

Application of Whole-Process Nursing in the Rescue of Emergency Critically Ill Patients

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Abstract: *Objective:* To analyze the impact of whole-process nursing on the rescue of emergency critically ill patients by setting a control group and an experimental group and comparing their experimental results. *Methods:* A total of 50 critically ill patients admitted to the Emergency Department from October 2022 to October 2023 were randomly divided into the experimental group (25 cases) and the control group (25 cases). The control group received routine nursing, while the experimental group received whole-process nursing. The rescue success rate and nursing satisfaction were compared between the two groups. *Results:* In the experimental group, 24 patients were rescued successfully, with a success rate of 96%; in the control group, 19 patients were rescued successfully, with a success rate of 76%, showing a significant difference ($\chi^2 = 4.1528, p = 0.0415 < 0.05$). The nursing satisfaction was 92% in the experimental group and 68% in the control group. *Conclusion:* Whole-process nursing can effectively improve the rescue success rate of critically ill patients, enhance the satisfaction of patients and their families, and improve patients' quality of life.

Keywords: Whole-process nursing; Emergency critically ill patients; Rescue; Application

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1. Introduction

Emergency patients are mostly characterized by acute onset, severe condition, and poor prognosis. The condition of emergency critically ill patients imposes a heavy disease burden on the country and great psychological pressure on patients and their families. How to improve the prognosis of emergency critically ill patients has always been the focus of attention of emergency nursing staff. With the development of social economy, people have higher requirements for health, thus promoting the establishment of a comprehensive and humanistic nursing model. This study conducted an investigation and analysis on 50 critically ill patients admitted to the Emergency Department of our hospital from October 2022 to October 2023 to explore the application effect of whole-process nursing.

2. Materials and methods

2.1. General information

A total of 50 critically ill patients admitted to the Emergency Department of our hospital were selected as the research objects and randomly divided into the experimental group (25 cases) and the control group (25 cases). In the experimental group, there were 14 males and 11 females, aged 13–82 years, with an average age of (53.24 ± 6.32) years; the disease types included 15 cases of internal medicine diseases, 9 cases of surgical diseases, and 1 case of poisoning. In the control group, there were 13 males and 12 females, aged 14–82 years, with an average age of (53.13 ± 6.41) years; the disease types included 16 cases of internal medicine diseases, 8 cases of surgical diseases, and 1 case of poisoning. There were no significant differences in gender, age, or disease type between the two groups ($p > 0.05$), indicating good comparability. The study was approved by the Ethics Committee, and all patients and their families signed informed consent forms.

2.2. Methods

The control group received routine nursing, while the experimental group received whole-process nursing. The specific measures are shown in **Table 1**.

Table 1. Comparison of emergency rescue indicators between the two groups

Group	Triage assessment time (min)	Rescue time (min)	Rescue success rate
Experimental group (n = 25)	1.02 ± 0.18	41.75 ± 4.06	194 (97.00)
Control group (n = 25)	4.15 ± 0.98	68.02 ± 7.16	173 (86.50)
<i>t</i>	8.523	9.140	9.217
<i>p</i>	< 0.05	< 0.05	< 0.05

2.2.1. Routine nursing

Routine nursing measures included

(1) Symptomatic treatment

Corresponding treatment was given according to the patient's clinical symptoms, such as hemostasis for trauma patients.

(2) Vital signs monitoring

Blood pressure and heart rate were measured for each patient upon admission and once every hour until the patient was admitted to the ward or discharged.

(3) Rescue

During the emergency rescue, nurses collaborated with emergency doctors to provide rescue for at least 30 minutes.

2.2.2. Whole-process nursing

The whole-process nursing included:

(1) Information exchange

An information contact point was set up in the emergency center, with a designated staff member responsible for communicating with 120 ambulances outside the hospital to obtain advance information about the patient's condition (disease type, severity, etc.). This ensured that the Emergency Department could prepare necessary equipment, medicines, and corresponding wards in advance for patient rescue and nursing.

(2) Triage desk setup

Responsible for the reasonable arrangement of each emergency patient, staffed by 1–2 nurses with rich clinical experience. Triage nurses first assessed each patient's condition, then transferred them to the most suitable emergency room. They had a clear understanding of each department (advantageous specialties, number of patients, staffing) to make rapid optimal decisions ^[1].

