Leading in a time of crisis: a qualitative study capturing experiences of health facility leaders during the early phases of the COVID-19 pandemic in Nigeria's epicentre

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Abstract

Purpose – The COVID-19 pandemic has had a disruptive effect on the health system. Health facility leaders were at the forefront of maintaining service delivery and were exposed to varied stressors in the early phase of the pandemic. This study aims to explore the leadership experiences of health facility leaders during the early phase of the COVID-19 pandemic in Nigeria's epicentre.

Design/methodology/approach – We conducted an exploratory descriptive qualitative study. To achieve this, we remotely interviewed 33 health facility leaders of different cadres across primary, secondary, and tertiary levels of the public health care system in Lagos, Nigeria. The key informant interviews were transcribed verbatim and were analysed using thematic analysis.

Findings – The health facility leaders experienced heightened levels of fear, anxiety and stressors during the early phase of the pandemic. They also had genuine concerns about exposing their family members to the virus and had to manage some healthcare workers who were afraid for their lives and reluctant. Coping mechanisms included psychological and social support; innovative hygiene measures at health facility and at home; training and staff welfare in more ways than usual. They were motivated to continue rendering services during the crisis because of their passion, their calling, the Hippocratic oath, and support from the State government.

Originality – The experiences of health facility leaders from different parts of the world have been documented. However, this is one of the first studies that specifically report multi-layer leadership experiences of health facility leaders during the early phase of the COVID-19 pandemic in sub-Saharan Africa.

Introduction

The COVID-19 pandemic has been aptly described as a wicked problem – that is, a complex problem with broad multi-sectoral impact where conventional problem-solving processes do not apply, and in which responses are rarely right or wrong and may have unintended consequences elsewhere (Schiefloe, 2021). In addition to its direct health impacts in terms of morbidity and mortality, the pandemic has had a disruptive effect on the health system, especially access, provision, and utilisation of primary care services across health facilities. Sub-Saharan African health systems, which were already described as fragile pre-pandemic were not spared of the disruptions (Gebremeskel *et al.*, 2021), despite the relatively lower prevalence of the disease in the region (WHO, 2020a). Similar to the decline reported in the utilisation of healthcare during the 2013-2016 West African Ebola outbreak (Wilhelm and Helleringer, 2019), a significant decline was reported in the provision and utilisation of essential services in many countries of sub-Saharan Africa (SSA) (Semaan *et al.*, 2022; WHO, 2020b).

The wide disruptions caused by the COVID-19 pandemic highlighted the need for strong leadership at different levels of healthcare systems especially one tailored to the crisis at hand. This is very much in line with Hersey and Blanchard's situational leadership theory which submits that there is no universal 'best leadership' approach and that truly effective leaders tend to adapt their style of leadership to the situation at hand (Hersey and Blanchard, 1972, 1977). At the hospital level, several challenges were faced requiring skills, innovation, and resilience from leaders within hospitals including lack of adequate capacity to handle the surging patient volume, the need for quick, real-time redesign of care models for patients, protecting the physical and mental health of their frontline staff, financial loss due to disruptions in usual sources of revenue and the disruption of routine care (Banke-Thomas *et al.*, 2021; Begun and Jiang, 2020). To overcome these challenges, leaders in the health system were required to make faster decisions, despite rapid changes in the issues, the policies as well as available clinical evidence. In the end, the principal mandate of a health leader is to integrate systems so they can serve patients, families, and systems well; to ensure healthcare workers under their supervision can do their work optimally in a

psychologically and physically safe workspace; and implement necessary changes and reform to allow the organisation function smoothly (Abdi *et al.*, 2022; Georgiades, 2020).

The first documented case of COVID-19 in SSA was reported on 27th February 2020 in Nigeria (Kapata *et al.*, 2020; WHO, 2020c). This first case in Nigeria was an Italian citizen who flew into the commercial city of Lagos from Milan. Since then, there have been 254,461 cases and 3,142 deaths, as of 26th February 2022. Indeed, Lagos has been the epicentre of the pandemic in Nigeria (NCDC, 2020). Like in other parts of the country, the COVID-19 response in the state included a mix of lockdowns, travel restrictions and social distancing. These policies led to wide-ranging disruptions in service provision across hospitals especially during the earlier phases of the pandemic.

