PERCEPTION OF NURSES ABOUT THEIR AUTONOMY IN PREVENTION OF PNEUMONIA ASSOCIATED WITH MECHANICAL VENTILATION

RESUMO

Objetivo: descrever as percepções dos enfermeiros acerca de sua autonomia na prevenção de pneumonia associada à ventilação mecânica. Método: estudo qualitativo, realizado com oito enfermeiros da Unidade de Terapia Intensiva de um hospital universitário em Curitiba/PR. As entrevistas foram gravadas, transcritas e analisadas conforme técnica de análise de conteúdo. O estudo foi aprovado pelo Comité de Ética em Pesquisa, CAAE 04335312.5.000.0103. Resultados: após a análise emergiram três categorias: 1. Percepções relacionadas ao exercício de competências gerenciais do enfermeiro; 2. O processo de trabalho na enfermagem como interveniente na articulação de medidas preventivas; 3. As medidas preventivas preconizadas para a prevenção de PAV como forma de autonomia técnica para o enfermeiro. Conclusão: houve percepções positivas acerca da autonomia do enfermeiro, principalmente no que se refere à educação permanente, a prescrição de enfermagem e a comunicação, porém permeadas por desafios como a realização da sistematização da assistência de enfermagem. Descritores: Autonomia Profissional; Respiração Artificial; Enfermagem; Pneumonia Associada à Ventilação Mecânica.

ABSTRACT

Objective: describing the perceptions of nurses about their autonomy in the prevention of ventilator-associated pneumonia. Method: a qualitative study conducted with eight nurses of the ICU of a university hospital in Curitiba/PR. The interviews were recorded, transcribed and analyzed according to the technique of content analysis. The study was approved by the Ethics Committee in Research, CAAE 04335312.5.000.0103. Results: after analyzing, three categories emerged: 1. perceptions related to the exercise of managerial skills of the nurse; 2. the process of nursing work as intervening in the articulation of preventive measures; 3. the recommended preventive measures for the prevention of VAP as a form of technical autonomy for nurses. Conclusion: there were positive perceptions of autonomy of nurses, mainly in regard to continuing education, prescription of nursing and communication, but permeated with challenges such as performing the systematization of nursing care. Descritores: Professional Autonomy; Artificial Respiration; Nursing; Ventilator-Associated Pneumonia.
INTRODUCTION

Nosocomial infection (NI) is defined as any infection acquired after admission of the patient and which becomes manifest during this period or even after discharge; since related hospitalization or medical procedures performed, as well as the hospitalization time and the incubation period; being the most important risks to the patient, it is included in the indicators of quality of health care.²

In Intensive Care Units (ICU), being highly complex environments, NIs are associated primarily with the severity of underlying diseases; the large number of invasive procedures performed; the use of mechanical ventilation, central venous catheter, urinary catheter and; mainly to prolonged hospitalization, favoring the selection of resistant microorganisms.³

Among the various topographies of NI stands out in incidence the hospital-acquired pneumonia. This injury is the second leading cause of infection, which occurs in 30% of patients on mechanical ventilation. ICU pneumonia is linked to the use of mechanical ventilation, resulting in high morbidity, mortality, and also the emergence of multidrug-resistant pathogens, causing increased length of hospital stay and higher costs to the public health services and supplemental health.⁴

Ventilator-associated pneumonia (VAP) is defined as one that develops forty-eight hours from the onset of mechanical ventilation; being considered within forty-eight hours after extubation; being one of nosocomial infections with greater topographic incidence in intensive care units, with rates ranging from 9-40% of infections acquired in this location, and is associated with an increase in length of hospitalization and rates of mortality, impacting significantly on healthcare costs.⁵

It becomes key a combination of measures to preventing and controlling this disease. Thus, it reinforces the contribution of nurses and in this context, as described in Law No. 7.498, of June 25ᵗʰ, 1986,⁶ this professional has as its exercise activities that fit its privately, among them the prevention and control of nosocomial infections and communicable diseases, so it is up to the nurse to exercising their autonomy with regard to the prevention of VAP.

The process of autonomy presupposes that the nurse can plan the nursing care, setting assistance priorities. This practice, with regard to the prevention of infection, it can contribute to reducing morbidity and mortality, among other factors that contribute to improving quality of care.⁸

Since the occurrence of NI contributes to increased length of hospital stay of the patient, causing higher expenses to the institution and the funder of health care system, whether public or private, beyond individual consequences for the patient, it is clear the importance of articulations of appropriate measures for prevention and control, being fundamental to positive perception and the proper exercise of autonomy for nurses to leverage their actions to reducing this hazard and to improving quality of care⁹.

