Media Kesehatan Masyarakat Indonesia
Volume 20 Issue 3 2024
DOI : 10.30597/mkmi.v20i3.36250
Website : http://journal.unhas.ac.id/index.php/mkmi
© 2024 by author. This is an open access article under the CC BY-NC-SA license

Nurse Managers' Experiences in Managing Inpatient Wards During a Crisis: Lessons from the COVID-19 Pandemic

Andi Baso Tombong[1*], Ani Auli Ilmi[2,3]
[1]Faculty of Nursing, Hasanuddin University, Indonesia
[2]School of Nursing and Midwifery, La Trobe University, Australia
[3]UIN Alauddin Makassar, Indonesia
[*]Authors Correspondence: andibaso.tombong@unhas.ac.id/ +628114450480

ARTICLE INFO

Article History:
Received Jul, 25th, 2024
Accepted Sep, 6th, 2024
Published online Sep, 30th, 2024

Keywords:
Inpatient;
nurse manager;
COVID-19;
challenges;
lessons learnt;

ABSTRACT
The COVID-19 pandemic has provided valuable lessons for all parties, including nursing services in hospitals. To date, literature has been lacking on the role of nurse managers in managing inpatient wards for COVID-19 patients, especially in Indonesia. This study aims to explore the experiences of, and the challenges encountered by nurse managers in managing inpatient wards during the crisis. This is a qualitative study with a phenomenology design. The study used a purposive sampling technique involving four nurse managers from several hospitals in South Sulawesi Province, Indonesia. Data were obtained through semi-structured interviews and were analyzed using thematic analysis. This study yielded three themes and nine sub-themes. Nurse managers experienced panic and fear but carried out inpatient management immediately. There was also a solid commitment to protect the fellow nurses from infection. Valuable lessons include the availability of human resources, strong commitment from all lines, management support, and teamwork. Meanwhile, nurse managers encountered challenges such as the lack of personal protective equipment, frequently changing service procedures and the psychological needs of nurses. Nurse managers obtained numerous lessons from the COVID-19 pandemic related to their capabilities in managing inpatient wards. The findings suggest the adaptability of nurse managers to similar challenging crisis encounters in the future by analysing the effects of frequent workflow changes on care quality and staff adaptation, examining the long-term psychological impact of pandemic work on nurses developing strategies to enhance organizational support for nurses including coping mechanisms and well-being related trainings and services, and to build dynamics of effective teamwork during crisis.

INTRODUCTION

The Coronavirus Disease-2019 (COVID-19) pandemic has left valuable lessons for Indonesia across various sectors. The pandemic began in late December 2019 with the discovery of symptoms and pneumonia-like images in a group of patients in Wuhan, China, which was later identified to be associated with a seafood wholesale market cluster in the area.[1,2] Since being declared a global pandemic by the World Health Organization (WHO), the transmission of the COVID-19 virus has continued to spread and has had a significant multisectoral impact,[3] including in the healthcare sector.

Regarding the impact of the disease on the human population, data from the Indonesian Ministry of Health indicates significant effects. Globally, the confirmed COVID-19 cases reached 776,546,006, with 7,065,880 deaths. In South East Asia, the confirmed Covid-19 cases accounted for 61,317,985, with 808,827 deaths.[4] In Indonesia itself, the confirmed cases of COVID-19 have reached 6,417,490, with 157,966 deaths, and as of 22 September 2024, there were still 23,503 COVID-19 patients being cared for at healthcare facilities.[5] This data indicates that COVID-19 continues to infect humans, posing an ongoing challenge to the healthcare system.

In facing the COVID-19 pandemic, a coordinated global response has been implemented to prepare optimal healthcare systems for patients needing care at healthcare facilities, especially hospitals. For example, WHO has provided several technical guidelines, including the Rapid Hospital Readiness Checklist (RHRC), to guide and benchmark hospitals in managing COVID-19, particularly concerning hospital capacity.[6] In these guidelines, WHO emphasizes that hospitals must prioritize leadership, coordination, human resources, patient management, staff mental health, and infection prevention and control.[6] Proper planning and organization are indeed among the primary tasks of hospitals. For example, the recruitment method is a regular process determining the number and type of staff needed to provide standard care in a healthcare institution.[7]

In the Guidelines and Control of COVID-19 issued by the Indonesian Ministry of Health, nurses are healthcare workers directly involved in COVID-19 services and clinical management in hospitals, alongside doctors and other healthcare workers, as needed.[8] Clinical management involves performing optimal and quality clinical governance so that patients receive comprehensive, patient-centered care continuously according to their needs and based on patient safety. In clinical management, inpatient care management is also included. Nurse managers play a crucial role in managing the charge nurses who provide care for the patients they serve. As part of the executive team or top management in hospitals, nurse managers should represent and voice the realities faced by frontline nurses, regardless of how complex or resistant these realities might be.[9]

The COVID-19 pandemic has imposed significant impacts and burdens on the healthcare system, particularly on nurses, who are frequently cited as being on the frontlines of the pandemic response. The increasing number of COVID-19 cases has led to an overburdened healthcare system, especially in hospitals. This situation has resulted in healthcare facilities facing shortages of Personal Protective Equipment (PPE), Intensive Care Unit (ICU) beds, and trained nurses to manage the substantial influx of critically ill patients.[10] The inadequate availability of trained nurses and the insufficiency of PPE have contributed to heightened levels of fatigue and stress among nursing staff.[11–14]

