

Review

Healthcare in Ghana amidst the coronavirus pandemic: A narrative literature review

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Abstract

The Coronavirus pandemic has caused more deaths than any other single disease since the outbreak was confirmed. The World Health Organization in collaboration with national and international health agencies continues to lead the way in bracing global healthcare systems to fight the pandemic. There are variations in national capacities towards the preparedness and management of the pandemic. The Government of Ghana, through the Ministry of Health and Ghana Health Service, continues to provide policy and operational directions towards the containment of the pandemic. The purpose of this study is to review the setup of the healthcare sector in Ghana in light of the ongoing pandemic. This study is a narrative literature review in which data was extracted from electronic databases such as PubMed, Google Scholar, Scopus and Ebscohost that published Covid-19 research articles from Ghana. Literature was analysed and discussed based on the structures and systems available in the healthcare sector, as well as trends available from the global perspective. The healthcare sector in Ghana continues to support the citizenry in the wake of the Coronavirus pandemic. The government provides regular updates and continues to pledge their support in dealing with the effects of the pandemic. Challenges with accessibility, workforce, funding, and infrastructure remain the major hindrances in fighting the pandemic. The government and healthcare partners need to continually reform the healthcare system to meet the increasing demand for healthcare during the pandemic.

Introduction

The Coronavirus (Covid-19) pandemic has remained a global health concern since the initial outbreak in Wuhan, China. With what was first purported to be common cold with an unknown cause,^{1,2} the Coronavirus has spread across every continent of the world in less than two years and has affected about 220 countries,

with nearly 171,943,181 confirmed cases and 3,575,991 deaths as of June 2, 2021.³ As shown in Table 1, the pandemic is ongoing, and many countries are struggling to contain the spread.

The World Health Organization (WHO) on January 30th, 2020 declared the flu-like disease a public health emergency when there were less than 100 cases and no fatalities in 18 countries outside China.¹ The global confirmed cases rapidly soared and exceeded 200,000 in less than a month⁴ with Iran and Italy recording an exponential number of confirmed cases and fatalities at the time. Many countries, developed, developing, and underdeveloped continue to struggle with the increasing daily number of cases. The United States of America as of June 2, 2021, leads the tally of the overwhelming effects including the number of cases diagnosed daily and Covid-19 related deaths.⁵ Presently, the trend of the pandemic has practically become impossible to predict due to the insurgence of different mutant viruses. Since the outbreak started in China, new strains of the Coronaviruses have been identified in the United Kingdom, South Africa, Brazil and India.^{6,7} Each of these identified mutant viruses present with varying degrees of disease severity. Infected people usually develop rapid symptoms that presented as the common cold, progressing over time to affect their entire respiratory systems.

In the early days of the pandemic, the transmission was thought to be facilitated through respiratory droplets from coughing and sneezing.^{2,8} The possibility of human to human transmission was first established on January 20, 2020, and has since provided insight and facilitated the adoption of additional preventive strategies that include avoiding crowds and social distancing.^{9,10}

The global impact of Covid-19 is overwhelming. The WHO predicted the gross impact when it announced at the early stages of the outbreak that the consequences of the virus at the time in Italy and Iran could be replicated in other countries. International and national health institutions across the globe moved into action and have remained in action since the commencement of the outbreak. The overbearing effect of Covid-19 on these institutions has been enormous. Developed countries, with their best techno-

Significance for public health

The Coronavirus pandemic continues to test healthcare systems globally. Developing countries with low resources and poor healthcare systems stand a risk of succumbing to the devastating effects of the pandemic. This study provides a brief insight into existing systematic healthcare gaps in the Ghanaian healthcare system and can serve as a wake-up call to policymakers to re-evaluate and augment the current systems to provide quality healthcare to the citizenry during the pandemic.

