





ORIGINAL ARTICLE

Nursing management for temporary lodging facilities in Japan in the early stages of the COVID-19 pandemic: A multiple-case study

Ryohei Kida¹  | Yukie Takemura²  | Maho Inoue¹  | Naoko Ichikawa¹  | Hiroe Koyanagi³

¹Department of Nursing Administration, Division of Health Sciences and Nursing, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan

²Nursing Department, The University of Tokyo Hospital, Tokyo, Japan

³Research Center for Implementation Nursing Science Initiative, School of Health Science, Fujita Health University, Toyoake, Japan

Correspondence

Ryohei Kida, Department of Nursing Administration, Division of Health Sciences and Nursing, Graduate School of Medicine, The University of Tokyo, 7-3-1, Hongo, Bunkyo-ku, Tokyo 113-0033, Japan.

Email: rkida-tyk@ns-adm.com

Funding information

Health Labour Sciences Research

Abstract

Aim: Temporary lodging facilities which were non-medical facilities were established to secure beds for severely and moderately ill patients with COVID-19, as well as for isolation, non-contact observation, and care of mildly ill and asymptomatic patients in Japan. This study aims to understand nursing management practices adopted in these facilities by examining cases of their establishment and operation.

Methods: A multiple-case study design was used. Interviews for qualitative data collection were conducted from August to October 2020. After analyzing the nursing management practices in four temporary lodging facilities, common points were collated and integrated.

Results: For the establishment and operation of temporary lodging facilities, a three-layer structure based on disaster management methods was adopted: headquarters at the helm as overseers, field supervisors in the middle, and frontline nursing staff at the base. The structure had clear roles, facilitated information exchange, and provided efficient and effective nursing care. Field supervisors mainly provided psychological and clinical support for staff and served as information and inter-professional hubs.

Conclusion: It is recommended that temporary lodging facilities should be organized based on principles of the division of labor. The workforce should comprise nursing staff, and experienced nursing professionals should be recruited to the higher echelons.

KEYWORDS

COVID-19, multiple-case study, nursing management, organizational structure, temporary lodging facility

1 | INTRODUCTION

The COVID-19 pandemic has spread worldwide and remains uncontained. In the early stages of the pandemic

in 2020, cities were locked down, and infected people were quarantined in many countries. Due to the rapid increase in the number of infected people, the medical infrastructure and resources of many nations were stretched to the limit.

In many countries, new temporary hospitals dedicated to caring for COVID-19 patients were constructed for the purposes of isolation and intensive care, and the governments of each country dealt with the growing number of infected patients by increasing the number and availability of hospital beds. In the United Kingdom, seven NHS Nightingale hospitals were built in major cities (National Health Service, 2020), while in China, two specialty field hospitals, Huoshenshan and Leishenshan, were built in Hubei province (Fang et al., 2020). Japan has also been doing its best to effectively utilize its limited medical resources and manage the increasing number of infected people.

Contingency nursing management is necessary to combat emerging infectious diseases such as COVID-19. Numerous studies have reviewed different methods employed for nursing management in COVID-19 medical facilities. These methods include setting up a crisis communication team (Zeneli et al., 2020), deploying a management structure within the nursing department (Wang et al., 2020), securing nursing staff and rearranging staff (Wu et al., 2020; Zeng et al., 2020), streamlining nursing care and adjusting workload (Gupta & Federman, 2020; Liu et al., 2020), facilitating interprofessional coordination and communication (Philips et al., 2020), providing education and training for the nursing staff entrusted with the care of infected patients (Jia et al., 2021; Kim et al., 2020), introducing a staff health management system (Kenanidis et al., 2020; Tosoni et al., 2020; Wee et al., 2020), and providing psychological support for the staff (Oakley et al., 2020; Zerbini et al., 2020). While there are many studies on nursing management in medical facilities, very few explore nursing management in other settings.

