



Hospital Management During the Coronavirus 2019 Pandemic

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Abstract

Managing a hospital is highly complex due to the broad range of services hospitals deliver to a diverse population, especially during events such as the coronavirus (COVID-19) pandemic. Hospital managers have faced a number of important management challenges during the COVID-19 pandemic. This qualitative study was conducted to explore the perceptions and views of hospital managers of the key challenges facing health care based on their own experience working at a hospital during the pandemic COVID-19. This study adds to the small body of qualitative knowledge on the experiences of the COVID-19 pandemic in public hospitals. The qualitative data was collected through 15 semi-structured interviews using a thematic analysis. Five interviews were conducted via an online program and 10 were conducted face to face. Participants were healthcare professionals including hospital managers, a director of medical services, a director of patients' affairs, a director of a nursing department, and managers who work directly with COVID-19 cases. The data analysis identified five main themes: namely, health system challenges, organizational challenges, individual challenges, financial challenges, and legal challenges. The findings of this research provide insights about the challenges experienced by hospital managers and provide direction for future improvements in hospitals to overcome these difficulties.

Keywords: capacity, challenges, workload, shortages, protocols, teamwork

1. Introduction

Managing a hospital is highly complex due to the broad range of services hospitals deliver to a diverse population, particularly during events like the coronavirus (COVID-19) pandemic. The management of hospitals is a growing concern, as it is linked to patients' safety and the quality of the health system. Hospitals all around the world are experiencing staff shortages, financial strain and other difficult conditions as a result of the pandemic. Hospitals and their clinical and non-clinical healthcare workers have been on the front lines battling COVID-19 (Haldane et al., 2021). Understanding the current challenges and difficulties faced by hospital management can be a base for identifying and introducing new strategies that will help them to manage during pandemics and also provide better outcomes for hospitals.

There is no doubt that the COVID-19 pandemic is a serious problem for healthcare organizations. There are a range of impacts arising from the COVID-19 pandemic, with the biggest factors being increased demand for health services, increased healthcare costs, and increased patient mortality (Blumenthal et al., 2020; Santana et al., 2020; Tian et al., 2020). This makes it difficult for healthcare providers to improve the value of healthcare services and for each hospital to manage their strategy for providing better health care, which has a knock-on effect on existing health systems, as the demands on them increased due to the high numbers of people infected. From a management perspective, there was increasing concern during the COVID-19 pandemic about the staff who deliver health services because of links to patients' safety and quality in health systems (Haldane et al., 2021). The aim of this research is to identify the challenges and difficulties experienced by healthcare organizations during the COVID-19 pandemic. This qualitative study was conducted to explore the perceptions and views of the hospital managers who shared their experience of the difficulties that occurred due to the COVID-19 pandemic. The significance of this research arises out of identifying what strategies are needed to ensure the capacity of hospitals is strengthened against the COVID-19 pandemic and examining what policies will ensure the adequate supply and high competency of health workers as well as provide a good strategy to manage complex healthcare systems.

A qualitative study was used in this research. Data were collected from mid-February to late May 2022. Three hospitals were selected because they were dealing with COVID-19 cases. The population of interest for this research is all healthcare professionals. Interviews were conducted with hospital managers, a director of medical services, a director of patients' affairs, a director of a nursing department, and managers who work directly with COVID-19 cases. The interviews provided in-depth insight, specifically about the challenges and difficulties that healthcare organizations faced during the COVID-19 pandemic. In the current study, face-to-face and online interviews were conducted. All interviews were conducted in English since all healthcare professionals and hospitals in Saudi Arabia use English as the primary language of communication. The interviews varied in duration between 20 to 45 minutes. The participants met the criteria for participating in the study, which was working at their job during the COVID-19 pandemic. The aim of this criteria is to identify the specific challenges and difficulties which affect healthcare workers from their perspective in order to determine how to provide better health care.

