support infected countries to fight the virus and also for countries who are yet to be infected, the organization is supporting them in the development of preparedness plans (World Health Organization, 2021). The support to infected countries by the World Health Organization has included the provision of laboratory services, case management, training, and assistance to dignified burial,

Table 1 Countries affected by the 2014 Ebola Outbreak

Source: World Health Organization (2021)

Year	Country	Cases	Deaths	Case Fatality
2014	Spain	1	0	0%
2014	UK	1	0	0%
2014	USA	4	1	25%
2014	Senegal	1	0	0%
2014	Mali	8	6	75%
2014	Nigeria	20	8	40%
2014–2016	Sierra Leone	14,124*	3956*	28%
2014–2016	Liberia	10,675*	4809*	45%
2014–2016	Guinea	3811*	2543*	67%

Total cases and deaths in Africa

	South Africa	Egypt	Nigeria	Algeria	Ghana	Morroco	Cameroon	Sudan	Senegal	Guinea
■ total deaths	683	735	287	653	36	205	197	286	42	23
■ total cases	32683	24985	10162	9394	8070	7819	6143	5026	3739	3706

■ total cases ■ total deaths
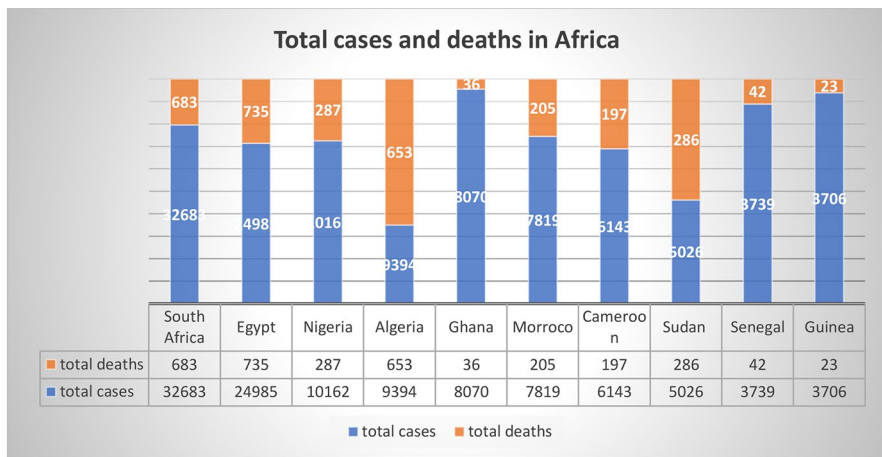
Fig. 1 Top 10 cases in Africa. Source: Authors construct based on data from WorldoMeters as at 31ST May 2020

vaccination, disease detection, contact tracing, community engagement as well as many other functions. Even though Ghana was not affected by the Ebola virus, the country followed all the recommendations by the World Health Organization as well as learn from experiences of neighbouring countries to prepare for virus.

The challenge however has been that the virus is still not yet fully known. Scientists believe the virus is animal-borne which infected animals serving as the transmitters to other animals as well as humans. Since the virus is still under study, it has so far meant that all the support being offered by the World Health Organization is just mitigating factors and not possibly something to end the spread of the disease. This is shown in the continuous resurfacing of the virus despite the attention it received to manage it in 2016. From 2018 to 2020, the Ebola virus reinfected the Democratic Republic of Congo with 3481 cases resulting in 2299 deaths with a case fatality of 66% (World Health Organization, 2021). The World Health Organization has continuously supported countries by developing detailed advice on the prevention and control of the Ebola infection.

According to the African Centers for Disease Control and Prevention (2020), the first case of Covid-19 on the African continent was identified in Egypt. De Hala Zayed, the Minister of Health and Population of Egypt confirmed this on the 14th of February 2020 when the virus was still a public health concern with Algeria recording the next infection on 25th February 2020. Following that, the virus entered Sub-Saharan Africa through Nigeria when the first case was reported on 27 February 2020 after an Italian patient entered Italy on 25 February 2020. This was followed by countries like Tunisia, Morocco, and Senegal all recording their first infections on 2nd March 2020 (Lone & Ahmad, 2020).

