

Analysis of Timely Intervention Model for Nursing Errors in Comprehensive Operating Rooms

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Abstract: Timely intervention of occurrence of nursing errors in comprehensive operating rooms is the work that the comprehensive operating room must do in the event of a nursing error, which is of great significance for the possible improvement of nursing errors, the analysis of timely intervention model for nursing errors in comprehensive operating rooms and the design for evaluating the intervention system of operating room nursing safety. By analyzing the timely intervention model for nursing errors in comprehensive operating rooms, a professional nursing safety intervention organization was established based on the model to prevent the occurrence of nursing errors. It is of great significance to analyze the timely intervention model for nursing errors in comprehensive operating rooms in the safety management of operating room.

Keywords: Operating room; Safety intervention; Safety management; Nursing errors;

1. Introduction

Model is a tool for quantitative analysis, which is widely applied in managerial economics. The model is essentially an abstraction of complex reality, which simplifies and visualizes the problem in order to accurately grasp the connection between things and to understand the nature of things, thereby effectively solving the problem [1]. Establishing model is an effective way of managing decision and analyzing economic in practice. In addition, more remarkable, timely intervention model for nursing errors in comprehensive operating rooms is a very limited quantity relationship. There are many complex problems in the real economy, which cannot be represented by a simple model. Therefore, it also requires a qualitative analysis method [2].

Timely intervention model for nursing errors in comprehensive operating rooms mainly has influence on the patient's psychological state and vital signs through the operating room nursing intervention. With the progress of society and the popularization of medical and legal knowledge, people's consciousness of rights safeguarding has been improved greatly, and higher requirements have been placed on the quality and safety of medical care. In particular, after Medical Malpractice Management Regulation and inverted evidence-providing came out, medical and nursing disputes were significantly increasing[3]. Dependents are dissatisfied with the treatment; The works in operating room are of constant, complex and comprehensive. Thus, operating rooms often become the place of medical negligence and disputes. This paper discusses how to prevent nursing-related dis-

putes in the medical operations of the operating room and the application of the timely intervention model for nursing errors in comprehensive operating rooms. Also, strengthening the awareness of the operating room nurses about laws, services, and evidence, and using legal weapons to protect the legal rights of themselves and patients are discussed in this paper [4].

2. The Design of Timely Intervention Model for Nursing Errors in Comprehensive Operating Rooms

The timely intervention model for nursing errors in comprehensive operating rooms evaluates policy intervention or detailed impact on economic environment and economic process caused by emergent events in a way of quantitative analysis. The design model is based on the addition and subtraction of building monomers and the splicing of groups as a means to design a discussion program. It is equal to the sketch of building design, and it is just replaced by the actual design. The performance model aims to represent the architectural scheme that has been designed, which is equivalent to the perspective of architectural design. The difference is that one is shown in substance, the other is shown in plan. Although these two basic forms are building models, their properties are different. The former aims at making design plan more perfect by studying it in a form of space, constantly focusing on the exquisiteness and accuracy of model, only the overall basic relationship effect is required. However, the purpose of the later is to achieve visibility, reality and image of model performance. The basic requirement of

model is the accuracy and preciseness of design. When making architectural models, the differences and characteristics between them must be clarified. The emphasis on timely intervention is shown in Figure 1.