The COVID-19 pandemic has presented unprecedented challenges and difficulties for nurses, both professionally, socially, and psychologically. This situation has posed unique challenges for hospital nurse managers, requiring them to adopt, adapt, and develop new leadership competencies to navigate the current pandemic challenges and future uncertainties. In unprecedented ways, nurse managers have responded to the healthcare crisis brought on by the COVID-19 pandemic through various approaches.[14] For example, the sudden increase in critically ill COVID-19 patients in Italy required hospital nurse managers to make abrupt and seemingly compulsory changes to address the unprecedented nursing shortages.[15] For example, after ICU beds were made available, nursing management provided ICU nursing staff by combining trained ICU nurses with newly graduated nurses.[15]

The adaptation processes of nursing management in handling COVID-19 patients in

other countries also merit special attention. During the prevention and control of the epidemic in several hospitals in China, for instance, nurse managers, through the nursing department as one of the hospital's central functional departments, played a crucial role by implementing contingency management strategies to ensure proper, orderly, safe, and efficient services.[16,17] One form of this contingency management involved the adjustment of wards for COVID-19 patients, the establishment of specialized task forces within the Nursing Department to provide clinical guidelines and directions for COVID-19 care to frontline nurses, as well as cross-sector coordination and communication within the hospital.[16,17]

The role of nurse managers during the COVID-19 pandemic has also been briefly discussed in several literatures, primarily in editorial columns and commentaries. In one editorial reflection, Goh et al. wrote about the experiences of nurse managers in Singapore during the pandemic, focusing on the additional tasks beyond routine duties, including attention to the emotional health of frontline nurses.[18] Pertinent to the role of nurse managers, research by Havaei et al. found that besides workplace conditions, the availability of necessary resources (logistics) for patient care and organizational support (leadership/nurse managers) were significantly related to nurses' mental health.[12] Consistent with these findings, Daly et al. emphasized that nurses on the frontline of the COVID-19 pandemic require and deserve to work alongside strong leaders (managers) because leaders are involved in decision-making to ensure that nurses' interests are served.[19] Thus, the nurse manager’s role entails full responsibility for the needs of frontline nurses and patient care during the pandemic, as well as in nursing care planning and supervision of frontline nurses providing such care.

In Indonesia, literature concerning the role of nurse managers in inpatient management amid efforts to combat this epidemic still needs to be expanded. A study by Asmaningrum et al. (2020), although conducted only in two hospitals in a district in East Java,[20] has at least provided insight that nurse managers play a role in staffing arrangements, scheduling, and efforts to supply PPE to reduce infection incidents among nurses. Therefore, research materials or references related to the role of nurse managers in COVID-19 response and service provision, or in facing pandemics in general in hospitals in Indonesia within a broader context, are still highly needed. Continuous research regarding the role of nurse managers in the context of the healthcare system in Indonesia is necessary so that the nursing profession can effectively respond to the increased quality of inpatient care for patients during the pandemic, particularly in terms of nursing services. This is because healthcare institutions that consistently integrate evidence-based nursing science and strategies yield better outcomes in patient care, one example being nurse staffing arrangements during the pandemic,[21] which indeed constitutes one of the responsibilities of nurse managers.

The limited scientific literature on the role of nurse managers in managing inpatient facilities presents both challenges and opportunities in inpatient care, especially for infectious disease patients during the pandemic. This is particularly relevant to nursing management and hospital administration. The lack of empirical data may hinder a comprehensive understanding of healthcare provision, making it challenging to establish evidence-based protocols or benchmark standards. However, this situation also allows scholars in tertiary education institutions to engage in ongoing research that could significantly contribute to scholarly discussions on healthcare, especially in pandemic response efforts.

According to data from the Health Human Resources Development and Empowerment Agency/ *Badan Pengembangan dan Pemberdayaan SDM Kesehatan (BPPSDMK)* under the Indonesian Ministry of Health, out of the 105 hospitals in South Sulawesi Province, ten have been designated as COVID-19 referral centers. However, there needs to be more scientific research on managing inpatient facilities for COVID-19 patients, highlighting a critical gap in research. Therefore, the current study aims to fill this gap by conducting foundational research involving nurse managers from various hospitals in South Sulawesi Province. The primary objective of this research is to delve into the experiences of nurse managers in navigating the challenges of inpatient management during

the COVID-19 pandemic across several health-care facilities in South Sulawesi Province.

MATERIAL AND METHOD

This research adopts a qualitative approach to address the research questions, explicitly employing a phenomenological design. The phenomenological qualitative inquiry aims to reveal the meaningful experiences of individuals in their daily lives and within the world.[22] The explored topic in this study revolves around the experiences of nurse managers in managing inpatient wards designated for COVID-19 patients across several hospitals in the South Sulawesi Province.

This study was conducted from October – December 2021. The population of this study was the nurse managers in hospitals within the South Sulawesi Province that offer inpatient care for COVID-19 patients. Using the purposive sampling method, the study selected a sample with the following criteria: 1) nurses occupying the position of the nurse manager in hospitals providing inpatient care for COVID-19 patients; 2) middle-level Nurse Managers (Head of Nursing Section) or Senior Nurse Managers (Head of Nursing Department); 3) nurse managers who were part of the hospital's internal team involved in COVID-19 management, such as Rapid Response Teams (RRT), Working Teams, Task Forces, or similar groups.