By May 2020, the African continent had been infected by the virus in almost every country with a widespread in March and April 2020. Figure 1 shows the number of cases recorded among the ten most infected African countries as of 31st May 2020. The number of cases was reported alongside case fatalities for these countries

to demonstrate the fatality of the pandemic. According to the World Health Organization African Region, 47 countries have been affected with cumulative cases of 8,955,277 and unfortunate fatalities of 173,988 as of Tuesday, 13 December 2022.

In anticipation of the viral infection hitting the continent, the African Centers of Disease Control and Prevention supported the preparedness of the African countries by supplying them with test kits for 16 African laboratories. The staff of these laboratories were provided with training on the characteristics of the virus. The training was further extended to some additional 40 participants from 9 countries on how to detect the virus at the port of entry as well as enhance testing in their countries. The training was also to empower the countries to be able to investigate the virus further as scientists were still understudying it. The training was extended to airline operators including South African Airlines and Kenya Airways.

Ghana's Ebola Preparedness Approaches

Training of Health Professionals

In preparedness against the Ebola virus disease, one of Ghana's main strategies and approaches was the training of health professionals (Lartey et al., 2015). The key strategy was to empower the health professionals as they prepare for the possibility of an outbreak. The training or capacity building was in two ways; external and internal. The external was training by the World Health Organization Africa Office in Brazzaville from the 26th to the 28th of August 2014. This was an initiative from the World Health Organization to invite participants from countries that were yet to be affected by the Ebola virus to empower them to prepare for a potential outbreak. Five participants were sent from Ghana to participate in this training session, and these included two epidemiologists, two clinicians, as well as one health promotion officer.

With the virus entering the neighbouring countries, the Ministry of Health of Ghana and its partners developed Ghana's Ebola Preparedness Plan. Among many other recommendations, the preparedness plan developed by the Ministry of Health of Ghana recommended a local level training be conducted for all ten (10) regional hospitals in the country as well as all Teaching hospitals. The training for all the regions was to ensure that every part of the country is equipped with the necessary knowledge as the country could not identify exactly where the virus may have come from. Lartey et al. (2015) rightly put that given the unpredictability of place of the possible first case of the virus and that all health workers did not have any idea about the management of the Ebola virus, the training had to be comprehensive covering all parts of the country.

Despite the capacity building equipping the health professionals, additional provisions were made for them to motivate them to fight against the Ebola virus. Some scholars have reported that healthcare workers were insured against putting their lives on the line in preparedness for any form of the outbreak (Bever, 2014; Lartey et al., 2015) reports that the insurance package for health workers was really a motivating factor in the preparation against any Ebola outbreak. Healthcare workers could have peace of mind preparing for a possible outbreak and knowing that their families

would be taken care of in case of any casualties. Oleribe et al. (2015) described the approved insurance package for healthcare workers as a positive step in the management of the Ebola virus disease. These strategies were important in building human resource capacity needed to help in the fight against diseases.

Public Engagement on Ebola Virus Disease

Even though the training was mainly targeted at health professionals as they were going to be the frontline personnel in case of any outbreak, there was the need for cooperation from the citizens. Hence, there were some targeted awareness creation exercises to educate citizens about the virus. Oleribe et al. (2015) narrate how the state employed various health education, risk communication and social mobilization approaches to inform citizens about the need to prepare against the Ebola virus. They provide that the awareness was created in public places, in churches, schools, and in the media. People were encouraged through public education to adhere to hand-washing, change burial processes, avoidance of physical contact with people who are showing any form of symptoms.

Tsai et al. (2020) have described how citizens resistance and denial of the Ebola disease was a challenge to the crisis response of many governments. There is also evidence of how the citizens of Ghana responded to the Ebola virus. The citizens were very obedient to the information that was put out by the health officials through the various sensitization and public education that was spearheaded by the information department of government. Tenkorang (2018) has argued that the positive compliance to the Ebola virus was motivated by fear. The reason is that citizens were exposed to the information and examples from neighbouring countries depicting and showing the fatality rates that were seen to be associated with this disease.

