Effects of COVID-19 Outbreak on Persons with Chronic Health Conditions in Anglophone West Africa: A Qualitative Study Involving Key Stakeholders

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Abstract
The COVID-19 pandemic has increased the suffering of persons with chronic health conditions due to the increased demand for healthcare services in the pandemic. Globally, the COVID-19 pandemic has become a key determinant of how health systems function, with most existing health conditions being given less attention. This study focused on the effects of the COVID-19 pandemic on persons with chronic diseases in four Anglophone West African countries (Ghana, Liberia, Nigeria, and Sierra Leone) using in-depth interviews of a qualitative method to collect data from key stakeholders in chronic disease issues. The finding shows that COVID-19 caused fear, anxiety, and affected planned health delivery and resource location to interventions designed for chronic disease patients. The study also suggested training, improved technology in health delivery, increased resource location, and factoring persons with chronic health conditions into emergency health decision-making to mitigate the effects of COVID-19 and other future pandemics on persons with chronic health conditions.

Keywords
COVID-19, chronic diseases, West Africa, qualitative study, policy and evidence

Question-and-Answer Highlight
Question1: What is known about the topic?
Answer: High vulnerability of persons with chronic health conditions to COVID-19 outbreak.

Question2: How does this study contributed to the field?
Answer: Established COVID-19 impact and outbreaks mitigation on persons with chronic health conditions.

Question3: What is the implication of this research towards theory, practical or policy?
Answer: Practical benchmark document for policy formulation on chronic care during pandemic.

Introduction
Experts’ opinions from the initial stages of the COVID-19 outbreak in late 2019 to the current phases of several variants emergence have demonstrated that persons with chronic health conditions are more prone to morbidity and mortality of the pandemic.¹,² Studies have documented the physical, biological, and psychological impacts of COVID-19 on chronic disease patients, including people with mental disorder,³ chronic heart disease,⁴ diabetes,¹ HIV/AIDS, high blood pressure, and others.⁵ The psychological impacts range from the fear of COVID-19 infection (Coronaphobia), break in social network, increased anxiety to stressors due to uncertainty, and increased depression and emotional disorders.
which can be attributed to COVID-19 control measures such as lockdowns and travel restrictions.\(^6\)

Secondly, the increase in demand for healthcare service, caused by the outbreak, equally had a lot of negative impacts on chronic disease patients as continuous treatments and follow-ups are faced with human resources, health infrastructural, medical consumables, and financial challenges\(^2,1\). Though earlier studies from the initial stages of the COVID-19 have established increased morbidity and mortality among chronic disease patients, there is scanty evidence to make their concerns factored in health programs designed to control and mitigate the impacts of COVID-19\(^7,8\).

Though the above situations existed in both developing and developed nations, fewer studies have been conducted to establish the severity of the COVID-19 pandemic on persons with chronic health conditions in Africa.\(^9\) Africa, with 17.5\% of the global population, has huge disease burdens which are driven by an increase in infectious and none infectious disease\(^10\) with chronic health conditions estimated to have accounted for 45\% of deaths by 2030, indicating the upsurge of chronic diseases, which accounted for 25\% of deaths in 2010. Ironically sub-Sahara Africa, where West Africa is located, has gaps in health financing, infrastructure, and qualified health labor.\(^12\) These problems, coupled with dwindling foreign donations to health care and poor domestic health financing, which is demonstrated in the inability of nations to adhere to the 2001 Abuja declaration,\(^13\) were already impacting health delivery to the general public and severely affecting the continuous treatment of chronic disease patients. The outbreak has worsened the already difficult situation for chronic disease patients.\(^14\)

Countries in West Africa have received their shares of the devastating effects of COVID-19 on their health system;\(^15\) nonetheless, the entire continent has recorded less than 1\% of global COVID-19 infections.\(^16\) The pandemic has become a significant determinant of how the health system operates.\(^17\) The existing gaps in health resources and diversion of available resources to deal with issues that have to do with COVID-19 have worsened the conditions of chronic disease patients.\(^8,18\) Though, COVID-19 has affected all aspects of society; persons with chronic health conditions have suffered the most. Hence the need to establish evidence of the effects of COVID-19 on persons with chronic health conditions in Anglophone West Africa and find ways to mitigate the impact of COVID-19 and future outbreaks on chronic disease patients.