In this study, a sample size of four individuals was obtained. In qualitative research, there is no specific format for determining sample size. Whitehead asserts that the minimum sample size in qualitative research depends on the research design employed.[23] This study was conducted in the working area of South Sulawesi Province, with most activities conducted online. As a result of the impact of the COVID-19 pandemic on sample recruitment, many qualitative researchers had to conduct interviews exclusively online.[24]

The research instrument utilized in this study was an interview guide developed by the research team. The supporting tools included recording devices and field notes. Data collection employed in-depth interviews, where research subjects were individually interviewed to gather extensive data focused on specific issues in detail. Interview questions were posed using a semi-structured approach to stimulate open discussions and obtain deeper insights. This method allows flexibility in the sequence of questions, enabling researchers to adapt questions according to responses and the direction of the conversation.[23] While the interview protocol guided interviews, question development occurred spontaneously and naturally in response to the evolving interaction.

The data analysis employed in this study is Thematic Analysis. In thematic analysis, researchers identify all significant issues, concepts, and themes from the interview data. The outcome of this stage is a detailed data index, all labeled according to subgroup. Thematic Analysis enables researchers to revisit data until meaningful themes are derived repeatedly.[25] The process involved in Thematic Analysis includes data familiarization, coding, theme identification, theme review, naming and defining themes, continued with writing the analysis.[26] The results of theme identification and the findings within these themes are then written and used to compile the research report.

This study obtained ethical approval from the Faculty of Public Health, Hasanuddin University in Makassar, Indonesia, and the ethical approval number is 9960/UN4.14.1/TP.02.02/2021. Respondents were informed about the objectives and purposes of the study, and their verbal consent to participate was obtained. Research Permit was also obtained from The Government of South Sulawesi Province with research permit Number 22489/S.01/PTSP/ 2021.

RESULTS

This study was conducted in the South Sulawesi Province, involving governmental hospitals in four regencies. These hospitals provided COVID-19 patient care and adhered to guidelines issued by the World Health Organization (WHO), the Ministry of Health of the Republic of Indonesia, the Governor's Policy of South Sulawesi Province, and other government regulations. Nurse managers (Head of Nursing Section) from these hospitals were involved as participants/informants. The characteristics of the informants can be seen in the Table 1.

Following interviews with all research subjects (informants), the interview transcripts were subsequently transcribed and structured into an interview matrix to facilitate data management for the researcher. Subsequently, the transcribed data underwent reduction and categorization into distinct data clusters or thematic categories and subcategories. The themes/variables and corresponding sub-themes/sub-variables derived from this data reduction process are delineated in the Table 2. The table depicts three themes that emerged from the thematic analysis. Within these three themes, nine sub-themes were identified as findings of this research.

Table 1. Informants' Characteristics

Code	Age (Years)	Gender	Position
P1	48	M	Nurse Manager
P2	41	F	Nurse Manager
P3	42	F	Nurse Manager
P4	42	M	Nurse Manager

Source: Primary Data, 2021

Table 2. Themes and Subthemes Resulting from Thematic Analysis

Themes	Subthemes
Experiences of nurse managers during the initial phase of the pandemic	1. Nurse managers initially encountered feelings of panic and fear. 2. Nurse managers responded promptly to the situation. 3. Desire to protect for both patients and frontline nurses.
Insights gained by nurse managers on the supporting factors in inpatient care management during the pandemic	1. The hospital's strength lies in the availability of human resources. 2. Robust commitment across all organizational levels and management support are crucial. 3. Effective teamwork emerges as a pivotal facilitator in the success of intervention efforts.
Barriers and challenges in inpatient care management during the pandemic	1. Limited availability of personal protective equipment (PPE). 2. Frequent changing of health service workflows. 3. Psychological needs of nurses providing direct care for COVID-19 patients.

Source: Primary Data, 2021

Experiences of nurse managers during the initial phase of the pandemic

The pandemic has various impacts on all layers of society. Healthcare workers, including nurse managers, also feel panic and fear experienced by the general public. This is evident in the information obtained as follows:

"...Well, there was panic among colleagues in the ward, including us as managers. Our panic was firstly whether we were ready to provide services to COVID patients, from the availability of our human resources and especially our facilities and infrastructure. The second panic was the danger that colleagues in the ward felt at the beginning of getting infected....." (P1)

A similar expression was obtained from another participant:

"...Yes... initially, perhaps we felt confused about what to do. ...the preparation of personnel, also related to facilities, how to address the needs of colleagues in the ward regarding their PPE requirements. So, we were somewhat overwhelmed... " (P2)

Nurse managers pointed out that the experience was new and unprecedented, causing fear in dealing with it.