Based this theme, it is emphasized that it is strongly recommended by the Guideline for Preventing Health-Care-associated Pneumonia edited by the Centers for Disease Control and Preventionⁱ⁰ - CDC/USA, the education of health professionals in the prevention and control of pneumonia. Thus, it is necessary that the nurse has extensive knowledge on this subject, to prevent systemic complications. In this context, knowledge of preventive measures for VAP, coupled with professional autonomy are important factors for reducing the incidence of this infection.

Given the above, the question that guides this study is << What are the perceptions of nurses about their autonomy on the prevention of ventilator-associated pneumonia? >>. And to responding was defined as objective:

- Describing the perceptions of nurses about their autonomy in the prevention of ventilator-associated pneumonia.

METHOD

This is a study of qualitative nature, in a philanthropic university hospital in Curitiba/PR. It occurred in the Surgical Intensive Care Unit, totaling fourteen beds, with the characteristic of adult patient care with clinical and surgical complications.

As inclusion criteria in the study were considered nurses working in the intensive care unit of the place, in different shifts (morning, afternoon, evening) and who agreed to participating. It was explained to the participants about the objectives and the voluntary nature of the survey and then asked to signing the Informed Consent Form (ICF).

The choice of these professionals was due to be responsible for the planning of nursing care to patients with mechanical ventilation. As exclusion criteria were individuals from other professions, who did not work in that
ICU; nurses who did not accept to participating in the survey and who were on vacation or sick leave.

From the total of ten participants, eight met the inclusion criteria, all being invited to participating in the study in time defined by their head, so they do not harm the workday, in a reserved place. All agreed to participating in the study. The approximate length of the interview was of 30 minutes. In order to maintain secrecy regarding the identity of the participants, they were identified by the respondent word followed by a numerical sequence of one to eight for their identification.

Data were produced through a semi-structured interview, recorded, using a guiding instrument for each respondent, composed of four open questions: << What is your perception about the prevention of ventilator-associated pneumonia? >>, << In your opinion, what is the role of the nurse and how can it exercise its autonomy in the prevention of ventilator-associated pneumonia? >>, << What are the actions that the nurse must have on its team, in the prevention of ventilator-associated pneumonia? >> and << In your daily which agents are facilitators and what the challenges for the prevention of these infections? >>.

After data production, we proceeded to the organization and analysis of the same. For this it used the technique of content analysis proposed by Bardin. This analysis technique is divided into three phases: pre-analysis, which defined the place where the records and the level of importance of the records occurred that is related to the frequency in which they appear; exploration of the material, where it was organized to give simplified representation of the raw data, enabling the creation of categories and; inference and understanding where there was performed the deduction and the understanding of the reasoning transmitted by the interviewed agent.

The study was approved by the Research Ethics Committee, being registered under the CAAE number: 04335313.5.000.0103. The ethical principles governing research with human beings in Brazil were respected.

RESULTS

After discourse analysis, three categories emerged: 1) Perceptions related to the exercise of managerial skills of the nurse; 2) The process of work in nursing as a player in the articulation of and preventive measures for VAP; 3) The recommended preventive measures for the prevention of VAP as a form of technical autonomy for nurses.

♦ Perceptions related to the exercise of managerial competencies of nurses

In the dialogues, were cited some managerial skills needed to carry out nursing and the importance of ongoing education, communication, and evaluation and supervision of staff, as can be seen in the narrative below.

I practice autonomy performing nursing care or prescription ... and evaluating the patient, what are patients who have risk and propensity to acquire pneumonia “(E1) would perhaps, obligation of the nurse, train the staff to do a job. If it’s not 100 percent, at least reach the maximum possible. (E3)

It knows that knowledge is essential to the work of the nurses. Without it is not possible assistance, education and care management. Therefore, it emphasizes that predominated in the narratives, the reflection on the need to search for knowledge and technical and scientific improvement, as can be seen in the speeches below.

The challenge is more of knowledge, we need more knowledge. (E4)

[…] in fact, is whether police more, work harder! Is you be much more updated. (E5).