In Japan, the prioritization of severe and moderately infected COVID-19 patients in the allotment of hospital beds led to the establishment of temporary lodging facilities to provide care separately for mild or asymptomatic patients (Ministry of Health, Labour and Welfare, 2020). The purpose of these facilities was to prevent the spread of infection, allowing for a prompt response to aggravation, facilitating isolation, and enabling non-contact patient observation. When infections were spreading rapidly, hotels were used as temporary lodging facilities as many were unoccupied due to travel restrictions. The advantages of using hotels were that the rooms already had beds in them, and it was possible to isolate patients by allotting them private rooms. The facility could also be prepared without needing a new building, and more than 100 infected people could be managed centrally at one location. The disadvantages were the lack of medical equipment and the need to secure new medical staff, especially nurses, and develop an on-site care provision

system from scratch. Nursing care was provided in new locations, and each local government or prefectural nursing association had to build new nursing provision systems, for which they needed to recruit many additional nurses. Nurses for temporary lodging facilities were mainly recruited from the pool of non-working nurses who were either not currently part of the workforce or had retired.

Management protocols for temporary lodging facilities were published by the central and local governments (Ministry of Health, Labour and Welfare, 2020), but there were no specific guidelines issued on nursing management in such facilities. Therefore, the aim of this study is to understand temporary lodging facilities' nursing management by examining some cases of their establishment and operation. The study findings will inform guidelines for nursing management in these and similar facilities in the event of a new wave or another pandemic.

2 | METHODS

A multiple-case study design was employed in this study (Yin, 2018). The establishment conditions and operation of each temporary lodging facility differ according to local government policies and regional infection statistics. Therefore, the context and content of nursing management in each facility were analyzed separately and then integrated. This article has been prepared in accordance with the Standards for Reporting Qualitative Research (SRQR) guidelines.

2.1 | Participants

Participants were either registered nurses or public health nurses who had played an important role in the establishment and operation of temporary lodging facilities and were recruited through opportunistic sampling. The researchers called or emailed five prospective participants from four local governments (two prefectures are in the Kansai region, one in the Kyushu region, and one in the Hokuriku region), all of whom agreed to participate. The maximum weekly moving average for each prefecture during the second wave was about 200 persons/week and 30 persons/week in the two prefectures in Kansai, about 120 persons/week for the prefecture in Kyushu, and about 10 persons/week for the prefecture in Hokuriku. The participants were all women: four were registered nurses and one was a public health nurse, two worked for the local government, and three belonged to the prefectural nursing association. Detailed participant characteristics are shown in Table 1.

TABLE 1 Characteristics of the participants

	Region	Nurse type and qualifications	Number of people	Experience managing nursing teams for other disasters
Case 1	Urban	Prefectural nursing association (RN)	1	Experienced
Case 2	Rural	Local government (Certified nurse in infection control)	1	Unknown
Case 3	Urban	Prefectural nursing association (RN)	2	Unknown
Case 4	Urban	Local government (PHN)	1	Experienced

Abbreviations: PHN, public health nurse; RN, registered nurse.

2.2 | Data collection

Data were collected through web-based semi-structured interviews aided by an interview guide. Upon recruitment, participants were informed about the interview theme and guide. To understand the process of securing nurses and establishing and operating temporary lodging facilities, the participants were questioned about the background of the facilities' establishment, the methods used for securing the nursing staff, the characteristics of the secured nursing staff, and the concrete nursing management measures employed while the facilities were operational. The interviews were conducted between August and October 2020, were approximately 60 minutes long, and were recorded after obtaining consent. The survey was conducted between the second (June–September 2020) and third (October 2020–February 2021) waves of the pandemic, but the interviews enquired about facilities that were established between the first (January–June 2020) and second waves.

2.3 | Data analysis

A multiple-case analysis was conducted following Yin (2018). All interviews were transcribed verbatim and transcripts were categorized based on the background of the establishment of the facility (e.g., which organization took the initiative to establish and operate the facility), methods of securing the nursing staff, characteristics of the secured nursing staff, and concrete nursing management measures employed for the operation of each facility. After analyzing each case to clarify and identify the concrete nursing management measures, we discussed the commonalities between the cases.

2.4 | Ethical considerations

All interviews were conducted using a web conferencing system. To ensure confidentiality of the interviews, login

information for the web conferencing system during the interview was updated for each interview and shared with the participants alone. Participation was voluntary, and participants were assured of their anonymity verbally and in writing. The interviews were conducted and recorded after obtaining written consent from all participants.

3 | RESULTS

Two of the participants had previous experience managing nursing teams in other disasters. Based on the cases of the four local governments, the context of the establishment of each facility and the commonalities in their nursing management measures were clarified. These are presented below and in Table 2.