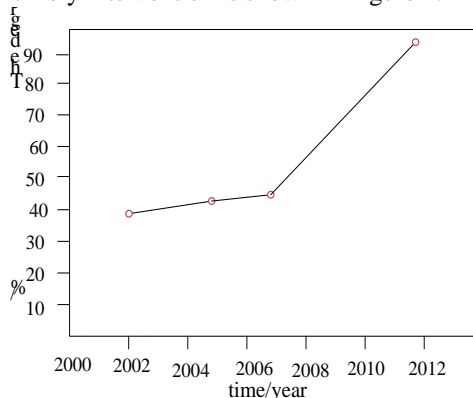


Figure 1. The curve of emphasis degree of timely intervention

In Figure 1, as time goes by, people put more and more attention on timely intervention. Since lack of correct understanding of operations, patients have different levels of nervousness, anxiety, anxiety and other negative psychological emotions before the operation. Therefore, patients' specific psychological state should be reassured and strengthen communication with the patient, which can relieve patients' negative psychology, enhance patients' compliance and make it more compatible with surgical treatment, thus accelerating the course of surgery [6]. Research shows that pointed psychological nursing should be given to patients, which can relieve anxiety of patients and make them keep peaceful mind. The patient's good mental state played a positive role in promoting the occurrence, development, prognosis and rehabilitation of the disease. Psychological nursing can relieve anxiety and help patients actively cooperate with surgical treatment and accelerate postoperative recovery.

The doctors and the patients have disputes over the medical consequences and causes of the disputes and lodge complaints with the judicial authorities or the health administrative department. With the progress of society, and with the improvement of patients' self-protection awareness and increasing demand for medical care level, the incidence of medical disputes is on the rise. As a comprehensive teaching hospital operating room, there are many types of surgery, with complex condition, large labor intensity of the nurse, fast work pace, high pressure, high technical content to be mastered, and there is a high possibility of generating a nursing dispute. Now the causes of nursing disputes in recent years are analyzed, and preventive measures are put forward.

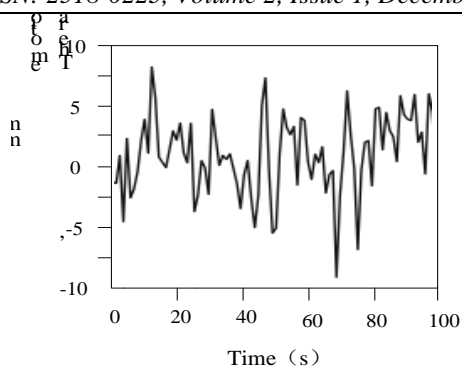


Figure 2. Emotional fluctuation curve of patients before and after intervention

From Figure 2, it can be seen that when the intervention is not performed, the mood of the patient fluctuates greatly, which adversely affects the patient's physical recovery. Preoperative interviews play an important role in the overall care of the operating room, not only to understand the patient's basic situation and mental status, but also to help patients adjust the state of mind, physiology, society, etc., to promote the smooth progress of surgery and accelerate the patient's rehabilitation process. The standard of preoperative visits combined with visit card visits can reduce the patient's preoperative anxiety and make the patient more actively cooperate with surgical anesthesia; Visiting nurses can also fully understand the patients, and make assessments, prepare surgical items in advance, and provide the basis for tacit cooperation in surgery to promote smooth operation. The study pointed out that surgery can be performed under general anesthesia, and preoperative surgical visits such as comic book manuals and storytelling can improve the patient's degree of surgical cooperation. The ideas and specific steps for modeling intervention models are:

Firstly, using the data before the impact of the intervention to analyze the effectiveness of timely intervention model for nursing errors in comprehensive operating rooms and establish a univariate time series model. And then use this model to extrapolate and predict the resulting value as a value that is not affected by the intervention. Finally, the actual value is subtracted from the predicted value to obtain the specific results affected by the intervention. These parameters can be used to estimate the parameters of the intervention model. Next, the parameters of the intervention model are estimated. Again, using the entire data after exclusion of the intervention, a single-variable time-series model was identified and estimated. At last, the total intervention analysis model is found. In the development of economics and management, more and more methods are applied to quantitative analysis. The timely intervention model for nursing errors in comprehensive operating rooms is a model that aims at reducing nursing errors in operating rooms.