In line with this theme, participants referred to the importance in academic nursing education and communication, as a contributor to the strengthening of an autonomous consciousness, as can be seen in the narratives.

What I think: colleges that orient more! I know this because I was newly formed. I wanted to walk into the hospital and I wanted to do, perform. Just before we run anything, we have to view the prevention for everything. So it is important that awareness come since the formation of the person. (E4)

The nurse has to be available there in bed, along with the patient. Also give training, or whenever you have doubts the nurse is acting in that part. The nurse must be more to teach, to give an even support. (E3)

With regard to communication, the subjects emphasized that competence as a teaching tool, aid and improvement of healthcare practice.

♦ The worker process in nursing as intervener on articulation of preventive measures of PAV

The speeches demonstrate challenges for the exercise of professional autonomy, whose interface with the work process is narrow.
Issues such as employee turnover; the interrelationship of the nursing staff with a multidisciplinary team; the need to organize the process and work of the nursing team and; of adequacy of the design of staff in the intensive care unit were striking in speeches.

With regard to employee turnover and the relationship between the professional nursing staff and other members of the multidisciplinary team, diverse narratives illustrate how these factors involved in the planning and realization of the prevention of VAP, as evidenced below.

The turnover, the lack of staff in both periods, eventually exhausting for everyone present. (E5)

Observed in these speeches as verbs require, policing that underlie the benchmark of a practice model with technical trend.

[...] we have to require the care that will be prescribed for this patient. (E1)

Have to supervise directly the team. (E5)

Actually I think it’s more associated with it: you get always an eye right? Actually do policing. (E8)

It should be noted that even with a predominance of technical assistance model, there is a sense contrary to this practice, as can be seen in the lines below.

The nurse has to devote himself more to the day to day care; we need to “see”! It’s not just run. We have to organize, guide, and examine patients. We have to do the whole part. (E4).

♦ Preventive measures recommended for the prevention of PAV as a form of technical autonomy for the nurse

In the narrative regarding the technical autonomy in the actions of the nurse for the prevention of VAP, predominated in that it is the duration of mechanical ventilation; cleaning and decontamination of the oropharyngeal cavity, aspiration of tracheal tube, hand hygiene, maintenance of high headboard and mobilizing the client, as evidenced in these statements:

The less time the patient stay out of ventilation, the quicker out of ventilation, less will be a chance for him to acquire pneumonia. (E8)

Be attentive to the aspiration in correct technique and oral hygiene, why often people forget oral hygiene, which are the major factors for pneumonia, high headboard also. Sit the patient that also stimulates the sputum. (E3)

It is very important to perform the aseptic techniques right? Since fitting the respirator to disinfection of equipment. Guide the team with relation to the importance of high headboard, why sometimes we find patients in bed with the bed totally ... the headboard is not high. And it is important to be. (E5)

**DISCUSSION**

As regards the first category, called exercise-related perceptions of nursing managerial competences, discloses that the discussion and application of competency models stem from an irreversible movement, whose consequences are perceived in the scenario of education and the labor market.  

The National Curriculum Guidelines for Undergraduate Nursing (DCNCGE) describes that to exercise the skills and general skills of nurses are needed: health care, decision making, communication, leadership, administration, management and continuing education.

The absence or the presence of scientific knowledge directly affects the way the nurse relates to staff, patients and the institution in which it operates. Autonomy in nursing practice means that uses knowledge, skill and competence, making decisions and solving problems in their performance space.  

The health professional is responsible for continuing education, since the nurse should always be able to learn, both in their academic training and in practice. Thus, it became clear that the narratives, there are some important understandings of managerial skills that contribute to the development of autonomous practice, but it becomes a challenge to developing the perception of other as the realization of the systematization of nursing care and the political and social integration of the nurse.

With regard to the category named the process of nursing work as intervening in the articulation of preventive measures for VAP, it is emphasized that the process of nursing work consists of a tool for qualifying assistance and subsidies requires both a theoretical for addressing health disease process, as a work context that encourages and makes possible its implementation. In this sense, demand is a qualified nursing staff for assistance; supervision of work as continuous reflection on practice; the coordination and integration of the components of the nursing staff; and adequacy of physical and material resources.