3.1 | Characteristics of temporary lodging facilities

The prefectural governor made the decision to install temporary lodging facilities, and the local government mainly implemented the installation. Prefectural staff (including non-medical staff) were included at the headquarters. All temporary lodging facilities were established at hotels or resort facilities. As the facilities were not intended for treatment, doctors were not stationed there, and medical supplies and equipment were limited. Many patients complained of psychological stress because they were forced to live in confined spaces, and nursing characteristics differed vastly from those in medical settings. The facilities had to be established rapidly and on short notice to accommodate the second wave, necessitating the recruitment of staff from various backgrounds, disregarding the usual requirements related to experience and skill. Nursing management at temporary lodging facilities had to establish nursing teams from scratch to deliver high-

TABLE 2 Roles of the three echelons in the establishment and operation of temporary lodging facilities

Headquarters	Securing nursing staff	<ul style="list-style-type: none"> • Securing nursing staff as workforce at the TLF • Nurses were secured through two channels: prefectural nursing associations or local public health nurses
	Gathering information on COVID-19 or TLF management	<ul style="list-style-type: none"> • Gathering daily updated information on COVID-19, revising the manual for TLF management • Communicating information to each TLF immediately
	Orientation of secured nurses	<ul style="list-style-type: none"> • Teaching standardized infection prevention techniques before starting work at each TLF • Sharing the purpose and role of nursing care at the TLF
Field supervisor	Staff management	<ul style="list-style-type: none"> • Health management for nursing staff • Adjusting the number of nursing staff • Coaching and direction for nursing staff • Managing patients' complaints
	Work management	<ul style="list-style-type: none"> • Facilitating interprofessional coordination • Understanding patients' health conditions
Frontline nursing staff	Bridging information gap between the frontline and headquarters	<ul style="list-style-type: none"> • Informing frontline nurses of daily updated information • Informing headquarters of staff concerns and issues
	Providing direct care for infected patients	<ul style="list-style-type: none"> • Observing patients' health status using videophones or smartphone apps (non-contact) • Documentation • Transferring severe status patients to hospitals • Providing psychological support for patients • Managing complaints and inappropriate behavior • Arranging medication • Assisting with clinical examinations

Abbreviation: TLF, temporary lodging facility.

quality, consistent nursing care. Since the nurses employed at the temporary lodging facilities were themselves anxious about COVID-19, the management had to implement special measures to alleviate their concerns. It was also necessary for the management to ensure integration, and prompt and fluid two-way communication of information.

3.2 | Organization of a facilities management system

In all four cases, the pandemic was positioned as a “disaster” and the response was organized and implemented accordingly. The care delivery system had a three-layer structure, comprising headquarters, field supervisors, and nursing staff. In Cases 1 and 3 (Table 1), experienced nursing directors were included at the headquarters, and field supervisors included experienced nursing vice-directors or chief nursing managers. Table 2 and Figure 1 demonstrate the three-layer structure of temporary lodging facilities and the role of each layer.

3.3 | Role of headquarters

The headquarters incorporated multiple sectors, including municipal staff, prefectural nursing associations, medical associations, disaster medical assistance teams, and local infectious disease control networks. It also played various operational management roles: making contracts with facilities, arranging for supplies, coordinating cooperation with medical institutions, formulating basic zoning and infection control policies, giving explanations to residents, conducting interviews, and carrying out personnel recruitment. To establish the facilities, the headquarters recruited frontline nursing staff from two sources: prefectural nursing associations and the local public health system. More nurses were secured from prefectural nursing associations than the local public health system, and thus included nurses from diverse backgrounds and with various motivations. During the initial stages of the pandemic, the local public health system had organized nursing personnel, but the number was limited. During the second wave, it was necessary to secure additional personnel through prefectural nursing associations.