Health facility leaders have been in the frontline of fighting COVID-19 and maintaining health care delivery amid these disruptions. Findings from a survey in the early phase of COVID-19 among Nigerian health care workers (64% of whom were in a managerial role) showed that they had a high level of work-related burnout and concern about the preparedness of their health facilities (Ameh *et al.*, 2021). While there have been a few empirical studies published from high income countries like Canada, Denmark and the United States of America (Aquilia *et al.*, 2020; Crain *et al.*, 2021; Hartney *et al.*, 2022; Hølge-Hazelton *et al.*, 2021a, 2021b), the experiences of health facility leaders in low- and middle-income countries such as Nigeria have not been explored. This study sought to explore the leadership experiences of health facility leaders during the early phase of the COVID-19 pandemic in Nigeria's epicentre.

Methods

Study setting

Lagos state is a densely populated city in south-western Nigeria with a populace of over 21 million. Over a third (38.8%) of the confirmed COVID-19 cases in Nigeria have been reported in Lagos alone, making it the state with the highest prevalence in the country (NCDC, 2022). In all the 36 states of the federation including Lagos state, the public health sector is administered and arranged as primary, secondary and tertiary level. This reflects the type of service and cadre of

personnel along the continuum of healthcare service rendered by the facilities. As at the time of COVID-19 related lockdown, Lagos state had five tertiary facilities (including two teaching hospitals); twenty-seven secondary facilities and 329 primary healthcare centres (HEFAMAA, 2021; Musbau, 2017).

Study design and participants

The philosophical assumption for this qualitative research is based on the relativist ontology and subjective epistemology of an exploratory descriptive qualitative study. The study participants were healthcare workers who hold management/administrative positions at the three levels of health service provision in the public health system in Lagos state (primary, secondary, tertiary). This framed the inclusion criteria for our study. We excluded those who were not involved in leading health facilities during the early phase of the COVID-19 crisis in Lagos State. A list of health facility leaders was provided to us by the Lagos State Health Services Commission and the Lagos State Primary Health Care Board. This was subsequently updated with details of departmental heads captured through snowballing at health facility level. Using this list, we purposively selected potential interviewees and invited them to participate in the study via telephone calls. To recruit interviewees, we sent out letters along with informed consent forms one to two weeks before the planned interview. For the majority of potential interviewees, we heard back from them and secured dates and times for interviews.

At the primary health care level, we interviewed medical officers of health, apex nurses and apex community health officers that oversee 39 PHCs within five local government areas of the state. At the secondary level, we included medical directors across five general hospitals as well as their heads of department/units. The PHCs and general hospitals were distributed across the five administrative zones in the state to have adequate representation of healthcare leaders who were affected directly in the demand of the crisis. In addition, the Chairmen Medical Advisory Committees (CMACs) and heads of selected departments/units across the two teaching hospitals were included in the study.

Data collection

Data collection took place during the phased easing of lockdown over a period of five months (July to November 2020). Information was collected from the selected representative of the health facilities remotely via Zoom meetings (Zoom Video Communications, San Jose, California, United States). Key informant interviews (KIIs) were conducted using an interview guide made up of several open-ended questions that explored the experiences and challenges of health facility administrators leading service provision during the early phase of the COVID-19 pandemic. The Zoom interviews were recorded and ranged between 32 – 47 minutes. Participants were recruited and interviewed in a rolling fashion until data saturation was achieved (Saunders *et al.*, 2018). The interviewer maintained a reflective journal during all the interviews.

Data analysis

Professional transcription of the audio recordings from the KIIs was carefully done verbatim. The transcripts were then transferred as text documents into NVivo 10 (QSR International, Memphis, Tennessee, USA) where analysis was conducted. For reduce the data, we used the Braun and Clarke's six steps for thematic analysis, which allowed for familiarity with the data, generation of initial codes, search for themes, review of themes, definition and naming of themes, and production of the report (Braun and Clarke, 2006). Codes were generated inductively by careful evaluation of each line to ensure that no relevant information of the data was missed, in line with the exploratory approach taken for this analysis. Illustrative quotes were extracted from the transcripts to reflect the core message within the key emerging themes.

Ethical considerations

As required for research within the health sectors, ethical approval was received from the Health Research and Ethics Committee of Lagos University Teaching Hospital (LUTHHREC/EREV/0620/64). Considering the minimal risk of harm to interviewees, the ethical committee as well gave a waiver for signed informed consent. This permitted the principal investigator to collect verbal informed consent for participation as well as the audio-recording of the interviews. Participation in the study was entirely voluntary.