"...Fear and not knowing what to do. We only saw social media and television news that a hazardous virus was already entering Indonesia ...we did not know how to deal with it or protect ourselves..." (P3)

"...To be honest, of course, we are worried and scared because the most concerning thing is us getting infected... the transmission can occur among colleagues, so of course, there is worry. Secondly, we are also worried about the preparedness of human resources and the available facilities. Because this was a new issue, our preparations were still unclear..." (P2)

Despite the panic and fear experienced at the pandemic's beginning, nurse managers responded quickly. As intermediaries between the nursing staff and hospital management, nurse managers exhibited significant initiative in organizing treatment areas for patients suspected or confirmed to have COVID-19. The following informant statement evidences this proactive approach:

".... as part of the management team, we had to take responsibility and collaborate with the Emergency Department (ED) to prepare the necessary processes and regulations from the ED to inpatient

care. Consequently, we organized an emergency meeting with the director, involving the nursing section, the heads of inpatient care, the ED, the laboratory, radiology, and the medical and nursing committees…" (P3)

"…Initially, we designated specific rooms to be used as special isolation units for COVID-19. We identified two rooms specifically for confirmed and suspected cases.…" (P2)

"…Organizing these rooms was the first major task I had to undertake. We needed to map out which areas were designated for COVID-19 patients and which for non-COVID patients.…" (P1)

The onset of the pandemic provided a unique experience for nurse managers, who felt a strong need to protect their fellow nurses and healthcare workers in service areas. The primary goal of nurse managers in managing inpatient care at the beginning of the pandemic was to safeguard patients and their colleagues who provided direct care. This is evident from the following statements by informants:

"… That was my primary concern, ensuring that services continued while keeping my colleagues safe from COVID-19 exposure in those early days…" (P4)

Other informants also expressed similarly:

"…first, our objective was to ensure that COVID-19 patients received proper care while not neglecting general patients… to avoid transmission among staff and their families…" (P1)

"…our principle at that time was primarily driven by the need to ensure that our nurses at the hospital could work effectively (so we were) responsible for their health… We also considered the well-being of their families at home...and that patients would not feel neglected if there were no staff willing to enter to provide care…" (P3)

Other immediate efforts taken by nurse managers can be seen in the following statement:

"…additionally, we were accommodated in hotels and could not return home during the early stages of COVID-19 ..(to avoid transmission)…" (P1)

"The main objective was to address the perceived high risk of COVID-19 exposure among healthcare workers, as reported by several hospitals. Thus, we organized the inpatient care and prepared specific rooms to manage COVID-19 patients. .…" (P2)

Insights gained by nurse managers on the supporting factors in inpatient care management during the pandemic

In carrying out their duties within the COVID-19 response team, nurse managers regard human resources as the cornerstone of the hospital's strength. Sufficient staffing levels facilitate nurse managers in organizing personnel and managing inpatient care. This is evident from the insights provided by the following informant:

"…our human resources were adequate. We had a full complement of nurses and doctors…" (P4)

"In emergencies, our human resources were sufficient; perhaps that was our strength. .…" (P1).

"…. in terms of human resources, our staffing was adequate for preparing the care of COVID-19 patients. .…" (P2)

"…in terms of strength, we have staff willing to work sincerely…" (P3)

In addition to facilities and human resources, a strong commitment and management support are essential in combating COVID-19. This is evident from the information provided by the informant:

"... our strength perhaps from the beginning has been the work commitments of our leaders, subordinates around us, and some colleagues who want to work ..." (P4)

Similar statements were obtained from other participants:

"...there is a strong spirit among colleagues who are ready to work..." (P2); *"...our strength is that colleagues in (services) are willing to cooperate..."* (P1); *".... Initially, a volunteer team was formed at the hospital. So, we saw that those who joined the volunteer team were people ready to leave their families,..."* (P3)

Besides the strong commitment from the healthcare professionals, the management support was evident from the statements below:

"…we had support from the task force and the district government... (for example) at the beginning they helped provide masks, gowns, and others by sewing garments…" (P4).

"…another support, I think, comes from the directors... the directors are very supportive... there

is also support from the health department... the regent and the local government are very supportive in handling COVID-19…" (P2)

This study also found that teamwork played a significant role in succeeding in the management of inpatient care for COVID-19 patients. Regarding this, several informants stated the following:

"...our next strength is that colleagues in (services) are willing to cooperate..." (P1)

"... working together... it would be impossible for us to do it well if we worked alone without the help of a team. So, we truly collaborated as a team..." (P3)

"...the key at the hospital was coordination with the task force team, and it was indeed intense, 24 hours every day from our colleagues..." (P4)

Barriers and challenges in inpatient care management during the pandemic

The main weakness and challenge felt by nurse managers was primarily the availability of Personal Protective Equipment (PPE). This is evident from the statements of several informants as follows:

"...the challenge in terms of PPE at that time was initially a severe shortage…" (P2)

"...if the hospital's weakness is not having enough PPE for staff to use in providing services..." (P3)

"... because our focus was very high, especially on PPEs, we could not not use the required PPEs. It was like committing suicide, well, PPE was something very needed at that time..." (P1)

"…at the beginning, yes, there was a shortage of PPEs..." (P4)

In addition to the limited availability of PPE, the frequent changing of service flow also became a challenge in inpatient management. This is supported by the statements of informants as follows:

"... even for several months, the guidelines would suddenly change. So, the difficulty was there in the guidelines. Although they were available, we were still learning, experimenting, not fully understanding or knowing what to do because it was all new..." (P4)