**Research Design**

The researchers adopted consolidated criteria for reporting qualitative research (COREQ) for data collection and analysis\(^19\). A qualitative Phenomenology study focused on building evidence to establish the effects of the COVID-19 pandemic on persons with chronic diseases in Anglophone West Africa was used. The approach detailed the experiences and perspectives of stakeholders in the areas of treating and caring for persons with chronic conditions in four Anglophone West African countries, namely, Ghana, Nigeria, Sierra Leone, and Liberia. The ultimate goal of the approach is to explain the nature of a specific situation.\(^20\) The phenomenology approach aided the researchers in studying the experiences of persons with chronic health conditions within the COVID-19 pandemic through their caregivers and stakeholders.

**Study Population and Setting**

The study participants were nineteen professional health workers working with chronic health conditions and two leaders of established chronic health condition peer groups. Five of the participants were from Ghana, seven from Nigeria, four from Liberia, and three from Sierra Leone. The number of participants per country was based on experts who agreed to participate in the study after the researchers contacted them.

The selection of countries in Anglophone West Africa for the study was based on two reasons; first, the researchers want to avoid translating expert opinions from French to English since none of the researchers can speak or understand French, which is the official language for the other countries. Lack of specialist knowledge in the French language may affect the interpretation of the participant’s expert views. Second, employing an additional French translator will increase the budget for the study. The research participants did not include experts from Gambia, the smallest Anglophone West Africa country, because several schedule interactions with the participants have failed. The researchers were confident that having participants from four Anglophone West African countries out of the five provides a fair representation of the research setting.

**Recruitment and Inclusion Criteria**

The researchers contacted the health organizations, both governmental and non-governmental agencies working with chronic disease patients. Out of seventeen organizations contacted from the four countries, six governmental organizations turned down the request of providing the researchers with participants. Eleven organizations (four governmental and seven non-governmental organizations) agreed and provided the research participants. The organizations provided the researchers with the contacts, qualifications, and areas of specializations of the potential participants. The researchers purposively selected the participants that meet the study criteria based on their field of work, qualification, and the number of years working with chronic disease patients.

**Ethical Considerations**

The proposal for the study was reviewed and approved by the Social Science and Health Ethics Board and was granted with the ethics number: **SSHEB. No 20210973SN**. Protocols were observed from all the participants before interacting with them as they were pre-informed and had signed an informed
consent form before recordings began. Data confidentiality was well handled as participants’ identifiers such as names, particulars of countries, workplaces, and others were kept from the public throughout the process. Upon demand, the transcripts and audiotapes will not be submitted to anyone or authority. Researchers’ hard copy documents will be discarded a year after publication. The transcript remains confidential within the period of publication. Participants were given working aids as remunerations for participating in the study.

Data Collection

In-depth interviews were conducted between October and December 2021 using a semi-structured interview guide. The interview guide was designed by reviewing studies that investigated the impacts of previous outbreaks on health delivery. The interview guide was submitted to five public health professors specializing in chronic disease management for review. Four out of the five professors sent us their revisions, and their inputs were inculcated into the final interview guide.

Interviews were carried out through telephone interactions and recorded; each interview lasted for 49–57 minutes. All interviews were held at weekends when participants were at home; this was done to avoid research impacts on their job performance and interruptions from co-workers during the interactions. Before the interview, participants signed a written consent form that indicated their willingness to voluntarily participate in the study and how their data would be protected. The consent form also detailed their right to opt-out of the study at any stage or ignored any question they deemed unfit to answer. To prevent data lost, recorded interviews were transferred to other electronic devices. Participants were informed when the interview began, and when there were breakages in the process, permission was obtained for the restart of recordings. Saturation was attained as continuous probing brought out the same responses recorded. Member checking was employed to check data validity. The participants and researchers discussed saturation with participants stating they had provided all the information.