As required for permission to access the health facility leaders, approval was obtained from the Lagos State Ministry of Health, and permission to access health facility leaders was obtained from the Lagos State Health Service Commission, the Lagos State Primary Health Care Board, and the heads of facilities. Confidentiality of interviewees was maintained by not using identifiers. No financial incentive was offered.

Results

The respondents were thirty-three health facility leaders recruited and interviewed for this study. There were nine nurses, twenty-three doctors and one community health officer that constitute the sample categories. Amongst the nurses, there were five nurse managers called "apex nurses", three chief nursing officers and one assistant director of nursing services. Amongst the doctors, there were ten heads of department/unit, five medical directors, five medical officers of health, two chairmen of Medical Advisory Committees, and one Director Clinical Services and Training. Of all leaders, ten were based in rural areas, while 23 were based in urban areas. Ten leaders were managers in PHCs, while nine and 14 were managers in general hospitals and teaching hospitals respectively [Table 1].

Table 1: Individual characteristics of respondents

Three key themes emerged from our study. These are described in detail below:

Theme 1: Managing self

Health facility leaders regardless of role or facility type experienced fear and anxiety as a result of COVID-19. They were afraid of getting infected especially with the novel nature of the virus and the rapidly evolving course of the pandemic [Table 2, *P14, male, Medical Officer of Health, rural primary health care facility, 3 years in role; P18, female, Apex Nurse, urban primary facility, two years in role].*

Health facility leaders who considered themselves as elderly and/or had comorbidities which were shown to predispose to more serious disease were generally more anxious about contracting the disease [Table 2, [P2, male, Head PMTCT, urban tertiary facility, 17 years in role]. Leaders who were infected by the virus in the course of their duty or who had outbreaks among other health care workers (HCWs) were afraid of dying and also had concerns about the implication of infections for ongoing service delivery such as active case search in the communities [Table 2, *P18, female, Apex Nurse, urban primary facility, two years in role;* P13, female, MD, urban secondary facility, ten months in role; P19 male, CMAC, urban tertiary hospital, 2 years in role].

The pandemic also led to heightened levels of stress for facility leaders. In addition to fears they had for their health, they were also saddled with the responsibility of ensuring optimal service delivery despite the widespread disruptions especially with the supply chain of consumables [Table 2, P19, male, CMAC, urban tertiary facility, 2 years in role].

Health facility leaders utilized different strategies to cope with the fear, anxieties, and stressors they felt as the pandemic progressed. Some accessed psychological support within their facilities [Table 2, P3, male, HOD ART, urban tertiary facility, 16 years in role], leaned on the social support from colleagues [Table 2, P29, male, HOD Community health, urban tertiary facility, 7 months in role] and resorted to out-of-pocket provision of PPE when not readily available in facilities [Table 2, P11,Female, Apex Community Health Officer, rural primary health care facility, 4 years in role] some resorted to prayers [Table 2, P11, female, apex CHO, rural primary health facility, 4 years in role].

Despite their fears and the worries, health facility leaders were motivated to continue rendering services during the pandemic because of their passion for the vocation [Table 2, P16, male, Medical Director, urban secondary health facility, 3 years in role], yielding to their calling [Table 2, P2, male, Head PMTCT, urban tertiary facility, 17 years in role], a sense of responsibility as conferred by the oath to save lives [Table 2, P7, female, Head of unit, neonatology, Urban tertiary facility, 10 years in role] and support from the State government [Table 2, P14, male, Medical Officer of Health, rural primary health care facility, 3 years in role].

Theme 2: Managing family

In addition to the anxiety facility leaders had for contracting the virus, they also had genuine concerns about inadvertently exposing their family members to the virus. This concern was greater for facility leaders who knew HCWs whose immediate family members had acquired the infection [Table 3, P17, Female, Apex nurse, urban primary health care facility, 2 years in role].

To cope with this and continue rendering services at this time, facility leaders and HCWs adopted three key strategies. First, some facility leaders opted to stay in temporary accommodation provided by the facility or local government (in the case of PHCs) for a number of days or a week before they go back to see their families [Table 3, P18, female, Apex Nurse, urban primary facility, two years in role]. The health facility management or the Local Government ensured that persons who opted for this had access to food and basic amenities.

Secondly, these facility leaders sensitized members of their families about the virus and measures they can take to reduce the chances of contacting it from them. Participants with young children took extra steps to ensure their children were in physically enclosed rooms when they get back from work, with the children sometimes engaging their parents in conversations related to infection prevention [Table 3, P17, Female, Apex nurse, urban primary health care facility, 2 years in role].