3. The Application of Timely Intervention model for Nursing Errors in Comprehensive Operating Rooms

3.1. The application of intervention model in avoiding mistakes

The purpose of strengthening legal awareness and standardizing nursing behavior is to improve the safety awareness and legal awareness of operating room nurses. Targeted law and regulations learning is conducted unscheduled in the department, combined with explaining and analyzing problems in practical work, which can guide nurses in the department to learn the law, understand the law, observe the law and use it, and constantly strengthen the awareness of legal self-protection and risk. Besides, it also can standardize nursing behaviors, improve self-discipline and prudence, and strengthen the sense of responsibility. Thereby, the occupational risk of nursing is reduced, which can not only safeguards the patient's health and legal rights, but also protects nurses themselves [7]. Nurses must strictly implement various rules and regulations and operational procedures, clarify that each class should perform its own duties, be in office, and not be engaged in overdue behavior. Moreover, item management in operations should be enhanced, nurses also need to do handing procedure, standardize the placement and delivery of surgical items, use the developing gauze in the surgery, and add items to the record. In principle, the change of scrub nurses and circulating nurses in a surgery is not needed, but if there is actually need to change stuff, items should be handed over clearly and signature should be recorded. In order to prevent the physical injury of patients, the various check systems will be strictly enforced, and nurses should check every link carefully in a highly responsible attitude. Drops, falls, and bruises should be prevented when transporting patients; Components in the bed should be fixed firmly, when positioning. The limb is in the functional position, and the soft pillow is cushioned at the bony promontory to avoid local pressure and the body does not directly contact the metal parts. If there are ornaments, they should be removed from the patient and be handed over to the relatives of the patient directly by the patient and the nurse. Circulating nurses should check the operating table and the function of electric knife, and electrode pad should be placed properly. Also, circulating nurses need to instruct doctors to use electric appliance such as electric knife to prevent scalding and injuring patients accidentally.

The loss and mistake of pathological specimen should be prevented in operating rooms, and nurses should take care of all the specimens removed during the surgery. After the operation, the surgeon will be sent to the doctor for signature. Frozen during operations, exfoliated cells and other pathological findings must be issued to the

doctor in a formal written report. To avoid long-term overload work, head nurses should take flexible schedules, rotate their hands daily, work with nurses on tour, and rotate between big and small surgeries so that each nurse completes each operation with full enthusiasm. Continuing education is enhanced, comprehensive quality of nurses is increased, and attention should be paid to updating and supplementing your own knowledge and actively participate in self-examination. Theoretical and professional skill level of nurses is improved and nursing error and dispute caused by business technical issues is reduced by many kinds of activities in the department. Such as asking questions in the morning meeting every day, organizing business study every week, and taking the operation theory test once a month, designating a nurse to conduct business seminars, inviting all professional directors to explain the new surgery and essentials irregularly, inviting technical instructors of each instrument manufacturer to introduce the use of instruments and equipment and precautions, and sending two business leaders to go out for training every year. Ensure that emergency equipment and medicines are well-preserved such as electric knives, oxygen suction devices, defibrillators, and ventilators, etc., so that regular maintenance, inspection, quantitative, and positioning placement can be performed [9]. Regulations should behave in a manner that promotes communication between nurses and patients. Medical staff should pay attention to their own appearance, behave generously, and give patients care, love, and patience. Before explaining each operation, do a good job of explaining and paying attention to the protective medical system. Do not talk loudly between operations, talk about topics that are not related to surgery, and in particular, involve the patient's privacy and jealousy. When reporting adverse malignancy results to the doctor, the patient should be evaded and questions about the patient's condition or the family's condition should not be arbitrarily answered. The curve of patients' emotional fluctuation after intervention is shown in Figure 3.

