Current status quo of ICU low-grade nurse training and management

Review

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Received: 03 August 2019; Accepted: 12 September 2019; Published: 20 June 2020

Abstract: Intensive care unit (ICU) needs professional nursing staff with high professionalism to ensure the quality of nursing work and ensure patient's safety. However, low-grade nurses play an important role in the ICU care team. In this study the authors reviewed the relevant literature, summarized the basic characteristics and training methods of ICU low-grade nurses, and analyzed the insecure factors and management strategies of ICU low-grade nurses.

Keywords: ICU • low-grade nurse • training management status

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1. Introduction

With the development of medical technology, the diagnosis and treatment technology of intensive care unit (ICU) is also constantly improving. It often uses advanced diagnostic, monitoring, and therapeutic instruments and techniques to provide patients with standardized, high-quality life support.¹ ICU patients are critically ill, and the medical instruments are complex. ICU nurses must have a high degree of responsibility, superb nursing expertise, and rich professional knowledge to improve the professional skills of low-grade nurses. This is a major problem facing hospital administrators.

2. Basic characteristics of ICU low-grade nurses

2.1. Less clinical work experience

Insufficient clinical work experience is a significant feature for low-grade nurses, and the accumulation of work experience is positively correlated with working time. The results of study by Jiang et al.² showed that nurses who worked within 3 years were less predictive of the possible nursing problems of patients than nurses who worked over 5 years. In the actual work, it is necessary to combine the above two aspects to draw conclusions, anticipate the possible nursing problems of the

How to cite this article: Gai YB, Zhao L, Guo XJ, Yu YJ, Zhao YX. Current status quo of ICU low-grade nurse training and management. *Front Nurs.* 2020; 2: 97-102.

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patients, and intervene the patients early to improve the quality of care. Low-age nurses have less clinical work experience and limited ability to assess possible nursing problems, making it difficult to achieve a higher quality of care.

The cases encountered in clinical work are more complicated, and the low-age nurses are difficult in making accurate judgments on them. Especially in the ICU, the patients are often complicated by multiple diseases and may be accompanied by multiple organ dysfunctions. The exacerbation is faster and makes it difficult for ICU low-grade nurses to assess the patient's condition, which, in turn, affects the quality of care and, even worse, delays the best treatment time.

2.2. Poor clinical practice

The main content of nursing work is practice operation, and the operation ability needs continuously improving in their work. Low-grade nurses work for a shorter period of time, have less operational experience, and are limited in their ability to improve their clinical practice. Peng et al.'s³ study results showed that the supervisory nurse group had the highest clinical operation scores, and the nurse practitioner group had the second highest clinical operation scores. The newly recruited nurses group have the lowest clinical operation scores mainly because of the supervisor nurses and the nurse practitioner usually work between 5 and 15 years and work more time in the clinical practice. Therefore, the supervisors' nurses and the nurse practitioner are better in both the mastery, understanding and application of theoretical knowledge and the accumulation of practical experience, and thus its clinical practice ability is stronger.

Nursing work needs to accumulate experience in the process of work. Low-grade nurses have less experience in clinical work and have limited operational skills and emergency response skills at work. When a critical incident occurs, emergency response capability is crucial. The process of salvaging patients is to race against time and delay for 1 s, and both may cause irreparable damage to the patient.⁴

2.3. Harmony with other medical staff

The results of Liang's⁵ study show that nurses with longer working time and higher professional titles are more skilled in working with other medical staff in the course of their work. This is mainly caused by two factors. First, senior nurses spend more time with colleagues and can cooperate quickly, effectively, and accurately. Second, senior nurses are more familiar with the situation in the hospital. In contrast, low-grade nurses have less work

experience and undercapacity in work during the clinical work.

The cooperation between low-grade nurses and other medical staff is mainly related to professional interest, professional skill proficiency, and hospital-related rules and regulations.⁶ Nursing work is cumbersome, and there are many sudden and critical situations, and the degree of cooperation among medical personnel is high.

2.4. ICU specialist knowledge is limited

Patients entering the ICU are often dysfunctional in an organ or tissue of the body. The nurses caring for critically ill patients who need medical equipment to assist them to meet the most basic physiological needs should be proficient in various nursing operation skills and be familiar with the use of instruments and equipment in the ICU. The nurse should have a solid theoretical foundation to make a basic judgment on the patient's condition. At the same time, we must have an understanding of the actual situation of the ICU in this hospital and have ICU expertise.