Lastly, in addition to ensuring they observe right hygiene practices within the health facilities, participants also took extra hygiene measures to reduce the chances of transmitting the virus to their families. Unlike pre-pandemic days, some participants at the end of their work shift removed every piece of clothing and changed into new clothes before going home. On arrival in their homes, some also change into new clothing just outside of their houses, leaving all items worn outside for decontamination and laundry [Table 3, P9, female, Apex nurse, rural primary health care facility, 4 years in role].

Theme 3: Managing Healthcare workers

Health facility leaders in describing their roles highlighted that in addition to ensuring the efficient delivery of health services, they were also responsible for ensuring the availability and readiness of HCWs to render services accessible in their facilities. The outbreak of the pandemic made this task difficult for the participants.

Participants reported that just like themselves, the HCWs they manage were also afraid for their lives. This fear with the attending decreased morale and reluctance to work was worse in facilities where there was local outbreak among HCWs [Table 4, P7, female, Head of unit, neonatology, urban tertiary facility, 10 years in role]. The health facility leaders adopted different strategies in dealing with this. All facility leaders worked hard to encourage members to continue giving their best despite the prevailing circumstances. Some leaders made several phone calls to encourage staff who refused to come to work due to fear [Table 4, P10, female, MOH, urban LGA, 4 years in role], some leaders unlike before the pandemic also made daily rounds to cheer and support their staff [Table 4, P24, male, Medical Director, urban secondary facility, 1.5 years in role].

As these leaders interacted with their staff, they utilised the feedback from them to ensure they provided the most conducive and reassuring work environment. As most of the anxieties stemmed from the shortage of personal protective equipment, facility leaders were forced to explore unusual sources including the use of personal funds, making direct purchases from the open market, soliciting support from philanthropic donors or the local government authorities [Table 4, P10, female, MOH, urban LGA, 4 years in role; P24, male, MD, urban secondary facility, 1.5 years in role; P26, male, MOH, rural PHC, one year in role]. The facility leaders also designed training sessions which were meant to impart requisite skills to staff, provide global, regional, and local updates on disease management, and to share facility-specific guidance [Table 4, P14, male, MOH, rural primary health facility, 3 years in role; P1, female, Chief Medical Officer in charge of newborn, child and adolescent HIV services, urban tertiary facility, 18 years in role].

Health facility leaders embraced flexibility with the work schedule, staff transportation arrangement and facilitated logistics for staff members who wished to stay on the facility grounds for longer than usual [Table 4, P24, male, Medical Director, urban secondary facility, 1.5 years in role]. Facility leaders were more intentional in ascertaining and providing for staff welfare in more ways than usual in this period.

Some facilities established psychological support systems with some inaugurating round-the-clock access to psychologists' support [Table 4, P23, male, CMAC, urban tertiary facility, 2 years in role], some increased frequency of social welfare group meetings which served purpose of passing information and social support [Table 4, P24, male, MD, urban secondary facility, 1.5 years in role]. Some facilities provided stipends for transportation, meals, and phone call subsidies to help staff buffer for the increased fares during the period (Table 4, P24, male, MD, urban secondary facility, 1.5 years in role]. In some facilities, welfare packages given in form of food and holiday packages were offered as incentives for staff Table 4, P24, male, MD, urban secondary facility, 1.5 years in role]. If any member of staff got infected, the facility leaders ensured they continued to provide support to them via phone calls and home visits to drop off groceries and have brief chats while observing social distancing [Table 4, P24, male, MD, urban secondary facility, 1.5 years in role].

Table 2: Illustrative quotes for themes 1

Table 3: Illustrative quotes for themes 2

Table 4: Illustrative quotes for themes 3

Discussion

In this study, we set out to explore leadership experiences amongst health facility leaders at different levels of care of Nigeria's epicentre – Lagos. Our findings revealed that irrespective of role, cadre and facility-type, health facility leaders were faced with significant challenges with ensuring continuity of essential health services during the pandemic. This required trial of several adaptations to health service provision and management of staff, many who were afraid and

anxious of the crisis in which they were working. However, though motivated to continue leading, health facility leaders themselves were worried and anxious, with many requiring self-sourced social, spiritual, and psychological support to get by, while needing to reassure their families about their safeties.