Health Systems and Infrastructure

Another preparedness strategy adopted by the government of Ghana when the outbreak of Ebola hit neighbouring countries was the attempt in improving the health infrastructure in preparedness for a possible Ebola outbreak. Scholars point to the fact that there have been weaknesses existing in the health systems of Ghana with hospitals already facing shortages of doctors (Ansah, 2014; Ofori-Adjei & Koram, 2014; Lartey et al., 2015) have also reemphasized that the health infrastructure of the country was inadequate, and an outbreak of Ebola in Ghana would have been fatal. The government, therefore, instituted testing at the main international airport, set up Ebola Centers and worked with the United Nations to set up its emergency Ebola response headquarters for the sub-Saharan Africa region in Accra, the capital of Ghana (Boadu, 2014; Obern, 2020; Oleribe et al., 2015).

In a Daily Graphic report; one of the leading newspapers in Ghana, Boadu (2014) reports that there was an introduction of structures at the port of entry of Ghana mainly at the Kotoka International Airport which serves as Ghana's main entry point. The infrastructure which was nonexistent was quickly installed as a measure of detecting the virus. Obern (2020) narrates that during Ebola, travellers were screened at points of entry with designed health declaration forms and contact-free temperature

scans. This was confirmed by the United States Ambassador to the United Nations, Ms. Samantha Power who revealed that she went through rigorous screening when she arrived at the Kotoka International Airport during the time of the Ebola (Boadu, 2014). She further lauded and described these containment and preventive measures as very positive in the fight against Ebola.

Aside putting these preventive measures at the point of entries of Ghana, structures were also put in place in the country itself in preparation for the virus in case it finds itself in the country. Oleribe et al. (2015) report that three Ebola treatment centres were set up in parts of the country. The country was zoned into three areas, northern (Tamale), middle (Kumasi) and southern (Tema). These treatment centres were introduced to serve as case management centres when they come up, and also serve as surveillance centres. Further to these treatment centres, the government of Ghana also collaborated with the United Nations to set up the Emergency Ebola response headquarters in the capital of Ghana (Obern, 2020; Oleribe et al., 2015). The response headquarters was equipped with facilities enough to serve the sub-Saharan region.

Political Decision Making on Ebola

Political decisions making was critical to the government of Ghana's preparedness towards the Ebola virus disease. Starting from the acknowledgement of the possibility of an outbreak in Ghana since neighbouring countries and one of the major trading countries; Nigeria had begun recording cases. Ansah (2014) narrated that President Mahama had taken steps and already begun assigning tasks to government officials as well as other state agencies to step up their efforts towards preventing an outbreak of the Ebola disease in Ghana. Bever (2014) reported that the President and his Cabinet agreed to set up an Inter-Ministerial Taskforce on Ebola and a Deputy Minister of Health was appointed as an incident commander of Ebola. The main importance of the inter-ministerial Task Force was to streamline the chain of command and control as well as communication on the Ebola disease (Bever, 2014). The Taskforce was comprised of the ministries of Health, Local government, Defence, Interior, Communication, and others coming together to prepare for the disease (Ansah, 2014). She further reports that on Thursday, 14 August 2014, President Mahama directed the Ministry of Finance to release 6 million Ghana cedis to the necessary ministries and agencies to prepare for the Ebola virus.

Ghana's Covid-19 Preparedness Approaches

Sarkodie and others (2021) who were in the helm of affairs in the management of Ghana's Covid-19 report that the preparation were initially health sector driven focusing on approaches like improvement in infrastructure, equipment, logistics. Also, there was a focus on the capacity development of health care workers, public engagement, education, and sensitization.

Training of Health Professionals

According to Sarkodie et al. (2021), some key activity for preparedness against the Covid-19 disease was the training of healthcare workers based on existing knowledge. They further add that the focus of the training was on the case definition of viruses, surveillance as well the appropriate use of personal protective equipment. Kenu et al. (2020) provide some specific focal areas for the training of health professionals on Covid-19. According to them, first, a readiness assessment was conducted, and a response strategy was developed by the Ghana Health Service. This response strategy was adapted from what was used in preparation for Ebola. "In addition, the country conducted orientation at the Kotoka International Airport and other Ports of Entry for effective screening and handling of suspected cases" (Kenu et al., 2020, 72). Also, contact tracing training was provided for the Ghana Field Epidemiology and Laboratory Training program and the staff of the Ghana Health Service. At the regional and district level, Sarkodie et al. (2021) describe that rapid response teams previously established for Ebola were also activated and trained.