"...there was a flow that we corrected. We changed the flow because... previously it was rapid antibody, now it is a rapid antigen, so from that change, we also changed the flow..." (P2)

"...there were changes in the flow... several times " (P3)

"…the flow changes through our internal arrangements… (particularly) in the patient assessment because when we make a mistake in our assessment, our prevention methods would also be affected and be changed…." (P1)

Another challenge in inpatient management is the psychological needs and comfort of the nurses. Several statements from the informants support this, as shown in the following quotes:

"... at that time, they sometimes felt tired, but when given encouragement, (and) they had to be accompanied continuously, (so) they would persevere to complete their duty period..." (P3)

"...in terms of nursing management, well, the weakness since the pandemic began, from the psychological aspect, is that our colleagues who were not prepared... especially with... their knowledge, their fear of being exposed, so during... handover or shift change, they were not at their best (due to this fear of exposure). That is one of them..." (P2)

"...the weakness is the psychological aspect of our colleagues. Some colleagues even, because of that fear, wanted to take a break; most of them are still non-civil servant nurses..." (P4)

DISCUSSION

Data from all informants indicated that nurse managers experienced panic and fear at the start of the pandemic. This was very natural, given the highly contagious nature and characteristics of the COVID-19 virus and its effects on the human body. In responding to the COVID-19 outbreak, healthcare workers were on the front lines, exposing them to danger and putting them at risk of infection. The dangers included exposure to pathogens, long working hours, psychological pressure, fatigue, job burnout, stigma, and physical and psychological effects.[6]

Healthcare workers were at risk of infection when examining and treating patients with respiratory infections. If healthcare workers who were supposed to handle COVID-19 patients became infected, the healthcare system would be disrupted. When the healthcare system is overwhelmed, mortality rates, both direct and indirect consequences of the outbreak/ pandemic, can dramatically increase, including deaths from conditions that could have been prevented and treated with vaccines.[6] In line with this, a study showed that patients, health-

care workers, including nurses, families, and the community as a whole, have gone through several psychological stages since the beginning of the COVID-19 pandemic. [27] The first and most prominent reaction was panic, which arose due to the unfavorable clinical course of COVID-19, lack of information about the disease, difficulties in obtaining PPE, and uncertainty about the future.

Nurse managers are responsible for implementing inpatient management at every health service facility. The COVID-19 pandemic, which has resulted in high morbidity with high transmission rates, has increased the burden on nurses in providing care and increased workload due to COVID-19 patients needing treatment without family support systems, as seen with pre-pandemic patients. This burdens nursing staff more due to insufficient resources for personal patient care. The shortage of nurses with critical care expertise required managers to develop strategies to help existing nurses gain critical care skills quickly and effectively. Innovative care models included pairing medical-surgical or ward nurses with intensive care unit nurses to work as a team caring for some COVID-19 patients. While this did not meet the expected standards and was not ideal, it was the best alternative during the pandemic.[14]

Data from this study also showed that nurse managers at several hospitals in South Sulawesi Province had made maximum efforts in managing inpatient wards. This aligns with previous research that showed internal hospital arrangements in managing and rearranging their wards to provide care spaces for COVID-19 patients. For example, Wu et al. found that hospitals initially serving as general hospitals were converted into specialized COVID-19 care hospitals with sudden changes quickly.[17] These changes included preparing COVID-19 wards as needed, forming technical teams for nursing services, coordinating with the hospital level to ensure the availability of necessary equipment and supplies, and preparing nursing staff and training plans related to health services during the pandemic.

Other results from this research show that nurse managers in several hospitals in South Sulawesi Province consider adequate human resources to be a critical factor in implementing inpatient management. All informants in this study stated that the number of nursing staff was sufficient to be deployed in COVID-19 service areas. This is interesting because it shows different results compared to previous studies. Research by Firmansyah et al. indicated that the ratio of healthcare workers to patients in COVID-19 services was not ideal, with a ratio of only 2.1 compared to the ideal 5.5.[28] This discrepancy may stem from different researcher perspectives. Firmansyah et al. viewed the ratio of healthcare workers (nurses and patients) by comparing it with developed countries,[28] while the nurse managers in this study assessed it based on their experience of meeting nursing staff needs in their respective wards.

A strong commitment within a team has long been proven to be a crucial element in completing tasks. Specifically for nurses, in crisis like the COVID-19 pandemic, professional commitment is necessary. Duran et al. stated that in difficult situations such as the COVID-19 pandemic, the professional commitment of nurses to providing services can be influenced by several factors, including the desire to leave the job, family support, job satisfaction, career choice, perception of institutional barriers, and education.[29] This implies that nurses' professional commitment can decrease in the long term if the factors affecting professional commitment are not identified or addressed, and nurse managers and institutions need to take necessary actions. Such professional commitment needs serious attention from nurse managers, especially in crises, as nurses wanting to leave their jobs during the pandemic will affect overall service performance. Nurse managers have the opportunity to create a supportive work environment that promotes the health and well-being of nurses, which in turn increases organizational commitment.[30] According to Duran et al., nurse managers can employ several strategies, including reducing workload, developing strategies to reduce organizational barriers, particularly administrative ones, supporting career development, providing child-care services, and more.[29]

As the leading force in patient care, nurses face significant risks and challenges on the front lines of service to COVID-19 patients. This makes nursing management a critical department or

unit for implementing infection prevention and control. Nurses and nursing managers cannot work alone; teamwork is essential in combating COVID-19. This is in line with research by Wang et al. which stated that nursing management works closely with other departments to provide sufficient supplies and support for nurses as frontline healthcare workers, contributing to the successful handling of patients.[16] For example, after nurses have completed caring for infected patients, whether they have been discharged or have passed away, the room must still be disinfected, requiring assistance from the disinfection unit. This coordination and teamwork, including with the responsible medical officer, supporting units providing PPE and medications, and even security personnel in the hospital, is imperative.