As per our findings, health facility leaders first had to deal with a complex array of their own emotions including fear and anxiety before they could lead others through the emerging crisis. Similar experiences were reported amongst health facility managers who were at the frontline of the COVID-19 pandemic in other countries (Hartney *et al.*, 2022; Semaan *et al.*, 2020). Indeed, in previous outbreaks, HCWs, especially those who are younger, more junior in their role, have dependent children or with infected family members, have widely reported feeling fear, anxiety, and general psychological distress (Kisely *et al.*, 2020). These stressors are worse when there is no practical support offered and when there is a perception that preparedness is not sufficient (Afulani *et al.*, 2021; Ameh *et al.*, 2021; Kisely *et al.*, 2020). Despite this, health facility leaders in our study were expected to continue to directly support and lead implementation of COVID-19 measures and support mechanisms for their team. This expectation underscores the need for targeted support for health facility leaders, especially considering that they have the same or even arguably higher risk of contracting the disease and have to manage additional stressors of implementing the health facility response strategy.

Some authors have suggested that in crisis situations as experienced during the early phase of the COVID-19 pandemic, health facility leaders need to demonstrate psychological stability and balance that would help them inspire and motivate their team, capacity to manage stress while remaining calm, confidence to confront the challenge, and courage to make tough decisions (Abdi *et al.*, 2022). We argue that of these four attributes, psychological stability is a critical precursor to the remaining leadership competencies needed in a crisis. The stress and anxieties reported by facility leaders because of the virus and its consequences does not help them to be in the right frame of mind to establish the sort of effective leadership needed to manage the crisis. Though noteworthy that health leaders in our study setting implemented strategies to help themselves in

the crisis and received some support from the government, it does not appear that mental health of HCWs including health facility leaders was deemed top priority for government action across Africa during the early phase of the COVID-19 pandemic (Robertson *et al.*, 2020). Indeed, a more concerted approach of individual and organisational responses is required for the identification and mitigation of mental health burdens at different phases of the ongoing pandemic and in future outbreaks (Tomlin *et al.*, 2020).

As per our findings, health leaders in Lagos were also faced with managing concerns of their families, which is not unfounded as family members have been shown to be less protected from COVID-19 than HCWs (Lorenzo and Carrisi, 2020). The approaches taken by health leaders were mostly tailored to minimizing the risk of infection to their family members, which is in line with sensible public health measure, and reassuring family members. These broadly classified approaches probably encapsulate all health leaders can do themselves and may not be sufficient to address the needs of family members. For instance, high prevalence of anxiety and depression symptoms have been reported among family members of HCWs in China (Ying *et al.*, 2020). Also, they often must contend with overload of responsibilities, social stigma, and isolation (Souadka *et al.*, 2020). Importantly, support for HCWs and indeed health leaders should not be devoid of addressing the burden on family members.

Implementing agile and adaptative leadership styles that moved away from standard pre-pandemic ways of working was central to how health leaders functioned during the pandemic. This was critical for how health facility leaders managed other HCWs and how they maintained service delivery during the crisis. Even in better developed health systems, radical changes were needed to be implemented by leaders to manage the crisis of COVID-19 (Crain *et al.*, 2021). As such, it is not particularly surprising that radical changes were also needed in our study setting. Leaders needed to apply a more transformational style of leadership which meant that they worked with staff to identify their needs and how best to support them while creating a vision to guide the change in approach to service delivery which was critically needed during the early part of the COVID-19 pandemic. Providing support for transportation, communication and feeding

requirements during this time while managing the anxieties of the staff through use of personal direct phone calls, direct motivation, provision of the then hard-to-source PPE and psychological support classes were some of the strategies that health leaders used in Lagos (Balogun *et al.*, 2022). However, while many HCWs were beneficiaries of some of these efforts, many issues and cause of anxieties remained unaddressed (Ameh *et al.*, 2021). Ultimately, the capacity of leaders to provide robust support to staff depends on the resources available to them and health leaders who were able to provide more robust support in Lagos were those that had been building capacity for such crisis pre-pandemic (Balogun *et al.*, 2022). Moreover, it has been widely reported that health systems in Africa were inadequately prepared for the pandemic (Tessema *et al.*, 2021). The key implication for this is that preparedness has to be a proactive and not a retroactive action. In being proactive, preparedness efforts need to also stockpile resources above and beyond what might be needed, so as to minimise additional stressors.