At the beginning of the interview, the researcher requested the participants' consent for the interview to be recorded. If their answer was yes, the interview was voice recorded. If they did not agree to the interview being recorded, the researcher took notes by hand. The participants were provided with information sheets and consent forms. Participants were required to sign the consent form for participation in the study. Following the qualitative data

Collection, a thematic analysis (a technique for assessing and identifying patterns within the data) was conducted on the data using a number of coding methods (Braun & Clarke, 2006). Braun and Clarke (2006) identified several advantages of thematic analysis. Firstly, thematic analysis is “a flexible approach that can be used across a range of epistemologies and research questions” (p. 28). Audio recordings and handwritten notes were transcribed and then these responses were entered into Excel and then imported into NVivo, a qualitative data analysis program. These were analyzed thematically.

2. Results

The qualitative data was collected through 15 semi-structured interviews using a thematic analysis. Five interviews were conducted via an online program and 10 were conducted face to face. The participants were mostly male, 35 years of age and over, with a mean of nearly 10 years’ healthcare experience. Participants were healthcare professionals including hospital managers, a director of medical services, a director of patients’ affairs, a director of a nursing department, and managers who work directly with COVID-19 cases. The key themes are described below according to the research focus on healthcare professionals’ perception of the challenges and difficulties that their healthcare organization faced during the COVID-19 pandemic. The data analysis identified five main themes; namely, shortages of healthcare professionals, especially nurses (health system challenges); transporting infected patients to departments for services (organizational challenges); the lack of adequate capacity to handle surging patient volumes (financial challenges); lack of clear approaches and protocols for workers, increases in workload and personal burnout (individual challenges); and difficulty entering the patients into the hospital (legal challenges). The relationship between these themes is shown in Table 1.

Table 1: Examples of responses

Themes	Sub-themes	Selection of response
Health system challenges	A shortage of healthcare professionals.	“The hospital is understaffed, which gives us more workload than the normal ratio of patients.”
Organizational challenges	Floating system, transporting infected patients to departments for services.	“I do not like the idea that I can be floated to all other units most of the time.”
Individual challenges	Insufficient knowledge about COVID-19	“Overstaying patients refusing to leave the hospital.”
Financial challenges	A shortage of medication and equipment and lack of adequate capacity to handle surging patient volumes.	“Medical equipment and supplies need improvement in my hospital.”
Legal challenges	A lack of preparedness, lack of clear approaches and protocols for workers during the COVID-19 pandemic.	“There was no awareness of existing protocols related to COVID-19.”

Source: the researcher

2.1 Health System Challenges

In the first theme, health system challenges, participants identified the challenges and difficulties that their healthcare organization faced during the COVID-19 pandemic. For example, Participant 1 was a 30-year-old Saudi male with a master’s degree in health service management who worked as a hospital manager. When asked what difficulties he experienced during the COVID-19 pandemic, he highlighted the shortage of healthcare professionals, especially nurses. Supporting this, Participant 2, a 33-year-old female Filipino

nurse with a bachelor's degree in nursing who worked as the director of a nursing department, responded, *“The hospital is understaffed, which gives us more workload than the normal ratio of patients.”* It was clear that even when the number of infected people increased, the hospitals' management still allowed all patients to access healthcare. Providing access to healthcare services to all people would significantly challenge the capacity of any health system and may affect the quality of the health care provided. It can be argued that in the Saudi health system there is an increasing shortage of healthcare professionals, especially nurses, and many of the healthcare professionals who work in the Saudi health system are from overseas, as shown in Figure 1 (MOH, 2019). Worries regarding shortages of the health workforce are widespread. Many of the comments made by interviewers related to stress and workloads. This may relate to fact that the Saudi health system is generally understaffed, a situation which worsened during the COVID-19 pandemic, and there is high ratio of staff to patients. It is very important to consider that developing from the issues with shortages of healthcare professionals, the staff-to-patient ratio was also stated to be a problem. Another challenge raised by a large number of participants was the capacity of hospitals. The participants indicated that the number of patients who were infected by COVID-19 was very high and there were not enough beds in different units for these patients.