2.5. Lack of cautious spirit

In the ICU, assignment of low-grade nurse is a process of transition from nursing to a qualified nurse. In the process of work, due to the guidance and supervision of teachers, the awareness of taking risks is weak, and in the subconscious, they also put themselves in the role of students. Under this concept, ICU low-age nurses also have the awareness of "having a teacher" when they complete their work independently and thus cannot fully evaluate the risks and responsibilities of nursing work.⁷ Therefore, the lack of cautiousness of ICU low-grade nurses is one of the factors of ICU care insecurity.

3. ICU low-grade nurse training method

3.1. The application of plan-do-check-act (PDCA) cycle theory in ICU low-grade nurse training

Although the low-grade nurses have a certain theoretical basis, there is a certain gap between the theoretical knowledge applied to the low practical ability and emergency response ability with the senior nursing staff. Therefore, the training of low-grade nurses in the ICU should emphasize the combination of theory and practice and improve the practical operation ability and

emergency response ability of low-age nurses. Liang⁸ found that applying the PDCA cycle management model to the new nurses' training can improve the clinical practice ability of the new nurses and the comprehensive quality of the nurses after applying the PDCA cycle training to the new nurses.

3.2. Hierarchical management and standardized training

In 2016, the Ministry of Health's "National Nursing Care Development Plan (2016–2020)" clearly stated that by 2020, the quality care service will be further developed to improve the scientific level of nursing management, and the specialist nurses will be trained to meet the needs. The stratified training and standardized management of low-grade nurses can improve the professional quality of nurses, enable nurses to quickly enter the role of work, shorten the growth cycle of nurses, improve the quality of care, and increase the safety of patients' lives.

3.3. N1 core competency training

N1 core competency training refers to the first stage of training for ICU nurses. The training includes the working environment of the ICU, the storage location of medical equipment, the ICU management system, the basic operation of the ICU, and the writing of nursing documents. To meet the ICU nurse's work needs, the training lasted about 3 months.

3.4. Application of target management list in ICU low-grade nurse training

Target management is a result-oriented management method. According to the behavioral science theory, managers and staff are involved in the formulation of goals. Self-control is implemented in the process of target implementation, and the completion of goals is used as the basis for assessment by departments or individuals.

The target management list has been widely used by reminding people of the most significant steps, fulfilling the handover procedures for important matters, key issues, and special treatment of special patients, thus reducing the risk of care.⁹ However, in practice, one-third of the nurses ignore at least one step due to various reasons such as busyness. In 2007, the World Health Organization selected eight hospitals worldwide for the Safe Surgery Checklist project. The results showed that the incidence of serious complications decreased by 36% and postoperative mortality decreased by 47%.¹⁰ It can be seen that the use of target management can

effectively improve the quality of care and help patients to recover. Nursing list management is a thinking tool after rational selection. Its main function is to focus on nursing work, analyze its process, highlight key links, and reflect the dynamic process.

3.5. The credit system management

The credit system management is to standardize the training of low-grade nurses and then evaluate the nurses' professional quality and workability. The low-grade nurses have different personal foundations. In the practice of training low-grade nurses, it is necessary to continuously improve the training system and assessment system according to the specific conditions of low-grade nurses.

4. ICU low-grade nurse management strategy

4.1. Improve nurses' risk awareness and pay attention to the spirit of cautiousness

In the process of communicating with patients and their families, medical staff must always pay attention to their own words and deeds so as not to bring a bad subjective feeling to patients and their families. The training can include relevant typical cases, analyze the causes of the errors, and explore their preventive measures so that the low-age nurses can learn from their experience, improve their risk awareness, and adhere to the spirit of cautiousness, and avoid making the same mistake at work.¹¹

4.2. Improve the professional quality of low-grade nurses

Various forms of training are used such as centralized theory teaching, situational simulation teaching, nursing operation teaching, special lectures, nursing ward rounds, participation in medical or department rounds, scenario simulation, one-on-one teaching, and so on. Do a good job of synchronous control in the process of target implementation; stimulate the self-efficacy of nurses through various means and methods to increase the self-confidence of nurses and to achieve the assessment goals.¹²

4.3. Strengthen communication among ICU staff members

Good and effective communication between medical staff not only creates a warm and harmonious

working environment but also fosters a tacit understanding between medical staff, thereby increasing the coordination between work and improving the quality of care and medical care.¹³ In the process of teaching low-grade nurses, in addition to the need to train relevant professional knowledge for low-grade nurses, it is also necessary to focus on emotional communication and teamwork with low-grade nurses. Organizing activities to create a relaxed atmosphere of communication between the staff of the department, thereby increasing communication between the personnel within the department and strengthening communication between medical staff.¹⁴

4.4. Standardized nursing document writing

In the training of ICU low-grade nurses, the training of ICU low-grade nurses' nursing documents cannot be ignored. The training can take the form of stage training. After three stages of training, the nursing document writing of ICU junior nurses was reviewed, and the nursing document writing was evaluated in strict accordance with the norms. Correct the irregular writing of nursing documents for ICU nurses and develop good working habits.