When corroborating this issue, it describes the process of nursing work defined according to the social dynamics prevailing at different times in human history; therefore, the work processes in health and nursing are not confined to the limits of the hospital environment, but conversely, the hospital work process needs to be seen as a body of social practices in a given society and
subjected to certain historical, economic and political rules.17

By understanding the meanings to the process of nursing work, it could be acting as a counterweight of these concepts with what was observed in the narratives; where one realizes the great influence of the model of the work process, the exercise of autonomy of nurses for a combination of measures aimed at the prevention of VAP.

In line with the lines, it highlights another point that deserves consideration, it is the use of the systematization of nursing care (SAE)18 as a tool for the professional autonomy. Also evident in the narratives emphasize a model of attention permeating technicist professional practice. These professionals can provide trend in appreciation for the assistance technicality, because the hegemonic biomedical model.7 Such practice may be present not only in their training, but also in hospitals.

Henceforth, it is noteworthy that the nursing process can be used as a strategy statement on nursing knowledge and it is a starting point for the autonomous role of a nurse. By SAE, these professionals can make decisions about their practice, visualizing needs to be careful and can develop their practice in accordance with reality.

It is noteworthy that SAE is an instrument for implementing the nursing process in any place where nursing care occurs, providing a greater autonomy to nurses; being composed of five steps, as follows: history of nursing data collection and physical examination, survey of problems, nursing diagnoses, prescriptions and nursing assessment.18

In the third category, referring to perceptions related to the recommended preventive measures for the prevention of VAP as a form of technical autonomy for nurses, arises that technical nursing autonomy transcends the relationship vs. medicine, related to operant knowledge that defines the field itself and the common field of knowledge and practices geared to health care;9 Therefore, autonomy is associated with better delineation of the object of work of nurses.

For measures described by participants as being crucial for the prevention of VAP, oral hygiene was distinguished. This technique should be performed through oral vehicle chlorhexidine (0,12% or 0,2%) and with a small sponge, avoiding damaging the cavity. Suitable for three to four times a day. The professional must be alert to allergies, mucosal irritation or transient darkening of teeth.10, 20

Aspiration of endotracheal tube and airways was also a prominent theme in the narratives. The aspiration of the endotracheal tube is critical to reducing VAP, and there are some recommendations for its effectiveness, namely: the participation of two professionals during the procedure; its realization using aseptic technique; attention as to have adequate oxygenation and ventilation before, during and after the procedure; gavage close before the start of suction in order to avoiding aspiration of gastric contents, and; performing aspiration before installation of diets.10,20

Other topics highlighted in the speeches above were the elevation of the headboard and the mobilization of the patient. With regard to the elevation of the headboard, it is noteworthy that patients on mechanical ventilation, tracheostomy or gastric suctioning must remain positioned with the head elevated at an angle of thirty to forty-five degrees, aimed at preventing the occurrence of return gastric contents, which may lead to bronchial aspiration.10,20

Regarding the mobilization of the patient, it is described that the immobilization of a patient for long periods is associated with reduced lung volume, retention of secretions and other pulmonary complications. In these cases, it recommends changing positions every two hours.10,20

Substantiating that was evidenced in the narratives, it is observed that hand hygiene before and after contact with patient and equipment is undoubtedly one of the main ways to minimizing transmission of microorganisms.10

Before sections described in the speeches in this category, which emphasized the technical autonomy of the nurse contribution to the prevention of VAP, it uses the idea that the autonomy of nurses is due to the way in which they exercise their functions, capable of checking them with full effectiveness.

CONCLUSION

Far from exhausting the reflections on the topic, this study sought to further examining the perceptions of professional nurses about their technical autonomy for the prevention of VAP, because, since the improvement in exercise can help reducing this hazard, as well as strengthening political self-determination of the administrative professional, and contributing to functional independence and intellectual freedom, which are certainly factors tincturing improving the quality of care.

It is considered that, in the scenario where this study was developed, have made efforts
to developing their autonomous professional practice. Some highlighted points obtained in the exercise of that autonomy, as the development of technical autonomy and recognition of the importance of continuing education in the nursing work, as a contributor in the reduction of injuries, as in the case of VAP.

It is recognized that the practice and the exercise of autonomy are permeated by some challenges, such as those involved in the process of nursing work, characterized in this study by employee turnover and the development of some managerial skills, among them conflict mediation.

As regards the technical one realizes that nurses have knowledge on preventive practices of ventilator-associated pneumonia, cite indications of recognized guides and manuals and emphasize the importance of continuing education in the nursing work, as a contributor in the reduction of injuries, as in the case of VAP.

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