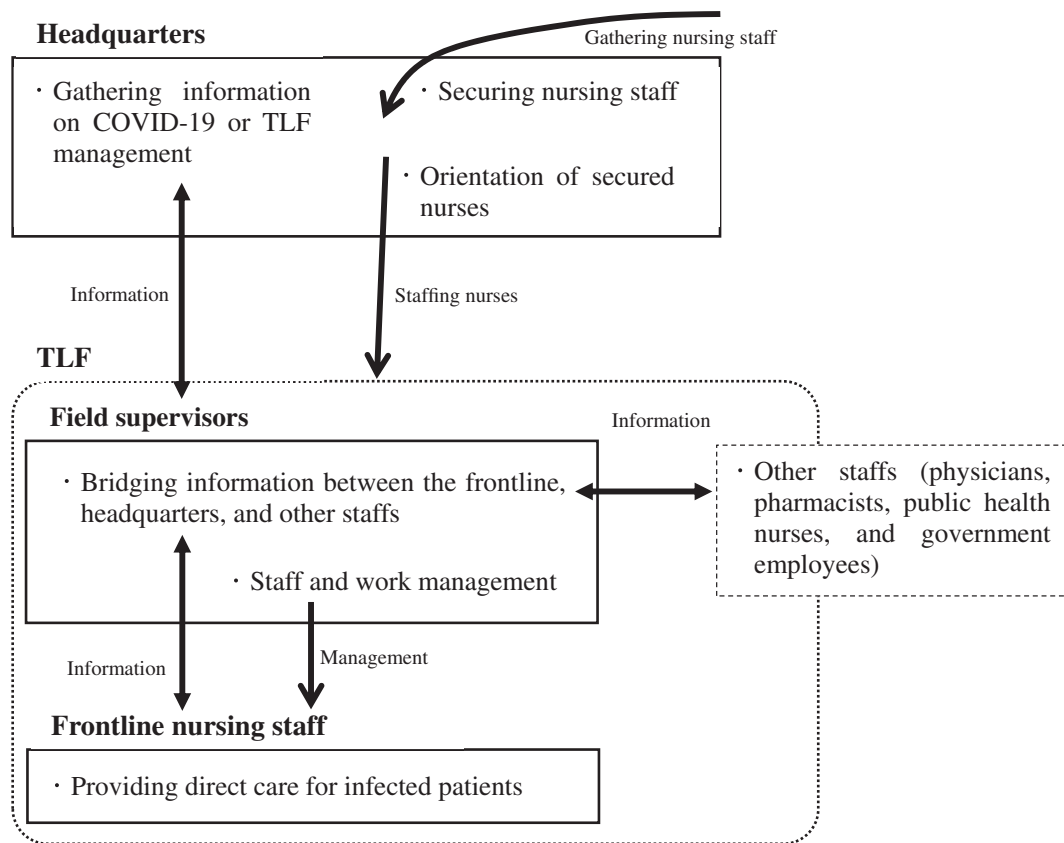


FIGURE 1 Roles of the three layers in the establishment and operation of temporary lodging facilities. Abbreviation: TLF, temporary lodging facilities

Headquarters was responsible for gathering daily updated information on COVID-19, revising the manual for temporary lodging facility management, and ensuring the rapid communication of the changes to each temporary lodging facility. In the early stages of the pandemic, information about infectious diseases was constantly updated and nursing care had to be modified accordingly. This role was crucial because it was difficult for each facility to regularly access the information and modify its operating manual and procedures accordingly.

Another important role of headquarters was to provide orientation to the secured nurses. Nurses recruited through the prefectural nursing associations had diverse experiences and skills, while public health nurses did not have sufficient knowledge and experience about actual infection prevention techniques. Therefore, it was important for headquarters to teach standardized infection prevention techniques to all nurses before they began working at the temporary lodging facilities. This led to the standardization of skills and the reduction of education costs at each temporary lodging facility. By sharing the purpose and role of nursing care at the temporary lodging facilities, the training also aimed to motivate the staff towards the achievement of higher goals.

3.4 | Role of field supervisors

Field supervisors played the role of chief nurse in a medical ward. They were dispatched from headquarters and local governments or were nursing teachers specializing in disaster nursing. They were crucial in organizing frontline nursing care teams, managed the frontline staff and their work, and bridged the information gap between the frontline and headquarters.

As part of their role in staff management, field supervisors conducted health management for the staff nurses, adjusted the number of staff members and their workloads according to the increase and decrease of residents and according to nurses' skills and characteristics, provided nurses with coaching and direction, and responded to patients' complaints. As a result of their careful management of the nursing teams, even inexperienced nurses were able to function optimally. Within work management, they facilitated interprofessional coordination and attempted to understand patients' health conditions to provide smooth and efficient nursing care. When the temporary lodging facilities were first established, the roles and scope had yet to be established for collaboration both interprofessionally (e.g., with government employees,

public health nurses, physicians, pharmacists) and with external healthcare providers (e.g., ambulance services, medical facilities, and pharmacies). While bridging the information gap between the frontline workers and headquarters, one of the field supervisors' most important roles was to ensure the immediate transmission of daily updated information from headquarters to the frontline nurses, and to inform headquarters of the staff's concerns and issues regarding nursing care and health statuses.

