

Characteristics and Challenges in Critical Care Nursing Practice: A Review

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Abstract

Objectives : To clarify the characteristics and challenges of critical care nursing practice based on literature reviews.

Method : A literature search was performed using Medical Central Journal and PubMed. A total of 19 articles were selected and analyzed.

Results : While prioritizing life-saving procedures, nurses took on various roles to provide both psychological and physical care and worked to make patients aware of their medical situation. Furthermore, in conjunction with a medical team, nurses anticipated possible issues that may arise when caring for the patient's family and supported their emotional well-being as well as their surrogate decision-making process. As members in a medical team, nurses provided patients with life-saving care by taking on various roles that included supportive and consultative functions. A major challenge for critical care nurses was performing multiple tasks to address the changing needs of patients and their families during an emergency.

Conclusion : Improving the professional competency of nurses as well as the medical system is important in providing patient-centered medical treatment in emergency situations.

Key words : emergency nursing, practice, medical team, barriers

Introduction

Critical care nurses are responsible for providing advanced medical care to patients in critical condition and relieving the suffering of patients and their families. Recently, progress in medicine and complex patient backgrounds require a high level of expertise, including knowledge and skills in communication and performance of life-saving care. However, a study that examined nursing practices¹⁾ showed that life-saving care was prioritized over the dignity of patients and that nurses experienced difficulties in balancing both due to a short time period and limited staff support. Furthermore, for new and inexperienced nurses²⁾, rapid progress in medical treatments resulted in fear of being unable to keep up with the advancements as well as dif-

ficult to learn new methods. Various studies were conducted to clarify these challenges such as care of patients with unspecified diseases, difficulty of nursing care families' large problems and limited hours to discuss in medical team, which resulted in increased knowledge of the situation in critical care. However, most studies were focused on specific aspects, and few have comprehensively assessed the characteristics and challenges in critical care nursing. In this study, we clarified the characteristics and challenges in critical care nursing practice by reviewing the literature and systematically categorizing the results.

Definition of terms

Critical care nursing is defined as nursing in intensive care units and in emergency medical facilities for patients in severe condition requiring urgent care.

Methods

1. Research design

We reviewed domestic and foreign international literature to clarify practices and challenges in critical care nursing. The literature review process was as follows :

1) Selection of documents

Articles were selected after performing a search using the ICHUSHI Web (ver. 5) and PubMed database. Search results were narrowed to issues published between 2008 and 2018. The following keywords were used to search through Japanese journals : “emergency nursing : Kyukyukango in Japanese” “nursing practice : Kango Jissen in Japanese”, “team medicine : chimuiro in Japanese”, and “difficulty : konnansa in Japanese”. The following keywords were used to search through international journals : “emergency nursing”, “practice”, “medical team”, “barriers”, and “difficulty” were used. The search criteria included (1) concrete description of critical care nursing practice and (2) description of challenges experienced by nurses in critical care.

2) Reading of target literature and assessment for relevance

After the purpose, objective, research methods, and results of the paper were read, we examined for scenarios and issues with which nurses experienced difficulties in addition to assessing the situation in critical care nursing facilities. These were organized and coded using analysis sheets. The summarized codes were categorized and given concise titles so as to not impair the essence of the research outcome.

2. Ethical consideration

Since this was a literature review, no ethical permissions or informed consent was required. Care was taken to not alter the meaning of the data intended by the authors when organizing the literature content.

Results

Of the 683 articles that were searched, articles other than original papers, reviews different from the subject of this study, articles regarding nursing education and psychiatric nursing as well as overlapping articles were excluded, which resulted in 19 articles that were assessed for this study. From these articles, we extracted content regarding patients, patient families, and medical teams, which were divided into 8 categories and 17 sub-categories under nursing practices (Table 1) as well as