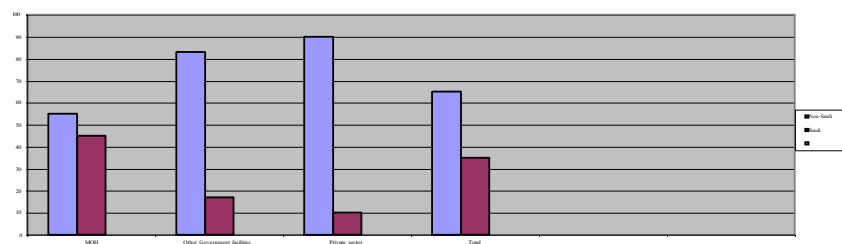


Figure 1: Total number of nurses in the health system in Saudi Arabia
Source: (MOH, KSA, 2019)

2.2 Organizational Challenges

In the second theme, organizational challenges, participants identified the organizational challenges and difficulties that hospitals faced during the COVID-19 pandemic. Most of the participants interviewed expressed their disappointment that each hospital tended to have different policies during the COVID-19 pandemic. The main organizational challenge that was highlighted by the majority of participants was transporting infected patients to departments for services. Participant 3, a 42-year-old Filipino female who worked as a director of medical services, explained that due to understaffing in other units, healthcare professionals, especially nurses, were floated to other units, even if their own unit needed more staff.

2.3 Individual Challenges

In the third theme, individual challenges, participants identified the individual challenges and difficulties that they faced during the COVID-19 pandemic. The concerns noted in the current research include insufficient knowledge about COVID-19. Participants perceived this challenge as impacting upon them and their family members. Fear of COVID-19 was a concern raised by most of the participants. For example, Participant 9, a 32-year-old Filipino female, noted, *“There is a lack of knowledge and experience in the management level in work.”* Participant 6, a 28-year-old Indian female, supported this view. She responded that three challenges that impacted her ability to provide better healthcare were the fear of being

unsafe, concern that her family would get infected, and a high workload. The issue of family safety was a concern raised by most of the participants, especially the nursing staff. Lacking knowledge about COVID-19, the nurses expressed their fear not just about themselves but also their family's safety, especially for those who dealt directly with COVID-19 cases. The quotes included here show that participants were concerned about what would happen to their family members, especially spouses, children and elderly parents, if they were infected with COVID-19. For example, Participant 13, a 34-year-old Saudi female, noted, *"My parents are old and I have to take care of them."* This statement signifies a widespread sense of responsibility towards their families that participants reported feeling during the COVID-19 pandemic.

While insufficient knowledge about COVID-19 was highlighted by the participants as an important challenge that affected their ability to deliver health care during the COVID-19 pandemic, other challenges, such as a lack of appreciation and respect they received at the workplace from patients' family members, were equally emphasized by participants as important challenges and difficulties that they faced during the COVID-19 pandemic. It was clear that participants encountered problems with regard to the control of patients' visitors, especially the close members of patients' families, and dispensing patients' information. For example, Participant 14, a 46-year-old Saudi male who worked as a director of patients' affairs, stated that a challenge that he faced during the COVID-19 pandemic was *"overstaying patients refusing to leave the hospital."* Supporting this, Participant 15, a Saudi manager, stated that *"there is no strong management to push the patients out from hospital."* It was clear that conflict occurred due to what medical staff were able to do for patients and what the patients' families wanted.

2.4 Financial Challenges

The participants interviewed expressed their grave concerns about financial challenges. The main financial challenge which was highlighted by the majority of participants was the lack of adequate capacity to handle surging patient volumes. For example, when Participant 3, a 42-year-old Filipino female who worked as a director of medical services, was asked what difficulties she experienced during the COVID-19 pandemic related to material resources, her response was a lack or insufficient availability of equipment. Supporting this, Participant 15, a Saudi manager, stated, *"Medical equipment and supplies need improvement in my hospital."* Similar to these responses, Participant 5, a 30-year-old female Saudi nurse, said, *"Medication that relates to COVID-19 was insufficient or sometimes there was a delay in receiving it from Pharmacy."* The leading reason for the shortages of medication and equipment was the high demand for health services during the COVID-19 pandemic, especially given the ageing Saudi population.