Data Analysis

Content analysis technique was employed to analyze in-depth interviews data collected. By principle, content analysis enabled researchers to find words, statements, and intentions that are correlated and group them into themes. Themes were manually generated using a conventional inductive approach. The inductive approach was appropriate as the data analysis was guided by the study’s objectives and previous studies focused on chronic disease patients; data were analyzed alongside data collection (Table 1).22

Reflexivity

The researchers were made up of public health professionals and health policy specialists. The participants hold a postgraduate qualification and are experienced in handling chronic health conditions, except the two leaders of persons with a chronic disease group who have less than graduate qualification. The researchers stick to the interview guide during data collection. Recordings were listened to three times before coding and developing codes and themes. Codes and themes were compared between researchers and co-coders and again compared to the transcripts to better clarify and match themes precisely. Confusions that came among the research team due to the positioning of codes to themes were addressed by inviting others researchers to share their views.

Rigor, Dependability, and Transferability

The researchers put in place all measures that made the study’s findings reflect the opinions of the research participants. Rigor was attained through credibility, dependability, confirmability, transferability, and authenticity. Credibility was achieved by carefully selecting participants who met the selection criteria and providing them with the study details to understand the study. Current literature2,3,6,9 was reviewed to support the development of relevant themes associated with the topic; the researchers engaged the participants in a way that limited the researchers from influencing the participants’ views.

All participants were treated with the same questions using the interview guide. After saturation during the interview, the researchers probed for clarity of responses and consistency for repeated answers. Clarification was sought about professional terms relating to chronic diseases. The researchers and the participant have discussed to saturation, indicating no further responses to be probed.

Dependability of data over time was achieved by selecting participants who met the criteria, reviewing and comparing the research procedure with other studies procedures24,26, and engaging the inputs of other researchers in the field. Conformability was established between notes, coding notes, written transcripts, interactions, and audiotaped interviews to achieve consistency and reader comprehension in the study findings.27

Transferability was enhanced by providing a detailed description of contexts in the study, description of research participants, and research setting. Transferability was further enhanced by supporting themes and sub-teams with participants’ direct quotations. These will enable another researcher to judge the possibility of repeating this study in similar settings.34

Findings

The study results were analyzed under themes, associated sub-themes, and direct quotes from the participants. A total of 23 professionals were contacted, but four turned down the offer citing workload as the reason; therefore, nineteen professionals participated in the study, five were aged between 28 and 35 years, seven were aged 36–46 years, and the
The researchers transcribed the recorded interviews separately and read them for not less than four times to understand the total content. Important and repeated statements describing the phenomenon of the subjects were extracted from the transcripts into a single form by the researchers and two independent coders. There were some arguments about the similarity of statements and codes classification, and these issues were addressed by carefully reviewing transcripts. The researchers and the independent coders formulated meanings from significant statements and carefully developed themes and sub-themes according to research objectives. Researchers and independent coders independently developed the themes and sub-themes. The researchers and the independent coders thoroughly examined all themes that emerged. The themes were realigned by considering existing findings of experts and dialoguing among the research team. The researchers revised themes and sub-themes, observed constructions of the phenomenon, and descriptions that seemed to be overboard were extracted as themes and sub-themes were restructured. Researchers and the independent coder dialogued and agreed on the final themes. Authentication of the findings: Though the researchers performed member checking during data collection, the study’s final findings were sent to participants to evaluate if the findings were similar or identical to the responses they gave or their experiences. Participants emailed their views to the researchers.

The rest were aged 47–58 years. In terms of education, two were educated to the senior high school level. Eight hold master’s degree certificates and nine were holders of a doctorate. When asked about their professions, seven of them were public health professionals (PHP) who have been working on various chronic disease interventions. Three were nurses (NRS), and two medical doctors (MD) who work with persons with chronic conditions, two leaders of chronic disease intervention groups (LCDG), three were health policy experts (HPE), and two were directors of non-governmental organizations (NGOM). Twelve of the participants said they were assigned to COVID-19 duties during the initial stages of the pandemic.