(3) Rescue

Emergency rescue is the top priority of emergency work. During the rescue, nurses should collaborate with emergency doctors, possessing solid professional knowledge, strong psychological quality, and good adaptability. After the patient's admission, nurses should first maintain vital signs, ensure unobstructed airway, and quickly establish venous access; they should complete tasks quickly, decisively, and accurately in accordance with doctor's orders.

(4) Strengthening communication with patients

Nurses should have strong communication skills and the ability to observe facial expressions. Upon the patient's admission, communicate with the patient or their family, provide psychological comfort if needed, and inform the family of the patient's condition, subsequent rescue measures, and possible outcomes. Try to keep the patient in a relaxed mood to better cooperate with doctors in rescue, improve prognosis, and establish trust with patients to form a good doctor-patient relationship.

(5) Basic nursing

After the patient's rescue, medical staff should pay attention to basic nursing, continuously monitor vital signs with instruments, and ensure sterile nursing after the operation.

(6) Whole-process accompaniment

From hospital admission to transfer, patients should be accompanied by medical staff throughout. Medical staff can provide guidance for various examinations to improve efficiency and ensure smooth completion, while ensuring critically ill patients have sufficient oxygen supply without affecting airway patency.

(7) System improvement

Whole-process accompaniment requires close cooperation among personnel in all links. The hospital should coordinate different departments to form an integrated team, ensuring a smooth transition for patients from the Emergency Department to other departments. The Emergency Department and ICU should maintain close communication, timely share patient information, and facilitate the ICU in preparing medicines and equipment ^[2].

2.3. Observation indicators

The rescue success rate and patient satisfaction with nursing were used as evaluation indicators. Nursing satisfaction refers to the satisfaction of the patient's family with emergency nursing work, investigated using a self-designed questionnaire by the hospital, covering four dimensions: acceptance speed, nursing attitude, nursing quality, and communication skills. Each dimension was scored out of 25 points, with a total score of 100 points. A total score of ≥ 80 points was considered "very satisfied", 60–79 points as "satisfied", and < 60 points as "dissatisfied". Satisfaction rate was the sum of "very satisfied" and "satisfied" cases.

2.4. Statistical methods

SPSS 22.0 statistical software was used for data analysis. Count data [n(%)] such as rescue success rate were

compared between the two groups using the χ^2 test; the test level $\alpha = 0.05$. A p value < 0.05 was considered statistically significant.

3. Results

The nursing satisfaction of the two groups is shown in **Table 2**. The hospital can strengthen the training of nursing staff according to actual conditions, such as carrying out training activities themed on “whole-process nursing” for all emergency nurses. The training content includes communication skills, professional competence improvement, and communication techniques. After the training, the emergency head nurse conducts on-site tests for participants, focusing on practical operations and emergency response capabilities, including questionnaire survey content and optimal inquiry methods, adhering to the principles of speed, accuracy, and comprehensiveness. On the day the questionnaires are completed, the head nurse organizes several nursing staff to verify the quantity and content of the questionnaires. For incomplete or unclear questionnaires, contact the patients or their families by phone to supplement the information as soon as possible; questionnaires with logical errors are deemed invalid and excluded. When conducting surveys, hospital nursing staff should avoid logical errors as much as possible.

Table 2. Nursing satisfaction of the two groups

Group	Very satisfied	Satisfied	Dissatisfied	Satisfaction rate
Experimental group (n = 25)	7	8	10	60%
Control group (n = 25)	14	10	1	96%
<i>p</i>	< 0.05	< 0.05	< 0.05	< 0.05

4. Discussion

With the acceleration of people’s living pace and the increasing incidence of critical diseases among young people due to great life pressure, the incidence of critical illnesses is rising year by year, posing challenges to emergency nursing work. Critically ill patients often have severe conditions and rapid progression, requiring the hospital to provide optimal clinical nursing. However, due to the high intensity of emergency nursing work, medical staff may inevitably make mistakes, which will reduce family satisfaction. Therefore, the author believes that in the nursing of emergency critically ill patients, hospitals can adopt the whole-process nursing model, implementing pre-hospital emergency rescue and subsequent transfer and handover in accordance with established procedures to achieve close connection between all links. At the same time, for some patients with severe conditions, hospitals can open green channels to shorten the time of each link and advance the rescue time as much as possible ^[3].