Table 1. Nursing Practice of Critical Care Nursing

Focus	Category	Sub Category	literature
Assistance to patient in crisis of life	Providing appropriate information to patients	Consultation about sedation use for understanding information	3
		Promote understanding by getting situated in mental and physical condition	13
	Alleviating pain while prioritizing life-saving care	Grasp of the patient's condition by watching detail to monitor	4
		Make all kinds of efforts to find out about patient's needs with non response patients	7
		Promptly to treatment by monitoring a patient's condition and activate the MET system.	5,6
		Active intervention for patient's physiological needs, including elimination	7
Support of family members of emergency patients	Providing appropriate information for family members	Provide compliment explanations about unusual situation by doctors	10
		Predict and intervention of family's emotion	11,12,13
	Maintaining relationships with family and patients	Mitigate family's shock by patient's appearance	13
		Avoid missing a chance for family's visiting	12,13
Managing distraught family members	Nursing as consideration and understanding for family's decision making	10,11,12	
Relationship with other personnel in emergency medical teams	Concurring views within team to provide appropriate treatment for patients	Smooth communication in medical team	18
		Provide patient's accurate information to doctors	19
	Mediating relationships among families, doctors and other team members	Make situations for family to asking easily	20
		Serve as mediators between family and doctors	10,12
	Demonstrating unique abilities of nurses in team	Clarification of roles sharing of members	18
Make sure to prepare for patient acceptance	13		

6 categories and 11 subcategories under challenges related to these practices (Table 2). The name of each category in the text below is indicated in parenthesis.

1. Assisting patients in critical condition

For content related to nursing patients in critical condition, two categories were extracted : [providing appropriate information to patients] and [alleviating pain while prioritizing life-saving care]. In the former category, the current medical situation as well as treatment progress and outlook were communicated nonverbally in emergency situations in order for information to be properly conveyed. In addition, the physical and psychological well-being of the patient was addressed so that they could be informed of their medical situation. For example, doctors were consulted regarding the reduction of sedatives depending on the situation³. In the [alleviating pain while prioritizing life-saving care] category, life-saving measures, such as the careful monitoring of patient condition, were prioritized⁴. Furthermore, medical systems, such as RRS (Rapid Response System) and MET (medical emergency team), were actively employed in some situations⁵⁻⁶. In addition to managing pain, nurses supported patients to be self-sufficient in physical care and bathroom needs⁷.

For content relating to challenges in nursing practice, the following categories were extracted : [care of patients with unspecified diseases] and [life-saving measures under time constraints]. In the former category, nurses experienced difficulties in managing cancer

patients⁸. Some of these difficulties were related to embarrassment by lack of expertise regarding treatment options to relieve cancer pain. Furthermore, the various physical conditions of the patients were considerable burdens to nurses. In addition, there was substantial psychological burden to nurses in responding to patients in critical situations⁹. In the category [life-saving measures under time constraints], nurses experienced difficulties in performing their role during an emergency due to being busy with their regular work schedule. Furthermore, there were difficulties in establishing a good relationship with patients in an emergency setting⁸.

2. Support for family members

Three categories were extracted regarding support for the family of the patient : [providing appropriate information to family members], [maintaining relationships between family and patients], and [managing distraught family members].

In the [providing appropriate information to family members] category, families were informed of the patient situation in order to obtain consent to provide appropriate treatment¹⁰. Furthermore, families responsible for surrogate decision-making were made fully aware of the severity of the patient condition when nurses attempted to discuss the treatment process with the patient¹¹⁻¹³. In the category [maintaining relationships between family and patients], nurses worked to create a good environment for visiting families at cha-

Table 2. Challenges to Critical Nursing

Focus	categories	subcategories	literature
nursing care	Care of patients with unspecified diseases	Nurses were difficult to nursing care in out of their specialty.	8
		Nurses have negative emotion easily because they are unable to care due to patient's back ground are various.	9
	Life-saving measures under time constraints	It was difficult define a priority in the emergency	8
family nursing	Challenges experienced by families	Even though with empathy them, it was difficult supporting family.	15,16
		It was difficult nursing because nurses personally couldn't take care of family's big issue due to they didn't have experience before.	8
	Poor contact due to lack of time	It was difficult attending informed consent procedure, because there was no time for attend.	15
medical team	Lack of opportunities to discuss with other health care personnel	It is not an equal relationship between doctors and nurses	21
		Medical team have no opportunity for discussion.	19
	Discrepancies in understanding between nurses and other health care personnel	Professions are difficult to take same stance toward patient each other, because their culture different each other	6,7
		The treatment courses of patients are different between doctors and nurses easily, because they are hard to understand each other on patient with impaired consciousness.	10,11,12, 13,14,

otic medical scenes^{12)–13)}. During visitation, nurses attempted to conceal damaged areas on the patient to minimize shock by family members¹³⁾. Furthermore, they respected the visitation time of families and supported patients in accepting their medical situation¹¹⁾. In one case, arrangements were made with a distant family and patient to review the care plan through Skype with a health care personnel. Therefore, various methods are being implemented to facilitate relationships between patients and their families during emergencies¹⁴⁾.