Five themes emerged from the analysis; Perception about the outbreak, Impacts of health system changes brought by COVID-19, Effects of COVID-19 preventive measures, Reduction in the allocation of health resources, and mitigating the impacts of COVID-19 and future outbreaks. All themes have their associated sub-themes.

**Theme 1: Perceptions about the Outbreak**

The first theme in Table 2 details how chronic disease patients received the news about the outbreak. Two sub-themes that emerged from this theme are misconception of the virus not transmissible in West Africa and the fear of severe morbidity and mortality among chronic disease patients.

**1.1 Misconception about Transmission of the Virus in West Africa.** The participants pointed out that individuals with chronic health conditions, just like other citizens, believe that COVID-19 cannot be transmissible in Africa due to the level of temperature in their countries. The above Perception emanated from past outbreaks in other parts of the globe that were not recorded in their countries.

“Many of our clients were thinking covid-19 will be limited to Asia, America, and Europe; they were with the view that virus cannot get to their countries because of high temperature in their countries.” PHP3

**1.2 Fear of Severe Morbidity and Mortality.** Participants acknowledged that their clients just took the news like any other person. Until news triggered in about the severity of the infections on persons with chronic health conditions, some reports suggest that most casualties were chronic disease patients; this news came from international and local media sources.

“Some of my clients began to panic when reports from some media sources seemed to paint the picture that persons with chronic health conditions will not recover when infected. Some clients were afraid to even get into contacts with people in their houses.” LCDG2

Another participant criticized the unethical ways the news about severity of covid-19 on chronic disease patients was put out, “The news about the severity of covid-19 infections on persons with chronic disease is true. But it was not carried out ethically and factually; there were persons with chronic health conditions who still recovered from the infection.” PHP5

**Theme 2: Impacts of Health System Changes Brought by COVID-19**

The above theme explored how the health systems designed to contain the COVID-19 outbreak affected chronic disease patients. Four sub-themes emerged from the above theme; worsening health outcomes, distortions in planned treatment schedules, reduction in treatment and peer meeting venues, and delay in treatment and anxiety.
2.1 Worsening Health Outcomes. Countries in West Africa made adjustments in their health facilities, workers, and resources to meet the needs of the pandemic. All the participants stated that changes in the health systems that aimed to suit COVID-19 and its related issues negatively impacted persons with chronic health conditions. They said it has distorted their treatment plans and made health-seeking difficult.

“I can authoritatively tell you that most clients’ conditions have been worsening due to changes in the health system. Some have lost their lives because they could not access their periodical treatments.” Another participant was quoted saying. “Issues of covid-19 have dominated all discussions at the top decision-making levels. Some of us wonder if other existing health conditions were very important to politicians. Most authorities, especially politicians were not ready to listen to issues about other health conditions, I was wondering why everything was covid-19.” MD1

2.2 Distortions in Planned Treatment Schedules
Assigning health workers on COVID-19 duties affects the treatment of chronic health conditions. Participants expressed a lot of worries about how most health workers who work with chronic disease patients were relocated to COVID-19 duties.

“Most of our staff working with chronic disease patients were assigned new duties, some have even booked patients for a specific date. Workers who have continuous treatment plans with patients were also assigned to other duties, so patients who managed to come to the hospitals were disappointed as they have to be attended to by the new person who knows little about their treatment plans” NRS3

2.3 Reduction in Treatment and Peer Meeting Venues.
Participants concluded that allocation of health facilities for COVID-19 treatment centers did not significantly impact chronic disease patients compared to the relocation of health workers. Though few acknowledged that any facilities designated for COVID-19 care become a hotspot for infections; hence, all persons seeking treatments in such facilities have to divert.