logical advancements and well-equipped systems, continue to struggle with efforts to contain the spread and combat the devastating effects of the pandemic. Developing countries also continue to struggle in their efforts to contain the Coronavirus pandemic. Apart from the USA, India, and Brazil, both developing countries top the list of the most affected countries in the world. The impact of the pandemic in low resourced countries can be predictably devastating due to poor healthcare systems, lack of policy directions, disparities in access to healthcare, economic problems, and the existing political atmosphere in these countries. The first Covid-19 case in Ghana was recorded on March 12, 2020, in two individuals who returned from Turkey and Norway, respectively. There has since been a surge in the number of cases and an increasing number of Covid-19 related deaths. Ghana, as of June 2, 2021, ranks 96th in the world and 11th in Africa with 94,011 confirmed cases and 785 deaths.³ Ghana, as a country, relies mostly on foreign aid to support its domestic activities, including healthcare.¹¹ During the coronavirus pandemic, it is anticipated that sources of funding will drastically reduce due to the global financial recession.¹² The Ghana health service provides an ongoing regional breakdown of the covid-19 situation in Ghana as of June 3, 2021 (Table 2).¹³

The purpose of this paper is to provide an insight into the healthcare system in Ghana in the wake of the Coronavirus pandemic.

Methodology

An electronic search was first conducted in electronic databases such as PubMed, Google Scholar, Scopus and Ebscohost that

published articles and information on healthcare in Ghana. Words such as Covid-19, Coronavirus, pandemic, healthcare, and Ghana were used to locate the selected articles for the review. A secondary search was conducted on relevant Government of Ghana websites, and websites of key international organizations that are pivotal in managing the pandemic at various levels. A comparative analysis of the structures and systems of the Ghanaian healthcare sector was conducted against global trends in the wake of the Coronavirus pandemic.

Discussion

The healthcare sector in Ghana operates on three main levels: national, regional and district levels. All health institutions are under the Ministry of Health, which regulates the administration and operationalization of healthcare delivery in Ghana through policy development and coordination of health services.¹⁴ Under the Ministry of Health, there are provider institutions, with Ghana health service being the largest provider of public health services. The system of service delivery varies where urban centres are well-positioned to receive better healthcare than their rural counterparts. Hospitals, clinics, pharmacies, and other important healthcare institutions are in big towns and cities. Rural dwellers rely mostly on using non-scientific traditional medicines and herbs to treat their ailments.¹⁵ In the wake of the Coronavirus pandemic, the Ministry of Health of Ghana, through the Ghana Health Service constituted a team of health experts to spearhead the initiation and implementation of strategies to combat the spread of the disease. As a standard practice, this team of experts provided regular updates to the government for onward communication to the citi-

Table 1. Global five most affected countries. Extracted and recreated from Worldometer [Internet].³

Country	Total number of confirmed cases	Total number of deaths	Number of active cases	Number of critically ill patients
United States of America	34,136,738	610,436	5,585,384	5,953
India	28,307,832	335,114	1,793,633	8,944
Brazil	16,625,572	465,312	1,092,114	8,318
France	5,677,172	109,662	213,872	2,825
Turkey	5,256,516	47,656	84,779	1,241