In the [managing distraught family members] category, nurses attempted to support families by understanding their perception of the patient condition while also considering their sufferings^{10)–12)}. Nurses anticipated various situations the family may experience and were prepared to respond at any time given time¹⁰⁾. In addition, they created a soothing environment for the family in order to manage their emotional well-being^{10)–11)}.

Two issues were identified regarding family support : [challenges experienced by families] and [poor contact due to lack of time]. In the former category, there were challenges in managing the psychological impact on families, which is difficult to predict, due to the sudden death of a family member⁸⁾. In addition, nurses felt insufficient and helpless that families were not able to give enough care by themselves^{15)–16)}. Other issues regarding family support during emergencies were grouped in the category [poor contact due to lack of time]. There were challenges when there was limited relationship between nurses and the patient's family, due to prior issues, during which the patient's condition rapidly deteriorated^{16)–17)}. Furthermore, nurses experienced difficulties in supporting families when patient care was prioritized¹⁵⁾.

3. Relationship with other health care personnel in medical teams

For team medical care, three categories and six subcategories were extracted : [concurring views within team to provide appropriate treatment for patients], [mediating relationships among families, doctors, and other team members] and [demonstrating unique abilities of nurses within a team].

In the [concurring views within team to provide appropriate treatment for patients] category, nurses were involved in providing a smooth execution of emergency measures, such as providing information and confirming treatment, while consulting with doctors¹⁸⁾. Fur-

thermore, when addressing the requests of patients, such as introducing MET, an outreach team was contacted¹⁹⁾. To provide appropriate treatment under a short time period, nurses mediated between doctors and families, a scenario that was placed in the category [mediating relationships among families, doctors, and other team members]. In addition to defining the role of each team member and working to increase the level of teamwork²⁰⁾, nurses acted as family spokespersons in order to build relationships with doctors^{10)–12)}. In the category [demonstrating unique abilities of nurses within a team], there were various situations in which the actions of nurses contributed to the smooth treatment of the patient. These included making appropriate preparations for patients whose condition is rapidly deteriorating and taking appropriate measures to ensure efficient medical care is provided¹³⁾¹⁸⁾.

For challenges in nursing practice in emergency medical teams, the following categories were created : [lack of opportunities to discuss with other health care personnel] and [discrepancies in understanding between nurses and other health care personnel]. The former category included difficulty in cooperating with other health personnel in a team due to differences in opinion and difficulties expressing them. This issue inhibited the advancement and function of emergency medical systems in the hospital such as MET²¹⁾. In the category [discrepancies in understanding between nurses and other health care personnel], inadequate understanding among health care personnel were barriers to developing new medical systems and resulted in situations that negatively affected patient care¹⁹⁾.

Discussion

From literature review, we comprehensively clarified nursing practices and challenges in critical patient care, which included topics such as assistance for patients, support for families, and team medical care.

1. Relieving pain during life-saving procedures

In addition to carrying out life-saving procedures, nurses supported patients in understanding their current medical situation and took care of their physical well-being. However, for critical situations outside their field of expertise, they found it difficult to respond and select the appropriate treatment. Patients in critical conditions trust medical personnel as instancial survival

instincts²²⁾. However, since life-saving procedures are prioritized, responding to patient requests by medical personnel may be delayed in critical situations. In particular, depending on the severity or progression of the patient condition, life-saving treatments may be performed by the doctor without patient consent²³⁾. In emergency situations, conflicts may occur between providing life-saving treatment and aid that emphasizes the dignity of patients. Therefore, nurses are frequently required to make ethical judgments and follow through appropriately. Therefore, the following patient-centered nursing practices should be implemented : prompt judgment and action as well as making ethical decisions to protect the dignity of patients. Furthermore, the nursing system should be reviewed while considering the burden of nurses.