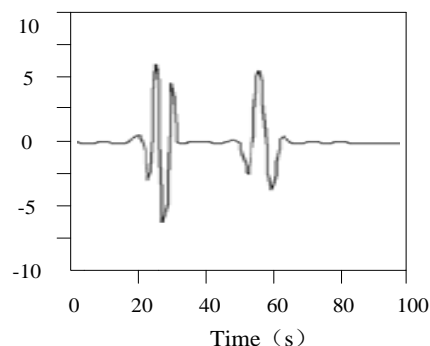


Figure 3. The curve of patients' emotional fluctuation after intervention

As can be seen from Figure 3, the post-intervention patient's mood swings were relatively stable. The important content of nursing management is the prevention and control of infection in operating room. Therefore, reducing the infection rate of surgical incision is the key link of operating room nursing. In this study, strict prevention and control of surgical site infection was carried out by strengthening nursing intervention in the operating room, and the incidence of infection was significantly reduced. It is a part of the patient's medical record and a evidential material with legal basis to standardize the surgical nursing record. It records the whole process of surgery nursing. Therefore, records should be rigorous, legible, consistent in medical care, and should not be altered, missing or missed. Nurses must ensure that the recorded content is objective, timely, truthful, complete, and accurate. Sterile package sterilization indicator cards and implantable product labels must be affixed to the surgical care record sheet with text instructions. All materials are in duplicate, one copy is filed with the medical records, and one is kept in the reserve for use as evidence. The head nurse sent special personnel to step up supervision and inspection, find problems and feed them back to nurses on duty, promptly correct them, and give bonus points and bonuses. This increases nurses' self-protection awareness and evidence awareness in the operating room, and avoids the difficulty of inverting the evidence [9].

3.2. The application of intervention model in the nursing process

The operating room is an important place for diagnosis, treatment and rescue. The working environment, safety and material guarantee provided by the operating room play an important role in the success of the surgery. Due to strict requirements for sterility in operating room, frequent emergency treatment, nurses perform oral instructions and other characteristics, the error accident is easy to happen, once it occurs, it can at least increase the suffering of patients, or even cause disability or other serious consequences. Therefore, it must be highly valued. Operating room is a special place for patients to be treated. There are many critical patients and there are many rescue operations. The task of nurses is heavy, the pace of work is faster than that of other departments, and there is a need for a high degree of concentration during work. And for major surgery, it often takes a long time to work. In such a work environment, how to ensure the safety of the operating room nursing work and reduce the occurrence of adverse nursing events is an important content for the operating room nurse. Nursing adverse events are important factors affecting the quality of care. Preventing the occurrence of adverse events during surgery is the key to ensuring the safe operation of the surgery. For the cause of adverse events in the operating room, corresponding preventive measures should be put

forward. Surgical patients were divided into control groups according to the random number method: routine nursing and observation group nursing interventions, 40 cases each, the scores of anxiety and depression were compared between the two groups before and after visits. The pain scores at 1h, 6h, and 12 h after surgery were compared, as well as the changes of preoperative, anesthetic, and postoperative vital signs. Compared with the control group, the anxiety and depression scores of the observation group were reduced after the visit, and the pain scores were decreased after 6h and 12h. In the observation group, heart rate, systolic blood pressure, and diastolic blood pressure decreased before and after anesthesia, and the difference between the two groups was statistically significant ($P < 0.05$). The operating room nursing intervention can effectively regulate the negative emotions of thyroid surgery patients, reduce the surgical stress, and make patients better tolerate surgical treatment. Surgical site infection is a common type of surgical infection, mainly due to perioperative surgical deep organs or incisions, infections in the cavity. Surgical site infection is an important cause of prolonged hospital stay, increased financial burden and leading to postoperative death, and is one of the complications [10]. Therefore, prevention and control of the operating room is very necessary. Postoperative pain is a reaction of the body to its own harm. Pain is the subjective feeling of self caused by the physiological, psychological and social factors. Large operation wound will cause high incidence of postoperative pain. Pain can cause muscle contractions and vasoconstriction of the body, resulting in post-operative wound ischemia. This in turn leads to hypoxia and edema, weakened immunity, slower healing of wounds, and pathological changes caused by pain that affect the patient's postoperative recovery and can easily cause complications such as urinary, cardiovascular, and respiratory systems. The effect of pain on postoperative patients is very serious and can cause psychological, mental, and emotional anxiety in patients, often leading to postoperative insomnia [11]. Pain can also cause sympathetic nerves to excite, cause vasoconstriction, ischemia, and affect wound healing. Therefore, how to effectively carry out nursing interventions and reduce postoperative pain and the incidence of pain is the main problem faced by current medical staff [12]. The curve of pain after surgery is shown in Figure 4.