2.5 Legal Challenges

In the last theme, participants identified the legal challenges and difficulties that hospitals faced during the COVID-19 pandemic. Some participants stated that they believe that there was a lack of clear approaches and protocols for workers during the COVID-19 pandemic. This means that the management of hospitals either did not have any protocols or there was a lack of knowledge about protocols or strategies to deal with the COVID-19 pandemic. For example, Participant 14, a 38-year-old Filipino female, noted, *"There was no awareness of existing protocols related to COVID-19."*

Another challenge raised by a large number of participants was difficulty entering the patients into the hospital, especially during the beginning of the COVID-19 pandemic. In the

beginning of COVID-19 pandemic, the government ordered a curfew for a period of 21 days to limit the spread of COVID-19. This made it difficult not just for infected people but also for close family members to get to hospitals. People needed to get permission through a device application to be able move around to get the necessary treatment and medicine. The government made it mandatory to follow the rules and those who failed to comply were subject to a fine. For example, Participant 14, a 46-year-old Saudi male who worked as a director of patients' affairs, stated, *"When infected people call an ambulance to transport them to hospitals, the ambulance takes long time due to high demand from other infected people, especially during the beginning of the COVID-19 pandemic."*

The majority of the participants, including Participants 3, 5, 6, 10 and 11, complained that the lack of alternative regulations and applied protocols for the staff's safety and health during the COVID-19 pandemic was one of the main challenges they faced. For example, Participant 1, 30-year-old Saudi male who worked as a hospital manager, stated *"The lack of protocols negatively impacted the health system during the COVID-19 pandemic."* Supporting this, Participant 7, a 28-year-old Saudi female, responded that lack of protocols and guidelines contributed to the problems encountered in hospitals because healthcare professionals did not have enough information or directives on how to deal with COVID-19 cases.

3. Discussion

The current research identified many challenges and difficulties that hospitals faced during the COVID-19 pandemic and provides strategies to overcome these challenges. The overarching goal of this study is to identify more precisely the challenges and difficulties experienced in hospital management and provide strategies to assist in the efficient management of hospitals. The study applied semi-structured interviews to obtain data from 15 health professionals. Qualitative data obtained from participant interviews were analyzed using NVivo 11.

In this section, the organizational, individual, financial and legal challenges potentially responsible for negatively impacting the health system during the COVID-19 pandemic are discussed by contrasting and comparing the findings of this current research with previous global research. Furthermore, the researcher has recognized the scope for future study and recommended how studies of this nature could provide strategies to assist in the efficient management of hospitals.

In the current research, health professionals were invited to participate in interviews. The interviews revealed that that challenges faced by healthcare professionals that contributed to impacting patient safety and outcomes were related to health system challenges, including shortages of healthcare professionals, especially nurses, understaffing, high workloads, and the capacity of hospitals. These challenges also contributed by impacting staff productivity (Drennan, & Ross, 2019).

The results of the current research indicate that the high demand for health services during the COVID-19 pandemic increased the already heavy workload of health professionals because there was a shortage of healthcare workers in the health system. Too high workloads were identified as an important issue by participants. Supporting this, Participant 2, a female Filipino nurse who worked as the director of a nursing department, argued that nurses had worked overtime and did not receive support from their management. Similar to this response, Participant 5, a 30-year-old female Saudi nurse, said, *"Support staff who have problems with their high workload; don't just blame them, hire staff to solve the problem."*

A possible reason for these responses was the limited number of nurses available to take care of a large number of patients during the COVID-19 pandemic. According to the Ministry of Health, from March 2020 to July 2021 a total of 504,960 positive COVID-19 cases were detected in the country (MOH, 2021). Particularly at the start of the pandemic, there was a dramatic increase in the number of detected COVID-19 cases, and hospitals did not have the capacity to admit and care for all of the infected patients, making hospitals very difficult to manage. It was evident that health system struggled to meet the high demand for health services during the COVID-19 pandemic (Alshareef, 2022).