To the best of our knowledge, this is one of the first studies that specifically report leadership experiences of health facility leaders during the early phase of the COVID-19 pandemic in SSA. This is a key strength of our study. In addition, the study's inclusion of health facility leaders at various levels of the health system – primary, secondary, and tertiary – was a key strength. Furthermore, there was a good mix of leaders including nurses/midwives and medical doctors with varying years of experience in our study. However, there are a few limitations to keep in mind in interpreting our findings. First, as the COVID-19 pandemic has continued, lessons have been learnt and changes have been made. It is possible that some of the challenges or issues cited in this paper are no longer of concern, especially as facility-level challenges during the pandemic came in waves and troughs (Banke-Thomas *et al.*, 2022). There is a case for future research to explore leadership experiences during the various phases of the pandemic including after vaccines became available or when health systems begin to 'live with COVID-19'. However, this does not negate the criticality of documenting the leadership experiences of health facility leaders at the time, so that these can influence future planning. Second, we did not collect data from health leaders working within the private sector. Lastly, being that members of the research team were living through the pandemic and some working in health facilities, it was possible that our understanding of leadership

experience was influenced by our experience. However, by 'bracketing', which involved reflexively identifying and putting aside our personal experiences (Fischer, 2009) and repeating statements made by the interviewees, we were able to ensure the validity of our findings.

Conclusion

Faced with diverse pressures internally and externally, health facility leaders did their utmost best to lead during the early phases of the COVID-19 pandemic. In Nigeria and other fragile health systems in SSA, strong leadership is required at many levels from local to national in responding to a crisis (Barnard, 2020). However, health facility leaders are the 'street level bureaucrats' that need to implement policy and strategies to end the crisis. There have been authors that have suggested some individual leader practices that can optimise care during the pandemic including proactiveness, collaboration, quick establishment of definite governance structures or incidence management units, creativity, speed, innovation, and flexibility in implementation, active and clear communication, and an ability to instil a sense of optimism (Abdi *et al.*, 2022; Georgiades, 2020; Hølge-Hazelton *et al.*, 2021b). Pre-pandemic, maintaining open and continuous communication which emphasises listening, and deliberate engagement of staff were already deemed important for leadership in SSA (Curry *et al.*, 2012). The COVID-19 pandemic provided a substrate for practice for health facility leaders. Going forward, the legacy of the COVID-19 pandemic has to be about thoughtfulness and bringing humanity into the workplace. However, there is a need to ensure that the leaders expected to demonstrate these behaviours are optimised for such.

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Tables

Table 1: Individual characteristics of respondents

Participant	Sex	Leadership role	Facility type	Urban/Rural	Num. of Years in role
P1	Female	Head Child ART	Tertiary	Urban	18 years
P2	Male	HOD PMTCT	Tertiary	Urban	17 years
P3	Male	HOD ART	Tertiary	Urban	16 years
P4	Female	Apex Nurse	Secondary	Rural	12 years
P5	Female	Medical Officer of Health	PHC	Urban	12 years
P6	Female	Medical Officer of Health	PHC	Urban	10 years
P7	Female	HOU Neonatology	Tertiary	Urban	10 years
P8	Female	HOD Nursing	Tertiary	Urban	4 years
P9	Female	Apex Nurse	PHC	Rural	4 years
P10	Female	Medical Officer of Health	PHC	Urban	4 years
P11	Female	Apex Community Health Officer	PHC	Rural	4 years
P12	Female	Apex Nurse	Secondary	Rural	4 years
P13	Female	Apex Nurse	Secondary	Urban	3 years
P14	Male	Medical Officer of Health	PHC	Rural	3 years
P15	Female	HOD Nursing	Tertiary	Urban	3 years
P16	Male	Medical Director	Secondary	Urban	3 years
P17	Female	Apex Nurse	PHC	Urban	2 years
P18	Female	Apex Nurse	PHC	Urban	2 years
P19	Male	CMAC	Tertiary	Urban	2 years
P20	Female	HOD Paediatrics	Tertiary	Urban	2 years
P21	Female	Officer in Charge	PHC	Rural	2 years
P22	Female	HOD Obstetrics & Gynaecology	Tertiary	Urban	2 years
P23	Male	CMAC	Tertiary	Urban	2 years
P24	Male	Medical Director	Secondary	Urban	1½ years
P25	Male	HOD Community Health	Tertiary	Urban	1 year
P26	Male	Medical Officer of Health	PHC	Rural	1 year
P27	Female	Medical Director	Secondary	Urban	10 months
P28	Female	DCST	Secondary	Urban	9 months
P29	Male	HOD Community Health	Tertiary	Urban	7 months
P30	Male	HOD Obstetrics & Gynaecology	Tertiary	Urban	6 months
P31	Female	HOD Paediatrics	Tertiary	Urban	6 months
P32	Female	Medical Director	Secondary	Rural	3 months
P33	Female	Medical Director	Secondary	Rural	2 months