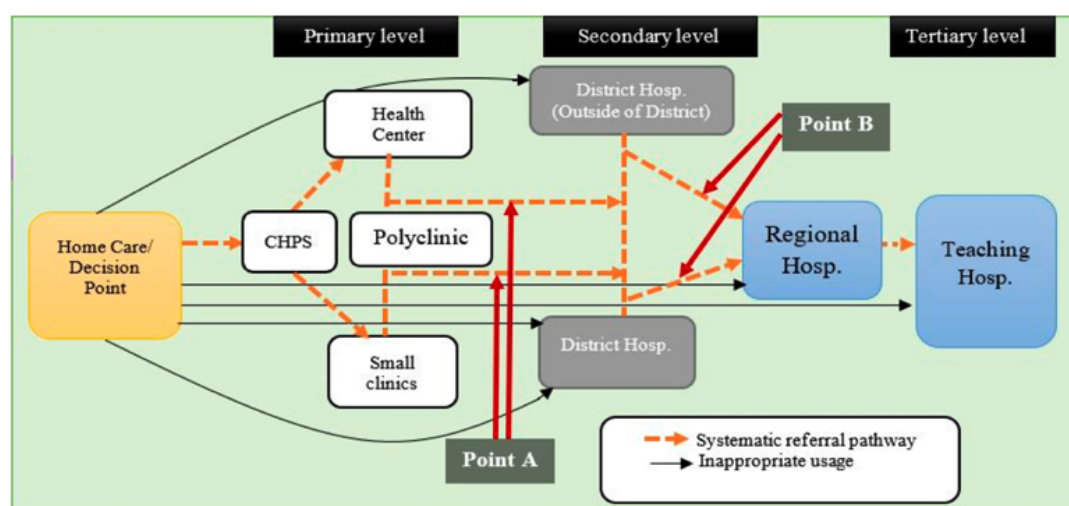


Figure 1. Ghana's healthcare referral system. Adapted from: Amoah PA, et al., Healthcare (Basel) 2017;5:80.¹⁸

zenry. Wearing of masks, hand washing and physical distancing were enforced as per the advice from the World Health Organization.⁵

Accessibility to healthcare in Ghana, especially in rural communities has remained a challenge over the years.¹⁶ The introduction of the primary healthcare system, which has been widely praised for its effectiveness globally has been marred with challenges in Ghana, especially regarding the approach and implementation of the program.^{15,17} The primary healthcare system is expected to bring affordable healthcare to individuals and their communities at their doorsteps. The bigger challenge in the wake of the pandemic is how equipped these primary healthcare facilities are to manage an outbreak. The Community-based Health Planning and Services (CHPS) which is the bedrock of the primary healthcare system provides door to door healthcare services to the less privileged population, and at the same time organizing community engagement activities in these respective communities. Physical distancing and restrictions on movement, as required during the Coronavirus pandemic will therefore mean that the primary healthcare system will require further consideration and modification to achieve its mandate. When the Coronavirus emerged in Ghana, the problem of inequalities in accessibility was acknowledged by the presidency. The president of the Republic in addressing the nation on April 26, 2020, promised to build 88 new hospitals to increase accessibility to the citizenry.¹⁴

Developed countries with accessible healthcare, such as the United States of America, the United Kingdom and Italy struggled at the peak of the pandemic to manage the increasing number of critically ill patients. Apart from challenges in accessing primary facilities in Ghana, the referral system¹⁸ (Figure 1) poses another dimension of threat. There are complexities in the service delivery systems between various levels of healthcare. Certain specialist services are only accessible in the regional and teaching hospitals. These hospitals often serve as the first point of contact for individuals living around these facilities. This in turn limits the capacity of the hospitals to accept referral cases from other parts of the country. There is often poor communication between the lower and higher levels of care which makes the referral system very daunting and becomes a source of frustration for both patients, their families and the healthcare personnel at various levels.

There are growing concerns regarding the capacity of the regional and teaching hospitals to admit many critically ill Covid-19 patients at the same time attending to patients with other disease conditions.

Despite the significance of accessible hospitals and clinics in Ghana to contain the pandemic, there are also growing concerns around the mode of transmission of the Coronavirus.^{8,9} Sociocultural life in Ghana, which encourages communal living and association can potentially facilitate the spread of the disease in the quest of seeking healthcare for other unrelated ailments. As a Covid-19 preventive strategy, many countries across the world have adopted telemedicine to augment the face-to-face form of seeking healthcare.^{19,20} Ghana, and for that matter Africa has been slow to embrace the concept of telemedicine due to structural and economic challenges.²¹ Mali, Uganda, South Africa, Botswana, and Ghana advised their citizens to seek healthcare online. High cost of internet services, unstable electrical systems and extreme poverty have been identified as the main challenges to the implementation of the telemedical practice.