Health Systems and Infrastructure

With regards to Covid-19, many countries in Africa are investing in building more facilities and specialized centres to prepare and fight the pandemic (Amu et al., 2022). Despite the attempt in improving the health structures of Ghana in preparation for Ebola, Ghana's health structure still lacks the infrastructure needed to combat a health crisis and a pandemic in the nature of the Covid-19 pandemic. Kenu et al. (2020) report that testing for Covid-19 was initially carried out in two zones of the country. The government supported these centres with some logistics for them in preparation for the pandemic. Testing for the northern zone was carried out at the Kumasi Center for Collaborative Research located in the Kwame Nkrumah University of Science and Technology and the testing in the southern zone was done by the Noguchi Memorial Institute for Medical Research situated at the University of Ghana (Kenu et al., 2020). Also, at the time of the preparations, the country initiated the process of constructing and preparing a number of treatment and holding centres in the Greater Accra region. Some of the holding centres were sited at the 37 Military Hospital, Shai Osudoku Hospital in Dodowa.

The infrastructure reintroduced at the Kotoka International airport has been one of the many channels that were used to detect Covid-19. Table 2 shows that out of the total of about 2,520,078 tests conducted in Ghana as of 9th November 2022, the test-

Table 2 Ghana's Covid-19 Situation as of 09 Nov. 2022

Ghana's Covid-19 Situation as of 09 Nov. 2022					
	Testing	Positive Tests	Recoveries	Deaths	Positivity Rate
Routine surveillance	502,918	62,196	161,766	1461	**12.4**
Enhanced Contact Tracing	1,136,287	101,100			**8.9**
International travellers	880,873	7,676	7,674		**0.9**
Total	**2,520,078**	**170,972**	**169,440**	**1,461**	**6.8**

Source: Author's Construct (2022) Based on Information from Ghana Health Service

ing at the Kotoka International airport alone was 880,873 representing about 35% of the tests conducted on Covid-19 in Ghana. The tests conducted at the Kotoka International airport identified 7,676 positive cases of the virus. Without this infrastructure reintroduced at the airport, one would have wondered how many infections would have entered the country to increase the spread of the covid-19 virus.

Other health logistical support was provided to support the health system of Ghana in the fight against Covid-19. Sarkodie et al. (2021) report the procurement of appropriate logistics that could fight the virus. Appropriate testing kits and personal protective equipment were procured and distributed to facilitate the preparedness for most facilities in Ghana. Also included in the preparedness plans were the procurement of thermal scanners and non-contact thermometers.

Political Decision-making on Covid-19

Like the Ebola crisis, political decisions making was critical to the government of Ghana's preparedness towards the Covid-19 virus disease. The acknowledgement of the possibility of an outbreak in Ghana since neighbouring countries started recording cases in the African continent. The utilization of the Presidential address to psych citizens up and demonstrate the country's readiness to fight the Covid-19 virus was important to the preparedness. In his first address on 11 March 2020 before Ghana recorded its first two cases on 12 March 2020, through the Presidential address, President Nana Akufo-Addo stated.

> *"...at my prompting, the Minister for Finance has made available the cedi equivalent of $100 million United States Dollars to enhance our Coronavirus preparedness and response plan. That is to fund the expansion of infrastructure, purchase of materials and equipment and public education".*

This announcement was a key political decision towards the preparations of Ghana against the Covid-19 pandemic even before the first case was recorded (Antwi-Boasiako & Nyarko, 2021).

Arkoful (2022) also notes that President Nana Akufo-Addo set up a Covid-19 inter-ministerial presidential task force. The presidential task force was chaired by the President of Ghana himself as a way of coordinating the chain of command in the management of the crisis. Sarkodie et al. (2021) also narrate how the Technical Coordinating Committee and the Emergency Operations Centre were activated at the National level to prepare for the outbreak of the Covid-19 pandemic. The composition of the National Technical Coordinating Committee was Ministries, Departments and Agencies with direct responsibility and roles in the crisis response, research institutions with the backing of international organizations like the World Health Organization. Sarkodie et al. (2021) further report that whilst the National Technical Committee was responsible for coordinating government preparedness, the Emergency Operations Centre led the implementation of the preparedness plans at the national level. At the regional and district level, Kenu et al. (2020) described how the Public Health Emergency Management Committees were activated and the public health emergencies were also revised in the preparedness for the outbreak of Covid-

19. At both the national and local levels, the Committees were tasked with four major areas which were surveillance, laboratory, case management as well as risk communication (Kenu et al., 2020; Sarkodie et al., 2021).