HOD/HOU – Head of department/Unit; DCST: Director Clinical Training and Services; CMAC: Chairman Medical Advisory Committee; ART: Anti-Retroviral Therapy program

Table 2: Illustrative quotes for themes 1

Theme 1 – Managing self
"Because nobody knows the pathogenesis … we have various new variants and we have never gone through a pandemic before, so everybody was scared, nobody wants to die. Initially, we were all in panic. [*P14, male, Medical Officer of Health, rural primary health care facility, 3 years in role]*
"Because of my age, I categorised myself as a senior citizen. I'm elderly. Because of the risk of COVID with age I had this feeling most times that I might have caught COVID-19. When a patient comes coughing, even though I am with my facemask, even though I do social distancing, I kept on washing my hands many times in a day, changing my clinical coats or whatever I wore. Yet, I kept on having that feeling psychologically, that I might have been infected [P2, male, Head PMTCT, urban tertiary facility, 17 years in role]
"In fact, spiritually, psychologically, emotionally it really affected me a lot. I was seriously afraid that I am going to contact this COVID-19. [P18, female, Apex Nurse, urban primary facility, two years in role]
"I thought it was spiritual, I was thinking: God am I going to die with this sickness? because it was really shaking me. It shook me that I said what is really happening with me? [P17, female, Apex Nurse, urban primary facility, two years in role]
"Yeah, I'll say that it was really scary, even as a medical doctor. I was positive [for COVID-19] both I and the apex [nurse] were positive and I think we contracted it during the active case search, so, you know I was mentally disturbed" [P13, female, MD, urban secondary facility, ten months in role]
"So, we had a number of exposed staff and unfortunately, we actually lost a staff that tested positive, though that staff also had comorbidities. So, the staff testing positive of course created panic [P19 male, CMAC, urban tertiary hospital, 2 years in role]
"Personally, l was praying fervently at one point that God let this thing just come to an end because it was becoming stressful. Getting PPEs, making sure they are available, making sure they are judiciously used, talking to staff, raising their morale. Things have come down from COVID-19, it put a lot of stress on us management, but we thank God, we weathered it" [P19, male, CMAC, urban tertiary facility, 2 years in role]
I had very good counselling opportunities. Like I said, I attended all these sessions. They were all to me motivations they made me to be brave. To be able to access my job and to do my job properly. P3, male, HOD ART, urban tertiary facility, 16 years in role].
Maybe what I will say actually helped was like I said, we kept engaging ourselves, we kept interacting, looking at challenges and then training and the rest [P29, male, HOD Community health, urban tertiary facility, 7 months in role]
"Personally, my own l really take care of myself. Like if they don't give us face mask, l always purchase for myself and even to my subordinate l give them" [P11. Female, Apex Community Health Officer, rural primary health care facility, 4 years in role]
"Once you follow rules and regulation, although there was fear, with prayer, with all those things, l think we were able to conquer. [P11, female, apex CHO, rural primary health facility, 4 years in role]
"The first motivation is that I love medicine, that's my passion, taking care of people. [P16, male, Medical Director, urban secondary health facility, 3 years in role]
"It's my calling. Well, If I don't come or if I don't see patients, who will see patients? Somebody must see people that are sick, so there's no way I won't see my patients, irrespective of what is happening to me as long as I'm alive and strong to do it" [P2, male, Head PMTCT, urban tertiary facility, 17 years in role]
"I will say first of all, the Hippocratic oath is one [of the factors that kept me motivated] [P7, female, Head of unit, neonatology, Urban tertiary facility, 10 years in role].
"The Lagos state government has been very helpful. If you have a system where your leader is supporting you, you will be motivated. You know, I don't think any Lagos state health staff has gone on strike. It's a good sign. The governor is talking to us, the commissioner is having his own meeting with us, encouraging us." [*P14, male, Medical Officer of Health, rural primary health care facility, 3 years in role]*