As can be seen from Figure 4, nursing staff comfort and help the patient mentally and psychologically during the nursing process. This enables the patient to truly feel the warmth of human nature, improve the tension between doctors and patients, and mobilize the subjective initiative of the patient during the recovery process, which can make the recovery more smooth. Postoperative nursing is the key to postoperative rehabilitation of patients, which can prevent complications such as bleeding infiltration

and urinary tract infection of intestinal adhesion incision of bed sore [13]. The doctor-patient relationship harmony rate curve is shown in Figure 5.

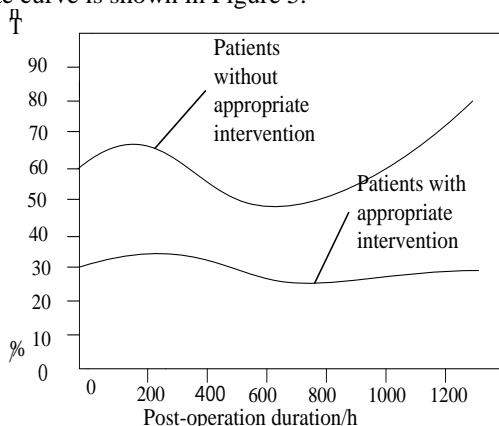


Figure 4. The curve of pain after surgery

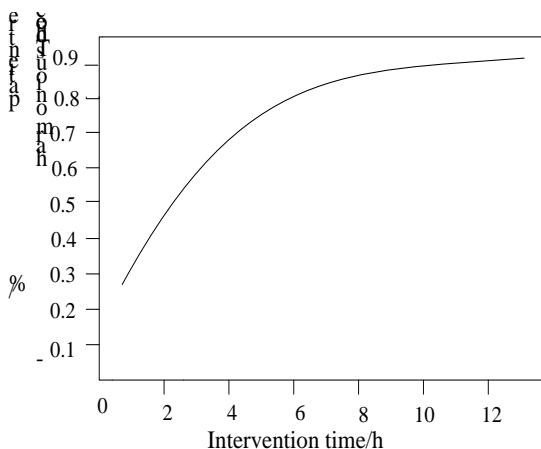


Figure 5. The curve of harmonious doctor-patient relationship rate

As can be seen from Figure 5, appropriate intervention can affect the doctor-patient relationship. Psychiatric nursing, skin preparation, gastrointestinal tract preparation are given to patients before the surgery, observation, wound care, comfort care, dietary nursing and other peri-operative nursing interventions are given to patients after the surgery, which both are important means to ensure the success of the operation. Careful and thorough peri-operative care is of great significance to postoperative rehabilitation of patients [14].

4. Conclusion

Through the continuous strengthening of legal awareness of nursing staff, strictly doing their own duties in accordance with the rules, learning to use legal weapons to protect and restrain themselves, and correctly handle the problems that arise in the work, so that the potential risk of care can be prevented, and eliminate all kinds of inse-

curity in the bud as much as possible. It has achieved good results in this year's special inspection activities for the 100-day medical safety in the province [15]. In order to ensure the quality of surgery, the medical model has been gradually developed towards biological, psychological and social direction. Nursing staff need to constantly change their own nursing concepts to promote the improvement of nursing quality, reduce the incidence of postoperative complications, ensure the safety of surgery, and continue to improve patient care satisfaction.

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