Emergency nursing is significantly different from routine nursing. Emergency nursing requires nurses to have high professional skills, surgical techniques, psychological quality, be familiar with emergency procedures and methods for various diseases, have good adaptability to emergencies, and be able to respond calmly and make optimal decisions. Emergency nursing not only places higher requirements on each nurse but also on the hospital’s nursing team. Due to the characteristics of acute onset, severe symptoms, rapid progression, and complex pathogenesis, it is difficult to clarify the disease type and cause in a short time, which requires cooperation between medical and nursing staff, each performing their duties and preparing for emergencies in advance. At the same time, actively cooperate with emergency personnel in the rescue of critically ill patients, adhering to the

“people-oriented” work philosophy and focusing on patients in rescue ^[4].

Information exchange is an important step in the whole-process nursing, which is significantly different from routine nursing. Through information dissemination, the connection between the emergency center and ambulances becomes closer, and communication becomes smoother and more frequent. This not only saves the time for 120 ambulances to transport patients to the emergency ward but also reduces the waiting time for patients upon first admission, improving rescue efficiency, an indispensable link for critically ill patients racing against time. At the same time, when there are many emergency patients and critically ill patients, the hospital sets up a triage desk to make the entire Emergency Department more organized and orderly, improving the work efficiency of medical staff. The triage desk can quickly divert patients to different rescue rooms, ensuring the unobstructed life channel for critically ill patients. Communication between doctors and patients and whole-process accompaniment are also advantages of whole-process nursing. Although it is impossible to ensure a one-to-one nurse-patient ratio, each nurse is responsible for several emergency patients to ensure real-time monitoring of their vital signs. Each patient has a dedicated person in charge throughout the treatment process. At the same time, when informing the family of the patient’s condition and rescue plan, medical staff should fully communicate with them, mutual assistance and understanding, forming a trusting and interdependent doctor-patient relationship, and working together for the patient’s treatment. Whole-process nursing is inseparable from the guarantee of advanced hospital systems. The integration of resources among various departments enables information sharing among departments in the hospital, quickly understanding the staffing situation of departments, as well as the number of beds and equipment usage. After successful emergency rescue, some patients are transferred to the ICU. Therefore, strengthening communication between the Emergency Department and ICU is very important. Close communication and information sharing between these two departments are important guarantees for critically ill patients to get out of danger, recover their health, and improve their quality of life ^[5-7].

At present, how to strengthen the rescue of critically ill patients in emergency treatment is the top priority of current emergency work. To improve the rescue quality of critically ill patients in emergency treatment, scholars at home and abroad have carried out a large number of studies. The results of this study show that the rescue success rates of the experimental group and the control group were 96% and 76%, respectively ($p < 0.05$); the satisfaction rates were 92% and 68%, respectively ($p < 0.05$). The results are basically consistent with the research results of Lin Meirui et al., which showed that the rescue success rates of the experimental group and the control group were 100% and 86.41%, respectively, with a significant difference ($p < 0.05$), and the nursing satisfaction rates were 99.03% and 83.50%, respectively ($p < 0.05$). The results of this study show that the optimization of nursing procedures is effective in the emergency rescue of critically ill gynecological patients, and the improvement of skills can also improve patient satisfaction, which is consistent with the conclusion of this study ^[8].

The results of this study show that the rescue success rate of the experimental group was higher than that of the control group. In short, the implementation of whole-process nursing in emergency rescue can effectively improve the rescue success rate. This may be because the whole process, from information exchange to the optimization of nursing methods, is better than routine nursing, which not only enhances the cooperation between doctors and nurses but also increases the success rate of patient rescue ^[9]. The satisfaction of the experimental group with nursing work was significantly higher than that of the control group. The results of this study show that whole-process nursing can improve patients’ satisfaction with care. There were significant differences in satisfaction between the two groups of subjects. However, the control group had more satisfied indicators than the experimental group. This may be because the nurses have high professional quality, excellent skills, and are familiar with emergency procedures, so they can maximize the rescue of each critically ill patient in daily nursing ^[10]. In the experimental group, the satisfaction

of the subjects included both the families of successfully rescued patients and those of unsuccessfully rescued patients. The results of this study show that even if the rescue is unsuccessful, the family members of the patients still have strong confidence in the medical staff.

5. Conclusion

In summary, the implementation of whole-process nursing plays a crucial role in increasing the rescue success rate of critically ill patients, improving the satisfaction of both patients and their families, and enhancing patients' overall quality of life. It is an essential component of high-quality critical care and warrants continued promotion and refinement in clinical practice.

Disclosure statement

The author declares no conflict of interest.

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