Table 3: Illustrative quotes for themes 2

Theme 2: Managing family
"One of my friends [who is a health worker] contacted it, they took care of her at the isolation centre, including her husband and three children. They contacted it! which means that my friend brought it home for the family, this has me worried" [P17, Female, Apex nurse, urban primary health care facility, 2 years in role]
'I learnt that the chairman of Mainland [local government] made a provision for them to cook for the nurses that are staying because it came to a stage that they cannot even go home again. Some stay over there like a week before going home, so they had to cook for them on a daily basis. So that they can take care of those patients' [P18, female, Apex Nurse, urban primary facility, two years in role]
"So that time when I am coming home, I had to be running away from my children. They will be in their own room, so when I come back, they will say mummy please we didn't go out. So don't move closer to us. In fact, it was not easy because we believed then that once you contacted it, it is death" [Table 3, P17, Female, Apex nurse, urban primary health care facility, 2 years in role].
"We are cautious of COVID-19. So, what we do is that when we are going home, we will remove the scrubs and now put on uniform. When we get there what we usually do is that we will just remove all the uniform, slippers[shoes] outside, everything we keep outside. I will not take the clothes inside so that I will not infect my family at home. That is what we have been doing [P9, female, Apex nurse, rural primary health care facility, 4 years in role]

Table 4: Illustrative quotes for themes 3

Theme 3: Managing Healthcare Workers
"If you come to the doctors, everybody was afraid because doctors were falling ill, doctors were testing positive to COVID, and these are doctors we all do ward round then. So, with that many people being in isolation in their homes, and some even admitted in the COVID isolation wards, it affected the general moral and the enthusiasm because it could be anybody, you can be positive." [P7, female, Head of unit, neonatology, Urban tertiary facility, 10 years in role]
"From the beginning of COVID-19 some health workers even stayed away from work we had to encourage them, we had to make series of phone calls to encourage them to come to work [Table 3, P10, female, MOH, urban LGA, 4 years in role]
"Personally, as the MD I will also go round, almost every day, talking with everybody, trying to encourage them, and lift up their spirits. And members of the COVID-19 response team also did that" [*P24, male, Medical Director, urban secondary facility, 1.5 years in role]*
"I had to use my money to buy them [personal protective equipment] to make sure we had them on ground, though I've collected my money from the council now' [P10, female, MOH, urban LGA, 4 years in role].
"So, we even had to change some of our suppliers and do direct purchase because we know that there is a mark-up with them [suppliers]. So, we went into the market with our procurement committee to get some of the PPEs ourselves and that was able to save us some cost [Table 4, P24, male, MD, urban secondary facility, 1.5 years in role]
"We informed the executive chairman [of the Local Government] at that time and he provided some funds for facemask, gloves, and other PPEs". [P26, male, MOH, rural PHC, one year in role]
"Sometimes we have, sometimes we don't have. So, we've learnt to use what we have perfectly well. Then we also have protocol, there is a protocol you know on which PPE to use. PPE is not supposed to be overdone because during the outbreak we had a training and then they gave us some instructions" [Table 4, P14, male, MOH, rural primary health facility, 3 years in role]
"One thing that actually helped was the continued medical education that we were having, there were many of them that were on at that time, and we were connecting to the Zoom sessions. Everyone was made to understand that once you are properly kitted and you do everything to prevent the virus, the risk of acquiring it is extremely low [P1, female, Chief Medical Officer in charge of newborn, child and adolescent HIV services, urban tertiary facility, 18 years in role]
"We made sure we tried to provide transportation. Paying for their transportation through the staff bus. We also at some point tried to give some staff what we call a running cost, to help them with their telephone messages, their transport" [Table 4, P24, male, Medical Director, urban secondary facility, 1.5 years in role].
"What we did was to work with our department of psychiatry and set up a team that was ready to listen to staff on phone twenty-four seven (24/7)" [P23, male, CMAC, urban tertiary facility, 2 years in role].
"We also continued to have this monthly staff forum. Though we could not meet physically, we maintained that through Zoom. So, at those Zoom meetings we also try to give encouraging messages" P24, male, MD, urban secondary facility, 1.5 years in role]
"For those who turned out positive, what we did was to visit them at home. We sent them some packages at home of supplies and materials. And not that we entered their homes. Packages were taken to their homes with supplies and materials to help them cope with the isolation and then we kept on calling them and reassuring them and finding out how they were. Letting them know that if there is anything, they needed we could do it for them" P24, male, MD, urban secondary facility, 1.5 years in role]