The field supervisor played an important role in ensuring that facilities' nursing teams continued to provide efficient care, as strong leadership was required to create a safe environment for the staff to work in. They also had the important role of communicating their facilities' supply needs to headquarters, and to prepare both the medical and work environments. By acting as coordinator for non-medical municipal staff at headquarters, they were able to deliver the necessary supplies to frontline nursing staff. Participants reported that many field supervisors had abundant nursing management experience in medical institutions, and that their experience helped the nursing team to function well.

3.5 | Role of nursing staff

The main nursing care administered at the temporary lodging facilities comprised observation of patients' health status, patient documentation, organizing the movement of more severely affected patients to hospitals, providing psychological support, dealing with complaints and inappropriate behavior, arranging medication, and providing clinical examination assistance. Non-contact health observation using videophones and smartphone apps was employed to minimize contact between the staff and patients. Nurses were required to evaluate patients' health without seeing them in person, and to act accordingly and in timely fashion. Nurses required the ability to communicate virtually to deal with issues. Participants emphasized the importance of ethics, having the appropriate attitude, and being active. The nurses' strength was their medical assessment ability, while public health nurses excelled at facility management based on their disaster management and interprofessional coordination skills.

4 | DISCUSSION

The nursing care provision system at temporary lodging facilities was organized and constructed according to disaster response guidelines. As Japan is prone to natural disasters, there were well-developed guidelines and

expertise for disaster preparedness nationwide. Hence, new organizations could be established smoothly during the pandemic. It was thought that by classifying this pandemic as a natural disaster and by organizing the nursing provision system accordingly, the command system and the roles of each player would be clarified. The nursing departments at the medical facilities that dealt with COVID-19 also formulated a three-layered management structure comprising the chief at the top, experienced nursing personnel in the middle, and finally, nursing staff on the frontline at the base (Wang et al., 2020). When emerging infectious diseases are prevalent and nursing care delivery systems need to be established quickly in new settings, the three-layer vertical organizational structure may be ideal for clarifying the command system and staff roles. Our findings regarding the three-layer structure of the organization may be applicable to other countries that need to develop new nursing delivery systems for the pandemic.

In addition, to organize the nursing provision system and the nursing teams more effectively, the top- and middle-level supervisors should be experienced in nursing management. When accidental and severe events like natural disasters or infectious disease pandemics occur, and an urgent nursing delivery system must be established, experienced nursing managers should be placed at the appropriate organizational levels. Therefore, it is necessary to develop a registration system in advance that can allow access to these resources immediately when required.

In the early stages of temporary lodging facility establishment and operation, it was very important that headquarters secure the required workforce. By securing and allocating nursing staff from a central point, the cost of workforce recruitment for each facility was reduced, and the allocation of nursing staff between facilities could be controlled. During the COVID-19 and H1N1 influenza pandemics, in medical facilities the top-level nursing departments drew up staffing plans and assigned staff in consideration of the workforce balance of the entire facility (Chu et al., 2012; Liu et al., 2020; Wu et al., 2020). If unanticipated events occur and it is necessary to secure new personnel, it may be essential to secure the workforce at once and then assign them to different facilities or units.

Furthermore, in the early stages, when a lot of information was transmitted from various organizations, it was difficult for each temporary lodging facility to collect the information and disseminate it to the nursing staff. It was therefore effective for the headquarters to collect such information, collate it, and then convey it. During an infectious disease pandemic, the organization's top managers and top-level nursing departments should

collect daily information about infection rates and medical care (Jackson & Nowell, 2021; Tseng et al., 2005; Zhang et al., 2003). In a situation where information is updated daily, top-level headquarters can aggregate the information and convey what is necessary to the subordinate organizations, thus preventing confusion due to a lack of information or information overload, and enabling stable organizational management.