In this research, like health system challenges, organizational challenges were found to be among the key difficulties that health professionals faced during the COVID-19 pandemic. From the analyses of the interviews, it was established that organizational challenges such as a floating system were a significant challenge for staff, given their increased workloads. For example, Participant 2, a female Filipino nurse who was a director of a nursing department, reported, *“I do not like the idea that I can be floated to all other units most of the time.”* A possible reason that supports this response could be that health professionals recruited for this research were from hospitals which deal directly with COVID-19 cases and were located in a city with a large population. Another organizational challenge that was highlighted was transporting infected patients to departments for services. The challenges related to health professionals’ availability and its implications for an increased workload were clearly visible in hospitals during the COVID-19 pandemic. This complaint highlights the floating of health professionals to other departments as an important challenge and cause of dissatisfaction amongst healthcare professionals that also impacted their ability to provide healthcare.

In this research, financial challenges were another difficulty that healthcare professionals faced during the COVID-19 pandemic. The analysis of the interviews indicates that the difficulties faced by healthcare professionals during the COVID-19 pandemic were impacted by a shortage of medication and equipment and lack of adequate capacity to handle surging patient volumes. Supporting this, a study by Kaye et al. (2021) found that a lack of preparedness was a major contributor to the struggles experienced by health professionals during the COVID-19 pandemic. A lack of equipment and high patient numbers will lead to poor quality of health care. These findings were also reported by Sun et al. (2021), who found that the COVID-19 pandemic exposed the weak capacity of hospitals, including outdated equipment and the low competency of health professionals.

In this research, legal challenges, in particular a lack of preparedness, were major contributors to the struggles faced by health professionals during the COVID-19 pandemic. Another legal challenge that was highlighted was the lack of clear approaches and protocols for workers during the COVID-19 pandemic. The participants reported being unaware of the protocols and lacking knowledge about COVID-19. Hospital management should provide strategies to overcome these challenges. Supporting this, one study conducted by COVIDSurg Collaborative (2020) found that hospitals should prepare context-specific pandemic plans that can be implemented as soon as a COVID-19 case is identified.

While legal challenges were highlighted by the number of participants as contributing to the difficulty of managing a hospital during the COVID-19 pandemic, other individual challenges, such as lack of appreciation and respect for healthcare workers received at the workplace from patients’ family members, were equally emphasized by participants as difficulties that they faced during the COVID-19 pandemic. For example, Participant 3, a 42-year-old Filipino female who was a director of medical services, stated that *“health professionals are concerned about their family and afraid of my family losing their lives because of the coronavirus.”*

The above quotes indicate that the concerns of health professionals about their family, especially their parents, getting infected by COVID-19 because the health professionals work directly with COVID-19 cases (Schimmenti, Billieux and, Starcevic, 2020). At the same time, this also brings to light their concerns about insufficient knowledge about COVID-19. This research found that there were no standards and guidelines in the hospitals the participants worked at during the COVID-19 pandemic. One reason for this was limited consensus on how to allocate hospital resources and a lack of high-quality evidence and guidelines on resource allocation during the COVID-19 pandemic. Hospitals should prepare a response plan for health services and make sure that health professionals have the relevant knowledge and are trained to deliver health services safely during a pandemic (Covidurg & Spinelli, 2020)

4. Conclusion

This research answered important questions relating to the challenges and difficulties that health professionals faced during the COVID-19 pandemic. Most of the participants in this study, who were health professionals in a hospital, struggled with doing their job during the COVID-19 pandemic. Hospitals managers who work directly with hospitals should provide a strategy plan for health services and make sure that health professionals have the relevant knowledge and are trained to deliver health services safely during a pandemic. Hospitals managers should prepare context-specific pandemic plans that strengthen the capacity of hospitals, including ensuring there is sufficient new and available equipment and the high competency of health professionals Furthermore, these strategies should legislate maximum nurse-to-patient ratios to avoid too heavy workloads and ensure safe patient outcomes. Hence, hospitals managers and leaders in the hospitals could look to providing such a framework to develop workload-management strategies for their services during pandemics.

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