“Some facilities that were met for discussions and treatments have been made covid-19 isolation and treatment centers so we cannot even meet.” NGOM2

2.4 Delay in Treatment and Anxiety
Other difficulties brought by reassigning health workers and facilities include delayed treatment and anxiety among chronic condition patients. Participants stated that patients who have crises do not know which facilities to attend, while other patients were anxious about the next decision.

“Attending hospitals was a risk, patients in crises were afraid of infections at these facilities, these have worsened the conditions of some patients. Others were nervous as to when the planned treatment schedule will begin as they hardly hear any decisions being made in their interest.” PHP5

Theme 3: Effects of COVID-19 Preventive Measures
Theme 3 in Table 2 examined the effects of COVID-19 pandemic preventive protocols on chronic disease patients. Three sub-themes that emerged from this theme are; Difficulties in accessing healthcare services, Difficulties in accessing social amenities, Stigmatization, and isolation.

Table 2. Illustration of Themes and Sub-Themes.

| Themes                                      | Sub-themes                                      |
|---------------------------------------------|------------------------------------------------|
| 1. Perception about the outbreak            | 1.1. Misconception about transmission           |
|                                             | 1.2. Fear of severe morbidity and mortality     |
| 2. Impacts of health system changes brought by COVID-19 | 2.1. Worsening health outcomes                  |
|                                             | 2.2. Distortions in planned treatment schedules |
|                                             | 2.3. Reduction in treatment and peer meeting venues |
|                                             | 2.4. Delay in treatment and anxiety             |
| 3. Effects of COVID-19 preventive measures   | 3.1. Difficulties in accessing healthcare services |
|                                             | 3.2. Difficulties in accessing social amenities |
|                                             | 3.3. Stigmatization and isolation               |
| 4. Reduction in the allocation of health resources | 4.1. Difficulties in financing preventive programs |
|                                             | 4.2. Limited access to treatment and drug supply |
|                                             | 4.3. Difficulties in detecting chronic conditions at early stages |
| 5. Mitigating the impacts of COVID-19 and future outbreaks | 5.1. Paying attention to chronic health conditions when making emergency decisions |
|                                             | 5.2. Self-reliance and cohesion within groups   |
|                                             | 5.3. Improve technology                         |
|                                             | 5.4. Increase funding                           |

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3.1 Difficulties in Accessing Healthcare Services

Though the preventive measures are useful for containing the outbreak, most government preventive measures adversely affect persons with chronic conditions. The participants alleged that measures such as lockdown affect their clients’ abilities to access health care.

“Lockdowns reduced movements of vehicles and also affect some social services, most patients who were in crises have less access to transports to attend hospitals. It must be stated that our ambulance services were ineffective and their concentrations were on contact tracing.”LCDG2

Other participants also stated that lockdown affects the nutrition of their clients. “Some drugs and therapies given to clients demand that they eat enough. Due to lock-down many of them who were mostly daily wages earners could not go to work hence were not able to afford adequate meals, so some clients could not get the volume of food they need to eat to support their treatment.” MD1

3.2 Difficulties in Accessing Social Amenities. Participants expressed worries about how the social facilities in their countries were not well structured and how many homes lack basic social amenities like running water, WASH facilities, etc.

“Some of the preventive measures implemented made life unbearable for chronic disease patients and other citizens. These measures were just copied from developed nations without recourse to how our communities were structured. Most homes have no running water, WASH facilities […] but they were all locked-down. How can the people survive? It was a horrible experience and has increased the suffering of our clients.” PHP1

3.3 Stigmatization and Isolation. “The call for social distance and other measures increase stigmatization against some sections of our clients. Already people stigmatized people with certain chronic conditions and the measures have worsened the situation. Even some people who died with covid-19 were classified as being with certain conditions.” NGOM2

Theme 4: Reduction in Allocation of Health Resources

The above theme reflects on how the COVID-19 outbreak has led to a reduction in resources located to caring for individuals with chronic conditions. Three sub-themes emerged from this theme; difficulties in financing preventive programs, limited access to treatment and drug supply, and challenges in detecting chronic conditions at early stages.