Public Engagement on Covid-19 Disease

The engagement of the public or the citizenry was an important factor while preparing Ghana for the Covid-19 pandemic. This was admitted by the President of Ghana when he realized how important it was to address the nation and inform them of its impending nature. In his first address on 11 March, the President informed the citizens in a TV address about the virus and how it is important for the country to get ready in case of an outbreak (Antwi-Boasiako & Nyarkoh, 2021). In his address, he tasked the Ministry of Information to lead a nationwide public education on the preventive measures each citizen can start adopting in the absence of any case. The task further indicated the Ministry to inform citizens of the plans to control the spread in case even the country records any case. The Ministry of Health, the Ministry of Information, as well as the media, came together on aggressive mass campaigns and education on the necessary awareness in Ghana (Kenu et al., 2020; Obern, 2020). On top of this, the president also delivered twenty (20) periodic National Briefings from March 2020- March 2021. These briefings were geared at keeping Ghanaians safe whilst maintaining basic freedoms (Musah, 2022; Sarkodie et al., 2021) indicated that there were press releases, media engagements, and the media giving absolute support to the government in providing updates and information to the public in preparation for the Covid-19 disease.

Discussion

Using experience from other health crisis and most especially as the Ebola preparedness had not happened long ago until about 2017, pocket of experiences and preparedness were factored in the preparedness of the Covid-19. Sarkodie et al. (2021, 38) rightly put that "preparedness and response plans were activated for implementation at the national, regional, district and community levels". This elaborates further the point of some existing structures at these levels to be activated rather than established from scratch new structures.

Even before the Covid-19 virus had entered Ghana, there were plans put in place to prepare for an outbreak. Unlike the Ebola virus which could not enter the country until 2022, Covid-19 entered Ghana at its peak. The preparedness approach however shows some similarities between them. As a training plan was developed to prepare for the Ebola virus, a similar training plan was adopted for covid-19. The training plan for both instances was focused on healthcare workers. Scholars have demonstrated direct similarities that this training was to serve. In the era of Ebola, Lartey et al. (2015, 1) indicated that "several categories of health workers have been trained in the spectrum of preparedness activities ranging from surveillance to case management". Seven years later in the era of covid-19, Sarkodie et al. (2021, 39) also indicated that "key activities for preparedness included the training of healthcare workers

on the disease based on existing knowledge. Training also focused on surveillance using developed case definition". Asante (2022, 18) has also reiterated that "Ghana already had a public health emergency response infrastructure in place from the 2014 Ebola outbreak, which was quickly reactivated and repurposed for the COVID-19 response. This included an extensive network of community health agents who were deployed for contact tracing and community sensitization". Due to the already existing structures and template from Ebola, it was easy and faster to utilize that instead of setting up a whole new structure.

In addition to the training provided for healthcare workers, the government of Ghana during the time of Ebola preparedness instituted a life insurance package for health workers (Bever, 2014). The motivation behind instituting this insurance package was to serve as a motivation for frontline health workers who were needed to manage the Ebola outbreak in case it happened. Oleribe et al. (2015,56) described "the approved insurance package for frontline health staff working on Ebola prevention and control by the government as another positive step". Bever (2014) opines that with the insurance package put in place, health workers would be ready to put their lives on the line knowing that in case they are infected or even killed by the potential outbreak, they were sure that their families would be catered for. With the experience from the Ebola insurance package, Sarkodie et al. (2021, 45) point out that "frontline workers were also provided insurance cover of up to 350,000 Ghana cedis per worker during the covid-19 health crisis". It is no surprise that as the policy legacy theory predicts, the government of Ghana during the covid-19 crisis adopted a similar approach from the Ebola experience even though there were some additions. This also reiterates the point that Ghana's preparedness response is highly associated with the experience of dealing with the previous health crisis.