In temporary lodging facilities, the system was set up to observe mildly ill patients and promptly transport them to medical institutions when their symptoms worsened. To operate this system effectively, headquarters had to promptly secure nurses with the necessary skills, which were screened through the recruitment method. Orientation provided at each facility imparted a common base of knowledge and skills to staff and nurses, contributed to their safety, and standardized the quality of nursing care. According to previous studies, training for wearing and removing PPE kits, and for infection control techniques, was conducted by the facility instead of headquarters (Fung et al., 2004; Kim et al., 2020; Leen et al., 2010; Tosoni et al., 2020). When constructing a new nursing delivery system like temporary lodging facilities, it is imperative that the top echelon provides standardized training to the staff before assigning the actual nursing work because of the participation of hired nurses with varied experience.

The role of field supervisors was particularly important in organizing and managing the temporary lodging facility nursing teams. Field supervisors, who had prior experience as either vice-directors of nursing departments or as chief nurses, guided the temporary lodging facility nursing staff through strong leadership. They responded effectively and quickly to the nursing staff's health management, guidance, and education needs, and to the patients' changing health conditions and inappropriate behaviors. This management behavior ensured the safety of the nursing staff and facilitated the organization of the nursing teams. Leen et al. (2010) and Gupta and Federman (2020) reported that during infectious disease outbreaks, the chief nurses of each ward managed the nursing operations. It was important that field supervisors with managerial experience created and led the new nursing teams because the facilities were not medical facilities and they employed nurses with a wide range of experience.

In medical settings, it is reported that hospitals provide health management and psychological support to the nursing staff (Oakley et al., 2020; Tosoni et al., 2020; Wee et al., 2020; Zeng et al., 2020; Zerbini et al., 2020). In temporary lodging facilities, the field supervisors provided health management and psychological support to the nursing staff because they were closely related to the

allocation of patients, and the management and provision of nursing operations. To provide care for emerging infectious diseases, field supervisors should carefully manage and protect the health of nursing staff.

The role of field supervisors as a relay point for information is important as well. In the temporary lodging facility nursing delivery system, the field supervisors communicated information from headquarters to the nursing staff and reported back to headquarters on the clinical issues faced by the staff. Even during the SARS outbreak, the chief nurses in the infected patient wards listened to the frontline staff and forwarded the clinical issues they faced to the nursing departments and hospitals (Lau & Chan, 2005; Tam et al., 2004). For the purposes of interprofessional collaboration, they coordinated the work of the interprofessional teams, and in the case of medical facilities, frontline nursing team leaders coordinated with the interprofessional team on behalf of the nursing teams (Philips et al., 2020; Zeneli et al., 2020). When care is provided by an improvised team like the temporary lodging facility nursing team, it is necessary for a field leader to function as a horizontal and vertical information exchange hub. This role as an information hub in interprofessional collaboration was important in the delivery of nursing care in non-medical facilities.

4.1 | Limitations

This study had a few limitations. First, this study was conducted between August and October 2020, the early stages of the pandemic. Therefore, subsequent changes that were made to management strategies were excluded. Second, since the interviews were conducted with only four local governments that volunteered to participate in the study, there may be certain management strategies that are not included in this study. Third, the interview participants did not include the frontline nurses who provided nursing care. Therefore, it was not possible to clarify the actual impact on nursing care and the staff providing it.

5 | CONCLUSIONS

An organized nursing system was important for the establishment and operation of temporary lodging facilities during the early stages of the COVID-19 pandemic. In new situations, such as a new wave or another pandemic, an efficient nursing delivery system must be established urgently. In such a case, a three-layer organizational structure based on disaster response principles is a good system for facilitating communication

and information exchange, efficient and effective nursing care management, and overall staff management. During a pandemic, the government and/or infectious diseases or public health experts may take the initiative to combat the crisis. However, nurse managers with experience and skills in nursing management are indispensable for the provision of nursing, especially in improvisational situations such as when establishing temporary lodging facilities. When new organizations must be built to combat emerging infectious diseases, large nursing teams are necessary. In addition, to organize these teams, nursing management experts should be secured and assigned to the appropriate echelons according to their experience and skill.

AUTHOR CONTRIBUTIONS

All authors were involved in study design, data collection, and interpretation. Ryohei Kida, Maho Inoue, and Yukie Takemura were involved in the data analysis. Ryohei Kida wrote the manuscript draft. All authors critically revised and commented on the draft of the manuscript, and approved the final version.

ACKNOWLEDGMENTS

We thank all the nurses who participated in this study for their contribution and dedication during COVID-19 pandemic.

CONFLICT OF INTEREST

All authors declare no conflicts of interest associated with this manuscript.