A finding from this study indicates that the main obstacle in implementing inpatient management is the availability of PPE for nurses providing direct care. The shortage of PPE has been a major issue in almost all healthcare facilities. This is consistent with research by Akkus et al., which found that PPE's limited availability was a central issue in tackling COVID-19.[27] Ensuring the safety of nurses and other healthcare professionals on the front lines of COVID-19 services requires serious attention. The risk of infectious disease transmission to healthcare professionals has long been felt. Healthcare workers have faced diseases such as HIV/AIDS, SARS, swine flu, and Ebola. Despite the lack of information about the virus, the disease's pathophysiology, transmission routes, and issues with PPE supply chain failures, healthcare workers continue to put themselves at risk in uncertain situations.[31]

The shortage of PPE supplies is a global issue, affecting nearly every country. Dyer mentioned that healthcare workers had to pay for PPE at the start of the pandemic in Russia.[32] There were differences in PPE needs and supply, with severe shortages across all lines.[33] Therefore, during a pandemic, it is crucial to ensure that all equipment is used carefully to prevent waste and to ensure a continuous supply of PPE, even if production is limited. Some considerations for PPE use amidst supply shortages include ensuring healthcare workers treating COVID-19 patients and those in direct contact have PPE, consisting of gloves, protective gowns, masks, face shields, and protective glasses. The same respirator can be used while examining multiple patients.[33] If supply shortages occur, wearing one for multiple patients is recommended. For the general public, improper use of medical masks can increase demand and hinder the supply of healthcare professionals who need PPE the most.

Another challenge in inpatient management during the pandemic is the frequently changing service flows. Wu et al. explained that converting general hospitals into COVID-19 treatment hospitals, where there is a demand to maintain high standards of care for every patient, requires nursing management to plan various strategic contingency management goals.[17] These included establishing specialized COVID-19 care units that were unavailable, forming technical support teams, and ensuring that hospitals had backup nurses ready to work. Similarly, other studies found that hospital arrangements due to the crisis caused by COVID-19 required rapid adaptation and frequently revised guidelines.[34] These revisions included changes or expansions of rooms and staff redeployments, carried out gradually (step by step). This requires energy, focus, and time allocation from nurse managers. With the increasing number of patients and decreasing availability of staff and other vital resources, changes or adjustments in the types of care rooms become a distinct challenge.

Nursing is physically and emotionally demanding, even during ordinary circumstances or outside of a pandemic. The COVID-19 pandemic has added extra demands to the already pressure-filled roles and environments that nurses face daily. The rapid spread of COVID-19 and its susceptibility among the general population, including the families of nurses, physical fatigue, and workload can cause psychological stress for nurses on the front lines working in care units. Various reasons and stress triggers, including staff shortages and unpredictable staff placements, lack of role clarity, increased role complexity, workload, time pressure, uncertainty in meeting job requirements, patient deaths and suffering, exposure to infection, and many other factors have placed nurses under challenging situations.[35] Wu et al. suggested that nursing management can conduct psychological interventions for frontline nurses and their

family members, such as forming psychological counselling groups through social media (easily and quickly accessible) and inviting psychiatrists from their hospitals to join these groups to raise mental health awareness and address the mental health concerns of frontline nurses and their families free of charge.[17] This way, nurses can be served by mental health experts without worrying about costs. According to Wu et al., positive stories and inspirational or successful cases were also shared in the counselling groups to motivate everyone in the hospital.[17] Morse and Warshawsky also found that providing emotional support was crucial for patients and fellow nurses during the pandemic.[14] Nurse managers can also play a key role in addressing the anxiety and fear of nurses related to COVID-19 by supporting their mental, psychological, and emotional health through evidence-based measures, issuing organizational policies that support enhanced mental health services, and providing a safe and secure work environment.[30]

CONCLUSION AND RECOMMENDATION

This study found that at the beginning of the COVID-19 pandemic, nurse managers experienced panic and fear similar to the general public. Despite the fear and panic, nurse managers immediately reorganized inpatient rooms. For nurse managers, besides ensuring patient quality and safety, the main goal in inpatient management was the strong desire to protect the direct-care nurses. Valuable lessons from the pandemic for nurse managers include the availability of human resources, strong commitment from all levels, management support, and teamwork. These were the main supports in managing inpatient care for COVID-19 patients. Meanwhile, the shortage of PPE, frequently changing service flows, and the psychological needs of nurses were obstacles for nurse managers in the management of inpatient wards.

This study recommends that nurse managers assess the hospital's readiness to face a pandemic. Nurse managers are encouraged to create references that pertain to preparedness for dealing with a pandemic. This should include insights into managing inpatient facilities during the pandemic and analysing the factors supporting or hindering inpatient management. These references will be valuable resources for health policy and administration related to hospital preparedness in future pandemic-related crises.