Another similarity is the infrastructure at the port of entry during both health crises. An important focus on the set-up at the only International Airport in Ghana. The Kotoka International Airport was the major entry point to the country even though there are some other land routes into the country. The focus on the international airport during the Ebola was a learning experience from other neighboring countries as most of them had importation from people who had entered the country. Similarly, the covid-19 also used a similar approach. Before Ghana recorded its first case, the state was studying how other countries got their first cases. From the first case in the African continent in Egypt which was imported, the neighboring Nigerian case which was also imported, the government had to institute a structure at the port of entry to be able to detect the virus before it enters. The use of this similar approach can be explained by Ghana's previous experience in managing previous crisis like Ebola. This gave the officials some ideas to prepare for the covid-19. In fact, Sarkodie and others (2021) who were at the forefront of Ghana's fight against covid-19 stated emphatically that "a health declaration form was adapted from the Ebola Virus Disease form for use at all points of entry". This arrangement in Ghana emphasizes tenets of the policy legacy theory as it shows how experiences from a past crisis like Ebola has helped address current issues like the covid-19 crisis.

With two different Presidents and political parties that belong to two different political ideologies at the helm of affairs in both crises, the expectation was that there would be different strategies that would be used. At the time of Ebola, the country was

ruled by the National Democratic Congress which align itself with Social Democrats and during Covid-19, the country was ruled by a President belonging to the centre-right and liberal-conservative. The Presidential acknowledgement and acceptance of the potential possibility of outbreaks were critical to the fight in both instances. Bever (2014) reports that in the government of Ghana's preparedness, President Mahama at that time established an Inter-Ministerial Task Force on Ebola in order to streamline the chain of command and control. In the case of covid-19, similarly, an Inter-Ministerial Presidential Taskforce on Covid-19 was set up (Arkoful, 2022). Again, this preparedness strategy also supports the theory of policy legacy as everything points to the fact that this task force structure was already in existence from the Ebola period and only needed to be activated with some modifications to fight Covid-19. Despite the similarities in the establishment of these inter-ministerial taskforces, some differences can still be pointed out which include the time of the establishment. Whiles the Ebola task force was established in anticipation of the first case, the covid-19 task force was set up after the country recorded its first case. Again, the chairs of both task forces differed. Whiles the Ebola task force was chaired by a Deputy Minister of Health, the covid-19 taskforce was chaired by the President of Ghana himself (Sarkodie et al. 2021).

Conclusion and Implications

The paper sought to understand the government of Ghana's preparedness ahead of the Ebola virus disease and Covid-19 disease. The paper has described the preparedness approaches to Ghana's Ebola disease and Covid-19 fight. The paper argues that Ghana's preparedness against both the Ebola virus disease and the Covid-19 disease had similar approaches. The main causal factor for the similarities between the two preparedness approaches is as a result of Ghana's history of dealing with previous health crises. This paper argues that there is evidence to show that Ghana's Covid-19 preparedness had a lot of lessons from its previous Ebola preparedness. The policy legacy framework provides a perfect analytical framework confirming the notion that history matters in understanding the present.

Although Ghana did not record an Ebola virus case, the country has experienced several other epidemics over the past few years including cholera, meningitis, yellow fever other viral haemorrhagic fevers. The country put in some plans in anticipation for the Ebola virus based on the knowledge developed from the previous epidemic. Likewise, when the Covid-19 disease was spreading in other parts of Sub-Saharan Africa, it was mostly the Ebola preparedness and response plans that were activated for implementation at the national, regional, district and community levels (Sarkodie et al., 2021). As was aptly put, Obern (2020) concludes that with lessons and tools from 2014, Ghana proved that lack of economic power doesn't necessarily preclude a country from successfully preparing and combating a public health crisis in the short term.

In terms of contribution, this paper has attempted to make a modest contribution to the literature on the management of health crises, especially on Covid-19. As the crisis is lingering, scholars are still trying to document every aspect of the health

crisis in preparation. This paper is contributing to this knowledge-building process. In terms of contribution to policy, Ghana's preparedness serves as a good case study for learning comparable countries for their preparation in case of any future outbreak. The Ghanaian case further contributes to theory by adopting the policy legacy analytical framework confirming the basic idea of the importance of history. This paper does not attempt to analyse the preparedness strategies that were deployed in the different crisis and whether it was effective in limiting the entry or spread of the virus in the country or otherwise. Future studies can consider such an analysis, but this is beyond the scope of this paper.

Declarations

Ethical approval Not applicable.

Informed consent This research did not involve Human Participants and/or Animals.

Conflict of Interest The above authors certify that there are none potential conflicts of interest.

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