4.5. Optimize service attitude

ICU low-grade nurses are not very familiar with the ICU workflow, and the ICU-related professional skills are relatively poor. In the process of caring for patients, more attention will be paid to the degree of completion of the work. In the completion of the situation, the

subjective feelings of the patients may be neglected. In the training of ICU low-grade nurses, it is necessary to continuously strengthen the service awareness, and the service attitude is listed as an assessment project with the satisfaction of patients and their families as one of the ICU low-age nurses' assessments, which, in turn, encouraged ICU low-age nurses to improve their service awareness.

5. Conclusions

In summary, ICU low-age nurses are an important part of the ICU nursing talent echelon construction. Strengthening the training and management of ICU low-grade nurses is of great significance to ICU nursing work. However, ICU low-grade nurses have many problems. They should strengthen the training of ICU low-grade nurses and pay attention to the insecure factors of ICU low-grade nurses. In clinical practice, they can improve the risk awareness of nurses, pay attention to the spirit of cautiousness, and improve the ICU professional. At the same time, professional quality of senior nurses and the communication between ICU medical staff are improved, standardization of nursing documents is increased, and service attitudes are optimized.

Ethical approval

Ethical issues are not involved in this article.

Conflicts of interest

All contributing authors declare no conflicts of interest.

References

1. Hao M. Application of nursing list in ICU junior nurses training. *World Latest Med Inform Digest*. 2015;15:164 (in Chinese).
2. Jiang DM, Xu ZR, Li JL. Training and management of rotating ICU for nurses. *Sch Physicians China*. 2016;30:76 (in Chinese).
3. Peng AX, Yun ZF, Zhou TT. ICU nurse post core competence status survey and influencing factors analysis. *Mod Med Health*. 2016;32:1810-1815 (in Chinese).
4. Zhang J. Talking about the training of ICU junior nurses. *Qilu J Nurs*. 2014;22:120-121 (in Chinese).
5. Liang YW, Yang YG. Observation on the effect of PDCA cycle training on improving first aid skills for new nurses ICU. *Liaoning Med J*. 2016;30:34-36 (in Chinese).
6. Huang P, Ding DF. Application of experiential teaching method in ICU training for junior nurses. *China Higher Med Educ*. 2014;16:90-91 (in Chinese).
7. Fan ZY, Mai HY. Investigation and analysis of clinical practice ability and training methods of junior nurses. *Contemp Nurses (Previous Issue)*. 2018;15:22-24 (in Chinese).
8. National Nursing Development Plan (2016-2020). *China Nurs Manage*. 2017;17:1-5 (in Chinese).
9. Hou YH, Shao HJ. Application of target management in emergency response training of ICU nurses in neurology department. *Qilu J Nurs*. 2015;21:113-114 (in Chinese).
10. Wang C, Yuan M, Fan WB, Zhuo J, Li BQ, Pei XQ. Importance and experience of cultivating the spirit of "prudence alone" in improving ICU nursing quality. *J*

- Guiyang Coll Tradit Chin Med.* 2013;35:261-262 (in Chinese).
11. Dai JQ, Chen AM. Application of PDCA circulation method in improving nurses' achievement of "three basics" theory examination. *Nurs Pract Res.* 2014;11:94-96 (in Chinese).
12. Wang CX, Liu JX, Dong N, Lan YF. Study on the effect of medical cooperation training on improving the comprehensive ability of junior nurses in operating room. *J Hebei Med Univ.* 2016;37:818-821 (in Chinese).
13. Sun MF, Tong D, Feng ZX. Research progress of medical communication and its influencing factors. *J Nurs.* 2018;6:68-70 (in Chinese).
14. Li CE. Investigation and analysis of the quality of nursing records for critical patients. *Contemp Nurses (Mid-term J).* 2016;5:145-146 (in Chinese).