ACKNOWLEDGMENTS

The author extends sincere appreciation to the Bachelor of Science in Nursing Study Program, Faculty of Nursing, Hasanuddin University, for the research grant provided, which facilitated the successful completion of this study. Profound gratitude is also extended to the esteemed nurse managers across various government hospitals in South Sulawesi Province. Their generous commitment of time and invaluable insights as key informants significantly enriched the depth and quality of this research endeavor.

AUTHOR CONTRIBUTIONS

ABT and AAI conceptualized the study; ABT designed the methodology and conducted the interview; ABT and AAI performed the analysis and wrote, reviewed, and edited the manuscript. ABT: Andi Baso Tombong; AAI: Ani Auli Ilmi.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

REFERENCES

1. Hanscheid T, Valadas E, Grobusch MP. Coronavirus 2019-nCoV: Is the Genie Already Out of The Bottle?. *Travel Medicine and Infectious Disease*. 2020;35. doi:10.1016/j.tmaid.2020.101577
2. Zhu N, Zhang D, Wang W, et al. A Novel Coronavirus from Patients with Pneumonia in China, 2019. *New England Journal of Medicine*. 2020;382(8):727-733. doi:10.1056/nejmoa2001017
3. Heymann DL. Data sharing and outbreaks: best practice exemplified. *The Lancet*. 2020;395(10223):469-470. doi:10.1016/S0140-6736(20)30184-7
4. Indonesian Ministry of Health. Infeksi Emerging: COVID-19. Accessed October 24, 2024. https://infeksiemerging.kemkes.go.id/dashboard/covid-19

5. Indonesian Ministry of Health. Dashboard COVID-19. Accessed October 24, 2024. from https://dashboardcovid19.kemkes.go.id
6. WHO. Rapid Hospital Readiness Checklist: A Module from the Suite of Health Service Capacity Assessment in the Context of the COVID-19 Pandemic. 2020. Accessed June 7, 2024. https://apps.who.int/iris/bitstream/handle/10665/331492/WHO-2019-nCoV-HCF_operations-2020.1-eng.pdf?sequence=1&isAllowed=y
7. Poortaghi S, Shahmari M, Ghobadi A. Exploring nursing managers' perceptions of nursing workforce management during the outbreak of COVID-19: a content analysis study. *BMC Nursing*. 2021;20(1). doi:10.1186/s12912-021-00546-x
8. Indonesia Ministry of Health. Guidelines for the Prevention and Control of Coronavirus Disease (COVID-19) 5th Edition. Jakarta: Directorate General of Disease Prevention and Control (P2P). 2020. Accessed June 6, 2024. https://covid19.go.id/storage/app/media/Protokol/2020/Juli/REV-05_Pedoman_P2_COVID-19_13_Juli_2020.pdf
9. Prestia AS. The Moral Obligation of Nurse Leaders: COVID-19. *Nurse Lead*. 2020;18(4):326-328. https://doi.org/10.1016/j.mnl.2020.04.008
10. Hoffman RL, Wojtaszek K, Battaglia A, Campbell G, Perpetua Z. The Clinical Nurse Leader and COVID-19: Leadership and Quality at the Point of Care. *Journal of Professional Nursing*. 2020;36(4):178-180. https://doi.org/10.1016/j.profnurs.2020.06.008
11. Zhang Y, Wang C, Pan W, et al. Stress, Burnout, and Coping Strategies of Frontline Nurses During the COVID-19 Epidemic in Wuhan and Shanghai, China. *Front Psychiatry*. 2020;11. https://doi.org/10.3389/fpsyt.2020.565520
12. Havaei F, Ma A, Staempfli S, Macphee M. Nurses' Workplace Conditions Impacting Their Mental Health During Covid-19: A Cross-Sectional Survey Study. *Healthcare (Switzerland)*. 2021;9(1):84. https://doi.org/10.3390/healthcare9010084
13. Leng M, Wei L, Shi X, et al. Mental Distress and Influencing Factors in Nurses Caring for Patients with COVID-19. *Nursing in Critical Care*. 2020;26(2):94-101. https://doi.org/10.1111/nicc.12528
14. Morse V, Warshawsky NE. Nurse Leader Competencies Today and Tomorrow. *Nursing Administration Quarterly*. 2021;45(1):65-70. doi*:* 10.1097/NAQ.0000000000000453
15. Bambi S, Lozzo P, Lucchini A. New Issues in Nursing Management During the COVID-19 Pandemic in Italy. *American Journal of Critical Care*. 2020;29(4):e92-e93. https://doi.org/10.4037/ajcc2020937
16. Wang H, Feng J, Shao L, et al. Contingency Management Strategies of the Nursing Department in Centralized Rescue of Patients with Coronavirus Disease 2019. *International Journal of Nursing Sciences*. 2020; 7(2):139-142. https://doi.org/10.1016/j.ijnss.2020.04.001
17. Wu X, Zheng S, Huang J, Zheng Z, Xu M, Zhou Y. Contingency Nursing Management in Designated Hospitals During COVID-19 Outbreak. *Annals of Global Health*. 2020;86(1):1-5. https://doi.org/10.5334/aogh.2918
18. Goh AMJ, Chia J, Zainuddin Z, Ahmad N, Abdul Manaf MS. Challenges Faced by Direct Care Nurse Managers During the Initial Coronavirus Disease 2019 Pandemic: A Reflection. *Proceedings of Singapore Healthcare*. 2021;30(1):85-87. https://doi.org/10.1177/2010105820953460
19. Daly J, Jackson D, Anders R, Davidson PM. Who Speaks for Nursing? COVID-19 Highlighting Gaps in Leadership. *Journal of Clinical Nursing*. 2020;29(15-16):2751-2752. https://doi.org/10.1111/jocn.15305
20. Asmaningrum N, Nur KRM, Purwandari R,