4.1 Difficulties in Financing Preventive Programs. Preventive programs are crucial to reducing the number of chronic disease patients in a country; the upsurge of chronic cases in developing countries can be directed at limited health education. Participants have stated that it is hard to get funding to organize such outreach programs before the outbreak, which will worsen the situation.

“For the past two years before the outbreak, funding of our projects has reduced dramatically, we mostly get funding from the foreign donors, and it hardly comes nowadays, with the impacts of covid-19 even local support is not coming forth.”HPE2

Another participant recounted this “Donor funding for HIV/AIDS awareness programs have completely stopped, even food supplement that we give to patients are no more available. Now that everything is covid-19, getting funds will be difficult because our government is spending on this pandemic.” NGOM3

4.2 Limited Access to Treatment and Reduction Drug Supply

Some participants said resource reduction has led to them not giving the needed treatment for their clients as they share little drug available.

“Those times that we had adequate funding, we gave our clients adequate treatment at little or no cost. I remember we do give those severely sick clients food supplements as well. But for some time now we share the little medications available among them. This may sound unprofessional but it is the fact and covid-19 may escalate the situation” MD2.

Other participants made these sharp statements: “The health sector of my country is struggling financially and we must expect more hardships. Most of the supporting interventions only exist in the books there is no money to make them practical.” NGOM

4.3 Difficulties in Detecting Chronic Conditions at Early Stages. Participants recalled that they organized periodic screening to detect lifestyles and infections that can develop into chronic conditions when donor funding was available. But poor resource allocations coupled with the COVID-19 situation are preventing the organization of screening programs regularly.

“There are upsurges in chronic cases because we barely do health screening. The number of persons with HIV/AIDS infections might have increased because we do not do public screening, most of them were not aware of their status. This is the situation before the outbreak and it is likely to get worsen due to the pandemic, as we do not know when funding will come in.” PHP3

Theme 5: Mitigating the Impact of COVID-19 and Future Outbreaks

The last theme focused on alleviating the impact of outbreaks on persons with chronic health conditions. The four sub-themes that emerged are: paying attention to chronic health
conditions when making emergency decisions, self-reliance and cohesion within groups, improving technology, and increasing funding.

5.1: Paying Attention to Chronic Health Condition When Making Emergency Decisions

To date, experts are very skeptical about when COVID-19 will be over, while the potential of other national or global outbreaks exists. The researchers explore ways to mitigate the impacts of epidemics on people with chronic conditions. Participants gave the following response:

“I think decision-makers should be finding ways of designing special care programs for persons with chronic conditions because they consume health services regularly. Unfortunately, they were not considered as special groups during the outbreak. Next time it must be compulsory to design programs for them when there are such shakeups in our health system.” HPE2

5.2: Self-Reliance and Improved Cohesion in the Social Groups

Some participants believed that there are many treatment activities that their clients can do themselves when they are given some basic training. These will help them to make fundamental treatment decisions without a medical professional. Again, persons with chronic health conditions belong to groups; an example is HIV/AIDS advocacy groups and diabetes advocacy groups. Participants believed that strengthening these groups would enable members to depend on themselves at the time of outbreaks.

“Persons with chronic conditions go through routine treatment so we can train them to do a lot for themselves and this is what we need to do so they can be self-reliant to some extent. If they have no crises I think they can apply their medication themselves” MD2

Another participant stated, “They have associations, some of them who have been with their conditions for a long time and have paid attention to regular treatments are experienced in taking control of simple issues. I want us to strengthen these associations; members live in the same environment and can support themselves without professional health workers. This will be useful in times of outbreaks.” NRS2

5.3 Improve Technology in Health Delivery

Some participants believed that improving technology in health delivery may help during outbreaks. Though telemedicine has gained ground in developed and some developing countries, governments in Western Africa are yet to implement telemedicine as a treatment model.