ORCID

Ryohei Kida  <https://orcid.org/0000-0003-0138-9946>
 Yukie Takemura  <https://orcid.org/0000-0003-2861-8673>
 Maho Inoue  <https://orcid.org/0000-0002-1308-5969>
 Naoko Ichikawa  <https://orcid.org/0000-0003-4512-9644>

REFERENCES

- Chu, T. P., Li, C. C., Wang, L., Hsu, L. W., Eng, H. L., You, H. L., Liu, J. W., Wei, C. C., Chang, L. S., Lee, I. K., & Yang, K. D. (2012). A surveillance system to reduce transmission of pandemic H1N1 (2009) influenza in a 2600-bed medical center. *PLoS One*, 7(3), e32731.
- Fang, D., Pan, S., Li, Z., Yuan, T., Jiang, B., Gan, D., Sheng, B., Han, J., Wang, T., & Liu, Z. (2020). Large-scale public venues as medical emergency sites in disasters: Lessons from COVID-19 and the use of Fangcang shelter hospitals in Wuhan, China. *BMJ Global Health*, 5(6), e002815.
- Fung, C. P., Hsieh, T. L., Tan, K. H., Loh, C. H., Wu, J. S., Li, C. C., Chang, F. Y., Siu, L. K., Yen, M. Y., Wang, L. S., Wong, W. W., Kao, W. F., Hsu, J. H., Lin, T. H., Huang, F. Y., & Lee, C. H. (2004). Rapid creation of a temporary isolation ward for patients with severe acute respiratory syndrome in Taiwan. *Infection Control & Hospital Epidemiology*, 25(12), 1026–1032.
- Gupta, S., & Federman, D. G. (2020). Hospital preparedness for COVID-19 pandemic: Experience from department of medicine at veterans affairs Connecticut healthcare system. *Postgraduate Medicine*, 132(6), 489–494.
- Jackson, J., & Nowell, L. (2021). “The office of disaster management” nurse managers’ experiences during COVID-19: A qualitative interview study using thematic analysis. *Journal of Nursing Management*, 29(8), 2392–2400.
- Jia, Y., Chen, O., Xiao, Z., Xiao, J., Bian, J., & Jia, H. (2021). Nurses’ ethical challenges caring for people with COVID-19: A qualitative study. *Nursing Ethics*, 28(1), 33–45.
- Kenanidis, E., Anagnostis, P., Arvaniti, K., Potoupnis, M. E., & Tsiridis, E. (2020). Organizing an orthopaedic department during COVID-19 pandemic to mitigate in-hospital transmission: Experience from Greece. *Cureus*, 12(6), e8676.
- Kim, M., Lee, J. Y., Park, J. S., Kim, H. A., Hyun, M., Suh, Y. S., Nam, S. I., Chung, W. J., & Cho, C. H. (2020). Lessons from a COVID-19 hospital, Republic of Korea. *Bulletin of the World Health Organization*, 98(12), 842–848.
- Lau, P. Y., & Chan, C. W. H. (2005). SARS (severe acute respiratory syndrome): Reflective practice of a nurse manager. *Journal of Clinical Nursing*, 14(1), 28–34.
- Leen, T., Williams, T. A., Campbell, L., Chamberlain, J., Gould, A., McEntaggart, G., & Leslie, G. D. (2010). Early experience with influenza A H1N109 in an Australian intensive care unit. *Intensive & Critical Care Nursing*, 26(4), 207–214.
- Liu, Y., Wang, H., Chen, J., Zhang, X., Yue, X., Ke, J., Wang, B., & Peng, C. (2020). Emergency management of nursing human resources and supplies to respond to coronavirus disease 2019 epidemic. *International Journal of Nursing Sciences*, 7(2), 135–138.
- Ministry of Health, Labour and Welfare (2020). Accommodation treatment manual for people with mild coronavirus infection. [Cited October 2, 2021.] Available from URL: <https://www.mhlw.go.jp/content/000618526.pdf> (in Japanese).
- National Health Service (2020, Mar 24). New NHS nightingale hospital to fight coronavirus. [Cited August 30, 2021.] Available from URL: <https://www.england.nhs.uk/2020/03/new-nhs-nightingale-hospital-to-fight-coronavirus/>.
- Oakley, C., Pascoe, C., Balthazor, D., Bennett, D., Gautam, N., Isaac, J., Isherwood, P., Matthews, T., Murphy, N., Oelofse, T., Patel, J., Snelson, C., Richardson, C., Willson, J., Wyton, F., Veenith, T., Whitehouse, T., & QEH COVID-19 Response Team. (2020). Assembly line ICU: What the long shops taught us about managing surge capacity for COVID-19. *BMJ Open Quality*, 9(4), e001117.
- Philips, K., Uong, A., Buckenmyer, T., Cabana, M. D., Hsu, D., Katyal, C., O’Connor, K., Shiminski-Maher, T., & Hametz, P. (2020). Rapid implementation of an adult coronavirus disease 2019 unit in a Children’s hospital. *The Journal of Pediatrics*, 222, 22–27.
- Tam, C. W. C., Pang, E. P. F., Lam, L. C. W., & Chiu, H. F. K. (2004). Severe acute respiratory syndrome (SARS) in Hong Kong in 2003: Stress and psychological impact among frontline healthcare workers. *Psychological Medicine*, 34(7), 1197–1204.
- Tosoni, A., Rizzatti, G., Nicolotti, N., Di Giambenedetto, S., Addolorato, G., Franceschi, F., Zileri Dal Verme, L., & Gemelli