Ardiana A. Nursing Work Arrangement in Health Care Settings During the Pandemic of Covid-19: Nurse Managers' Perspectives. *NurseLine Journal*. 2020;5(2):231-240. https://doi.org/10.19184/nlj.v5i2.20544

21. Lake E. How Effective Response to COVID-19 Relies on Nursing Research?. *Research in Nursing & Health*. 2020;43(3):213214. https://doi.org/10.1002/nur.22025
22. Whitehead D, Dilworth S, Higgins I. Common Qualitative Methods. In Z. Schneider, D. Whitehead, G. LoBiondo-Wood, & J. Haber (Eds.), Nursing and Midwifery Research: Methods and Appraisal for Evidence-Based Practice (5 Ed., Pp. 93-109). New South Wales: Elsevier Australia; 2016.
23. Whitehead D, Whitehead L. Sampling Data and Data Collection in Qualitative Research. In Z. Schneider, D. Whitehead, G. LoBiondo-Wood, & J. Haber (Eds.), Nursing and Midwifery Research: Methods and Appraisal for Evidence-Based Practice (5 Ed., Pp. 111-126). New South Wales: Elsevier Australia; 2016.
24. McKenna L. Considerations for Nursing Research After the COVID-19 Pandemic. *Indonesian Contemporary Nursing Journal (ICON Journal)*. 2023;8(1):1-3. http://journal.unhas.ac.id/index.php/icon/article/view/28265
25. Harding T, Whitehead D. Analysing Data in Qualitative Research in Z. Schneider, D. Whitehead, G. LoBiondo-Wood, & J. Haber (Eds.), Nursing and Midwifery Research: Methods and Appraisal for Evidence-Based Practice. *Elsevier Australia*. Published online 2016:127-142.
26. Nowell LS, Norris JM, White DE, Moules NJ. Thematic Analysis: Striving to Meet the Trustworthiness Criteria. *International Journal of Qualitative Methods*. 2017;16(1). https://doi.org/10.1177/1609406917733847
27. Akkuş Y, Karacan Y, Güney R, Kurt B. Experiences of Nurses Working with COVID-19 Patients: A Qualitative Study. *Journal of Clinical Nursing*. 2022;31(9-10):1243-1257. https://doi.org/10.1111/jocn.15979
28. Firmansyah MI, Rahmanto F, Setiawan D. The Preparedness for the COVID-19 Pandemic Management in Indonesia. *Jurnal Administrasi Kesehatan Indonesia*. 2020;8(2):188. doi:10.20473/jaki.v8i2.2020.188-201
29. Duran S, Celik I, Ertugrul B, Ok S, Albayrak S. Factors Affecting Nurses' Professional Commitment During the COVID-19 Pandemic: A Cross-Sectional Study. *Journal of Nursing Management*. 2021;29(7):1906-1915. https://doi.org/10.1111/jonm.13327
30. Faramawy MAEA, Kader AIA El. COVID-19 Anxiety and Organizational Commitment Among Front-Line Nurses: Perceived Role of Nurse Managers' Caring Behavior. *Nursing Practice Today*. 2022;9(1):37-45. https://doi.org/10.18502/npt.v9i1.7328
31. Morley G, Grady C, McCarthy J, Ulrich CM. COVID-19-19: Ethical Challenges for Nurses. *Hastings Center Report*. 2020;50(3):35-39. https://doi.org/10.1002/hast.1110
32. Dyer O. COVID-19: Cases Rise in Russia as Health Workers Pay the Price for PPE Shortage. *BMJ.* 2020;369:m1975. https://doi.org/10.1136/bmj.m1975
33. Mahmood SU, Crimbly F, Khan S, Choudry E, Mehwish S. Strategies for Rational Use of Personal Protective Equipment (PPE) Among Healthcare Providers During the COVID-19 Crisis. *Cureus*. 2020;12(5): e8248. https://doi.org/10.7759/cureus.8248
34. Hick JL, Hanfling D, Wynia M. Hospital Planning for Contingency and Crisis Conditions: Crisis Standards of Care Lessons from COVID-19. *The Joint Commission Journal on Quality and Patient Safety.* 2022;48(6-7):354-361. https://doi.org/10.1016/j.jcjq.2022.02.003
35. Middleton R, Loveday C, Hobbs C, et al. The COVID-19 Pandemic – A Focus on Nurse Managers' Mental Health, Coping Behaviours and organizational Commitment. *Collegian*. 2021;28(6):703-708. https://doi.org/10.1016/j.colegn.2021.10.006