“Health has gone technological in many countries; people are talking about telemedicine which means it is not always necessary for the client and health workers to meet in hospitals. Imagine we have a telemedicine process, we can direct clients on what to do during lockdown when they find it difficult to come to the hospitals. So technology can mitigate impacts of outbreaks on our clients.” MD2

5.4: Increase Funding and Stocks of Drugs

Most participants called for increased local funding sources since foreign donations have dwindled. Others also said the supply of drugs has been intermittent before and severe during the pandemic. The participant, hence, called for an increase in resources channeled to chronic cases.

“I have stressed on poor funding for chronic condition programs, now that foreign donations have dried up, it is time for our government to come on board. If there are funds, the hardship brought by the outbreak could have been reduced” PHP7. Another participant also said, “Drugs and other medical consumables come once in a while, and it is affecting continuous treatment; there must be ways to overcome this. It is not helping our clients at all; there have been reversals of progress in improvement in their health outcomes.” NGOM2

Discussion

COVID-19 has hurt the health systems of developed countries like the United States of America, Canada, and others in Europe. Living one to imagine its impact on the health systems of West African countries, whose health systems are mostly donor-dependent. Though countries in West Africa have recorded a limited number of COVID-19 infections, the distractions it brought to structured health systems are enormous. Most of these countries have colossal health financing gaps and are yet to recover from the 2014 Ebola outbreak fully. The category of people suffering much within the COVID-19 pandemic are persons with chronic health conditions; this has been proven biologically, physically, and socially with data from the onset of the COVID-19 pandemic.

This study’s findings demonstrated the negative impacts of COVID-19 on persons with chronic health conditions from the experts’ points of view. Our investigation established that unethical broadcasting of severe morbidity and mortality of COVID-19 infections on persons with chronic health conditions made them panic. Research has demonstrated that no matter how factual medical findings, there are ethical ways of channeling such news to the concerned groups; in the case of COVID-19 severity on chronic disease patients, ethical principles were ignored. In line with this finding, the study by Chatterjee, Goyal and others envisaged that several medical ethics might be overlooked in ways that COVID-19 cases were handled.
According to our findings, the restructuring of health facilities and the relocation of health workers had adverse effects on scheduled treatment plans of persons with chronic health conditions. It is common knowledge that chronic disease patients access health care regularly, and at the same time, some of them need specialized care. Hence, the restructuring of health facilities and relocation of medical staff to COVID-19 duties means that some of the health staff who attend to chronic disease patients were absent at their available units. These findings were also supported by studies that articulated the challenges for chronic disease patients in accessing health delivery in recent times.

Again the study also established that changes in the health system brought about anxiety as health facilities became hotspots for COVID-19 infections. While the thought about the severity of disease on chronic disease patients made seeking treatment unattractive, other studies recognized similar issues in examining the impacts of COVID-19 on the aged and other groups.

Nonetheless, COVID-19 preventive measures were implemented to help reduce the spread of infections; some of the measures were so punitive to the extent that chronic disease patients willing to access treatment find it difficult to do so. According to the study, lockdowns made it difficult for chronic disease patients in crises to get vehicles to attend hospitals. Though ambulance services were available, there is evidence that ambulance services in developing countries are primarily ineffective. With issues of COVID-19 dominating health decisions, equipment such as ambulances was devoted to contact tracing and moving COVID-19 patients from one place to the other at the detriment of chronic disease patients and others. The dominance of health decisions by COVID-19 matters has been a global phenomenon which sections of health experts have criticized.

Studies have documented inadequate health financing in Africa for some years now, the health financing gap has been getting wider due to a reduction in foreign support for health delivery. According to the research finding, a significant problem for caring for chronic disease patients is the poor financial contribution for chronic disease interventions. Though the issue of inadequate financing existed before the outbreak, the general economic impacts of the pandemic on West African countries may have negative influences on domestic contribution to health delivery. With the dwindling foreign donation to health delivery and increasing disease burden in Africa, there is the likelihood of significant setbacks in gains made in treating chronic diseases and other.