2. Aiding distraught families and supporting appropriate treatment

Studies have shown the importance of nursing practices to help families suffering from a sudden crisis make appropriate surrogate decisions. To maintain relationships between patients and their families, appropriate information were provided by nurses to families. However, nurses felt insufficient in coping with families who faced difficult situations and experienced difficulties in providing aid to both the patient and their family. Recently, there is focus on terminal medical care, which includes recommendations for withdrawing ventilators and other life-saving therapies²⁴⁾ ; however, it raises ethical issues. In critical care nursing, it is important to provide patient care by introducing new perspectives and supporting surrogate decision-making by family members. Furthermore, conflicts experienced by critical care nurses are similar to those working in end-of-life care. These challenges should be further clarified in order for nurses to provide the appropriate countermeasures to support families under limited information and time.

3. Relationship with other personnel in emergency medical teams

Increasing the synergy of medical teams and demonstrating the unique skills of nurses Studies regarding nursing practice in team medical care during emergencies showed that nurses coordinated medical teams while taking on different roles to address various situations by actively working in medical teams, supporting

team members, and performing life-saving procedures while collaborating with doctors. However, there were difficulties in cooperating with other health care personnel when life-saving procedures were being performed based on little information under a short time period. Since there may be differing opinions for treatment method, good working relationships among medical professionals are important for providing patient-centered medical care²²⁾. The importance of building good relationships between nurses and doctors is emphasized by various studies. In one study, nurses and doctors collaborated together during an emergency and worked towards a common purpose¹⁸⁾. Accordingly, it is important for nurses to acquire skills to quickly assess emergency situations and adapt to various roles in a medical team.

In this study, we clarified various characteristics and challenges common to Japan and other countries regarding critical care nursing. Although not yet introduced in Japan, medical systems for critical care, such as telemedicine for family visits, MET operations, and early outreach interventions, are being implemented. Therefore, novel nursing systems should be considered in order to address medical advancements.

Conclusions

In this study, the following were clarified regarding critical care nursing :

1. While prioritizing life-saving treatments, nurses promoted patient awareness of their current medical situation and managed their suffering.
2. Nurses were actively involved with the families of patients by making environmental adjustments in order to care for their emotional well-being and provide support in their surrogate decision-making.
3. Nurses facilitated medical treatment and care by taking on different roles to address varying situations.
4. Nurses experienced difficulties and conflicts when they were required to respond to the needs of both patients and their families within a short period of time. In order to provide appropriate medical care, nurses should be provided with resources to improve their knowledge and skills, such as response capability, in emergency situations. The medical system should also be improved.