- Against COVID-19 Clinician Team (GAC-19 CT) Study Group. (2020). Hospital reengineering against COVID-19 outbreak: 1-month experience of an Italian tertiary care center. *European Review for Medical & Pharmacological Sciences*, 24(15), 8202–8209.
- Tseng, H. C., Chen, T. F., & Chou, S. M. (2005). SARS: Key factors in crisis management. *The Journal of Nursing Research*, 13(1), 58–65 from <https://www.ncbi.nlm.nih.gov/pubmed/15977136>
- Wang, H., Feng, J., Shao, L., Wei, J., Wang, X., Xu, X., Shao, R., Zhang, M., He, J., Zhao, X., & Liang, T. (2020). Contingency management strategies of the nursing department in centralized rescue of patients with coronavirus disease 2019. *International Journal of Nursing Sciences*, 7(2), 139–142.
- Wee, L. E., Sim, X. Y. J., Conceicao, E. P., Aung, M. K., Goh, J. Q., Yeo, D. W. T., Gan, W. H., Chua, Y. Y., Wijaya, L., Tan, T. T., Tan, B. H., Ling, M. L., & Venkatachalam, I. (2020). Containment of COVID-19 cases among healthcare workers: The role of surveillance, early detection, and outbreak management. *Infection Control & Hospital Epidemiology*, 41(7), 765–771.
- Wu, X., Zheng, S., Huang, J., Zheng, Z., Xu, M., & Zhou, Y. (2020). Contingency nursing management in designated hospitals during COVID-19 outbreak. *Annals of Global Health*, 86(1), 70.
- Yin, R. K. (2018). *Case study research and applications*. Sage.
- Zeneli, A., Altini, M., Bragagni, M., Gentili, N., Prati, S., Golinucci, M., Rustignoli, M., & Montalti, S. (2020). Mitigating strategies and nursing response for cancer care management during the COVID-19 pandemic: An Italian experience. *International Nursing Review*, 67(4), 543–553.
- Zeng, P., Luo, X., Zeng, W., Qiu, D., Zhang, L., Zhou, Q., Wang, T., & Xiong, Z. (2020). Strategic management of pediatric intensive care unit in a tertiary Children's hospital in Southwest China during the COVID-19 pandemic. *Translational Pediatrics*, 9(6), 849–862.
- Zerbini, G., Ebigbo, A., Reicherts, P., Kunz, M., & Messman, H. (2020). Psychosocial burden of healthcare professionals in times of COVID-19 - a survey conducted at the university hospital Augsburg. *German Medical Science: GMS e-Journal*, 18, Doc05.
- Zhang, L., Wang, J., Feng, Z., Yang, X., Liu, Y., & Yuan, B. (2003). The responses of nursing system to the outbreak of SARS in general hospital. *Chinese Medical Journal*, 116(6), 834–837.

How to cite this article: Kida, R., Takemura, Y., Inoue, M., Ichikawa, N., & Koyanagi, H. (2022). Nursing management for temporary lodging facilities in Japan in the early stages of the COVID-19 pandemic: A multiple-case study. *Japan Journal of Nursing Science*, e12507. <https://doi.org/10.1111/jjns.12507>