The Coronavirus pandemic has ignited an increase in demand for resources in hospitals and healthcare institutions across the globe. There is an ongoing demand for human and capital resources, infrastructure, and other services to manage the outbreak.^{22,23} At the start of the pandemic, there were concerns about the availability of resources to manage positive cases in Sub-Saharan Africa.²⁴ Ghana's response was considered one of the best

Table 2. Regional breakdown of Covid-19 in Ghana. Extracted and recreated from Ghana Health Service [Internet].¹³

Region	Case count
Greater Accra Region	51,723
Ashanti Region	15,612
Western Region	5,891
Eastern Region	4,279
Central Region	3,513
Volta Region	2,532
Northern Region	1,654
Bono East Region	1,439
Bono Region	1,410
Upper East Region	1,320
Western North Region	888
Ahafo Region	725
Upper West Region	500
Oti Region	436
North East Region	229
Savannah Region	123

in the region due to the scientifically based approach implored by leadership.²⁵

Ghana currently has a total of 113 adults and 36 paediatric ICU beds which are unevenly distributed throughout the country for the total of about 30 million people living in the country.²⁴ Out of the 16 administrative regions of the country, 10 regions, with a total population of about 10 million had no ICU beds when the first Covid-19 cases were confirmed.²⁴ The lack of ICU beds has been a dominant challenge for many developing countries,²⁶ and threatens their abilities to respond to increasing numbers of Covid-19 cases. Funding of the healthcare system is primarily the responsibility of the government. The introduction of the national health insurance scheme was aimed at improving health-seeking behaviour for Ghanaians. However, the scheme continues to face challenges regarding reimbursement of health facilities.²⁷ Public and private health institutions struggle to provide basic resources for their operationalization due to a lack of funds. The president of the republic announced a \$100 million boost to the healthcare system on March 11, 2020.²⁸ The funds were allocated towards infrastructure, health education and the purchase of equipment. There was a challenge in the allocation of these funds and basic hospital items such as Personal Protective Equipment (PPE) were not provided to hospital staff. This resulted in threats of strike actions from healthcare workers. The Ghana Food and drugs authority commenced fast-tracking the certification of the production of hand sanitisers and PPE. Funding during the Covid-19 pandemic has been a global problem. The NHS in the UK faced similar challenges which caused an interruption in standards of service delivery.²⁹

Human resource remains a challenge in the Ghanaian healthcare setting. Doctors and nurses across the globe are overwhelmed with the increasing demand for care during the pandemic. Working long hours and taking on extra patient loads has become the new normal. Before the Covid-19 outbreak, staffing ratios were disproportionate and were for instance responsible for the majority of job-related stress among Ghanaian nurses.³⁰ In the wake of Covid-19, the lack of a specialized workforce in Ghana meant that majority of the ICUs were managed by non-intensivist staff.²⁴ In many developing and underdeveloped countries, challenges with work-

force and human capital have existed for decades. Poor working conditions and the lack of standardized work culture has contributed to unsatisfactory work outcomes.³¹

The services of allied health professionals are important in the fight against Covid-19. The outbreak has highlighted the critical need for biomedical scientists in our healthcare settings.³² There are currently 26 laboratories accredited by the Ghana health service to conduct Covid-19 tests in Ghana.³³ Their roles include collecting samples, conducting tests and interpreting results. By April 19, 2020, a total of 68,591 Covid-19 tests have been conducted.³⁴ Biomedical scientists from the University of Ghana were able to sequence the genomes of 15 Covid-19 cases at the onset of the pandemic and this provided a boost in the responsible approach to management.^{34,35} Similarly, the role of laboratories in unravelling the complexities in diagnosing Covid-19 globally has been well documented.³⁶⁻³⁸ The president of the Republic of Ghana announced his commitment to establishing infectious disease centres across the country in the wake of the coronavirus pandemic.²⁸ Although these projects are yet to surface,²⁵ their commencement and operationalization will augment the existing graduate unemployment in the country's health sector.^{39,40} This will also complement the World Health Organization's call on governments and other organizations to commit to working together to fight the Coronavirus pandemic.⁴¹

Conclusion

The Coronavirus pandemic has affected healthcare systems across the globe. Developing countries, including Ghana, continue to struggle in terms of resourcing to fight the pandemic. The government of Ghana through the ministry of health provide regular situational updates on the measures adopted to locally prevent the

spread and combat the effects of the pandemic. Lack of resources and poor accessibility to healthcare facilities remain a threat to fighting the pandemic. The existing healthcare system, especially in underprivileged communities require a modification during the Coronavirus pandemic to ensure access to quality healthcare. Developing the systems and structures in the wake of the pandemic will provide employment opportunities for unemployed graduates of the country.

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