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References

- 1) Honda K, Miyake C, Yao M, Toyota K : Nursing practice that nurses consider to be particularly important in tertiary emergency outpatient. *Human Nursing Research* 10 : 15–24, 2012.
- 2) Koujima Y, Nakamura K, Suda K, Hirao A, Miura H : Workplace adaptation structure of nurses until the third year after graduation working in the emergency department - Analysis of interviews. *Journal of Japan Critical Care Nursing Association* 11 (1) : 1–11, 2009.
- 3) Naito A, Takamizawa E, Ishida N : Nursing practice to support patient perception in emergency ICU of tertiary emergency medical facilities. *Japan Critical Care Nursing Association Journal* 18 (1) : 11–20, 2016.
- 4) Satake Y, Nitta N, Urade S : Nursing practice of experienced nurses to families of end-of-life patients in tertiary emergency outpatient. *Japan Critical Care Nursing Association Journal* 17(2) : 24–34, 2015.
- 5) Roberts EK, Bonafide PC, Paine WC, Paciotti B, Tibbetts MK, Keren R, Barg KF, Holmes HJ : Barriers to Calling for Urgent Assistance Despite a Comprehensive Pediatric Rapid Response System. *American journal of Critical Care* 23(3) : 223–230, 2014.
- 6) Pattison N, O’Gara G, Wigmore : Negotiating Transitions : Involvement of Critical Care Outreach Team in End-of-Life Decision Making. *American Journal of Critical Care* 24(3) : 232–241, 2015.
- 7) Oe R, Sugimoto Y, Hatamochi C, Kitamura A, Nakayama M : A qualitative study on the autonomy of nurses working in the critical care center. *Osaka Prefecture University Nursing Science Journal* 23(1) : 11–20, 2017.
- 8) Haruna J, Shiromaru M, Nakada M : Critical care nurses through difficulties related to their involvement in Oncologic Emergency patients and their families and their factors through an interview to emergency simplification. *Japan Critical Care Nursing Association Journal* 19(1) : 42–51, 2017.
- 9) Romanzini ME, Bock FL. Conception and Feeling of Nurses Working in Emergency Medical Services about Their Professional Practice and Training. *Latino-Am. Enfermagem* 18(2) : 240–246, 2010.
- 10) Machida M, Nakamura M : Nursing practice of experienced nurses with regard to relationships with family members who arrived after hospitalization for emergency transported patients. *Japan Critical Care Nursing Journal* 12(3) : 11–23, 2016.
- 11) Tanijima M, Nakamura M : Characteristics of patients and family members of DNAR (Do Not Attempt Resuscitation) recognized by critical care nurses and nursing practice for families. *Japan Critical Care Nursing Association Journal* 17(2) : 35–44, 2015.
- 12) Yoshida N, Nakamura M : Nursing practice supporting family surrogate decision-making regarding life-sustaining treatment founded by critical care nurses. *Japan Critical Care Nursing Association Journal* 16(2) : 1–12, 2014.
- 13) Nakai N, Nakamura K, Sugahara M : A study on nursing that critical care nurses regard as important in trauma nursing practice. *Japan Critical Care Nursing Association Journal* 17(1) : 9–21, 2015.
- 14) Stelson AE, Garr GB, Golden EK, Martin N, Therese S, Kit D, Daniel n : Perception of Family Participation in Intensive Care Unit Rounds and Telemedicine : A Qualitative Assessment. *American Journal of Critical Care* 25(5) : 440–448, 2016.
- 15) Harada R, Yamasaki H, Chiaki M, Hamamoto J : Nurses’ feelings in nursing practice for patients and families who died in the first-time treatment room. *Tokyo Medical and Health University Bulletin* 9(1) : 9–16, 2014.
- 16) Takeyasu Y, Sakurai E, Araki T, Deguchi M, Yomogida J : The sense of difficulty that the critical care nurse has in the context of a crisis patient and its family. *Japan Critical Care Nursing Association Journal* 13(2) : 1–9, 2011.
- 17) Tanijima M, Nakamura M : Practice of critical care nurses for family members of inpatients who chose DNAR (Do Not Attempt Resuscitation). *Journal of Nursing Science, Jichi Medical School University* 11 : 5–13, 2014.
- 18) Honda K, Takamizawa E : “Nurse - Doctor’s Col-

- laboration Relationship” recognized by nurses at tertiary emergency medical facilities. *Japan Critical Care Nursing Association Journal* 14(1) : 1-9, 2012.
- 19) Kirk JW, Sivertsen DM, Petersen J, Nilsen P, Petersen HV : Barriers and facilitators for implementing a new screening tool in an emergency department : A qualitative study applying the theoretical Domains Framework. *Journal of clinical nursing* 25 : 2786-2797, 2016.
- 20) Khademian Z, Sharif F, Tabei ZS, Sharam B, Abbaszadeh A : Teamwork improvement in emergency trauma departments. *Iran J Nurse Midwifery Res* 18(4) : 333-339, 2013.
- 21) Bagshaw MS, Mondor EE, Scouten C, Montgomery C, Slater L, Jones AD, Bellomo R, Gibney N : A Survey of Nurses’ Beliefs About The Medical Emergency Team System in a Canadian Tertiary hospital. *American journal of critical care* 19(1) : 74-84, 2010.
- 22) Montgomery CI, Hiroshi Kanagori, Akihiko Hamahata Translated : *Caring theory and practice*. Igaku Syoin (Tokyo) 18-57, 1993/1995.
- 23) Yamauchi H, Yamashita Y, Sugahara M : System nursing course, separate volume, *Critical care nursing*. Igaku Syoin (Tokyo) 2-7, 2013.
- 24) Higuchi H : *Terminal Medicine and Law, Medicine and Society* 25(1) : 21-34, 2015.
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