The last finding of the study focused on mitigating the impacts of COVID-19 and other pandemics on chronic disease patients in the future. Three suggestions came up from the experts. The first has to do with training persons with a chronic health condition to be self-reliant. This finding is similar to the results of Hacker, Briss, and others that suggested that most regular steps taken to treat chronic disease are less complicated, and patients can do them when they are well trained, except in times of crisis when the need for medical professionals shall be compulsory. Another study acknowledged that given these patients, some training would upgrade their level of self-efficacy, which is very important in times of the unavailability of a medical professional.

Other studies that proposed ways of alleviating the impacts of outbreaks on chronic disease patients suggested improving the use of technology in health delivery in Africa. Currently, developed countries have made technologies such as telemedicine an integral part of their healthcare systems. However, similar cannot be said about most countries in West Africa as they still rely on patients and doctors having physical contact at the hospitals. The professionals’ have emphasized that telemedicine can help treat chronic disease patients during outbreaks and beyond, as the movement of chronic disease patients to treatment centers could be avoidable. This finding is similar to many global studies that have stressed the gains made with telemedicine and other technologies in health delivery.

Finally, increasing the allocation of funds to chronic disease interventions was mentioned to alleviate the impacts of outbreaks on chronic disease patients. The problems of funding have dominated many sections of the study’s findings. The dwindling funding for intervention on chronic diseases and others makes it difficult to sustain health delivery to vulnerable persons. Hence, inadequate funding could worsen the conditions of chronic disease patients even beyond the pandemic and erode the gains made.

Conclusion

The study has articulated many significant adverse effects of the COVID-19 pandemic on chronic disease patients in Anglophone West Africa. The impacts arise from fear of severity of infections, difficulties in access to health care due to restructuring of health facilities and relocation of health staff to COVID-19 and other duties, delay in treatment, and anxiety of not knowing when things will return to normalcy.

Other COVID-19 impacts include difficulties in accessing health care due to the punitive preventive measures such as lockdowns which made it difficult for patients to get vehicles to treatment centers. Reduction in resources to chronic disease interventions due to an excessive focus on COVID-19 issues has equally influenced further reductions in medical supply, and other materials needed to improve the well-being of chronic disease patients. The study also recommended ways to mitigate the impacts of outbreaks on persons with chronic health conditions.

Recommendations

The study recommended five key ways to mitigate the impacts of COVID-19 and future outbreaks on persons with chronic conditions. Practically the researchers requested decision-makers involve issues about chronic diseases in
emergency health decision-making. Health managers must always give chronic disease patients access to continuous treatments and follow-ups priority. Second, researchers also request that caretakers for persons with chronic health conditions educate the chronic disease patients to apply routine treatment with less supervision.

Third, the researchers call for the management of health facilities to improve technology in health delivery by bringing telemedicine as a treatment model to reduce routine movement of persons with chronic health conditions to treatment centers. Again, there should be further research into continuously improving health delivery to chronic disease patients since there has been an upsurge in the number of chronic disease patients in West Africa.

Finally, there is a need to improve health financing from governments and donor levels to help make quality health delivery accessible to chronic disease patients. With the similarities between health systems and demography of both West Africa Anglophone and Francophone countries, the study’s recommendation can be transferred to francophone countries or modified to suit the treatments of chronic disease patients in these countries.

**Limitations of the Study**

Though the online data collection made it difficult to the observation of the body language of the participants, probing issues to saturation level has reduced the risk of losing data that could have been generated through participants’ body language. Second, though experts from one out of the five Anglophone West African countries could not participate in the study, the research setting was well represented with experts from four out of the five Anglophone West African countries. Last, the smaller size of participants may not have negatively impacted the study since the focus is to gather the views of the experts in the area of chronic health care. The selection of Anglophone West African countries is not much a limitation as the study’s objective is not to study the sixteen West African countries.

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Appendix 1

Interview Guide

1. How persons with chronic health conditions reacted to news of the outbreak.
2. Restructuring of health workers and health facilities.
3. How preventive measures impacted persons living with chronic conditions.
4. Reduction in resources allocation to support chronic disease treatment.
5. How did persons with chronic conditions rely on self-reliance care?
6. Mitigating future impacts of uncertainty.