
ABSTRACT

Objective: to analyze the perceptions of the nursing team in an intensive care unit for adults on the risk management in healthcare and the adherence to the electronic system of reporting adverse events. Method: a descriptive, exploratory study, with a qualitative approach, with content analysis of the speeches of 39 nursing technicians and four nurses from the intensive care unit of a general hospital in Belo Horizonte/MG/Southeastern Brazil. The construction of the data was carried out through recorded interviews, after the project was approved by the Ethics in Research Committee, CEAC number 02054212.7.0000.5098.

Results: Four categories emerged from the analysis: << The team's knowledge of risk management in healthcare >> << The occurrence of adverse events in an intensive care unit for adults >>; << The notification of adverse events >> and << Interventions that promote the prevention of adverse events >>. Descriptors: Safety Management; Intensive Care Units; Iatrogenic Disease; Nursing Team.

RESUMO

Objetivo: analisar a percepção da equipe de enfermagem numa unidade de terapia intensiva de adultos sobre o gerenciamento de risco em saúde e a adesão ao sistema eletrônico de notificação de eventos adversos. Método: estudo descritivo, exploratório, de abordagem qualitativa, com análise de conteúdo dos discursos de 39 técnicos de enfermagem e quatro enfermeiros da unidade de terapia intensiva de um hospital geral em Belo Horizonte/MG/Sudeste brasileiro. A construção dos dados foi realizada por meio de entrevistas gravadas, após a aprovação do projeto pelo Comitê de Ética em Pesquisa, CCAE nº 02054212.7.0000.5098. Resultados: surgiram quatro categorias de análise: << O conhecimento da equipe sobre gerenciamento de riscos em saúde >> << A ocorrência de eventos adversos na unidade de terapia intensiva de adultos >>; << A notificação de eventos adversos >> e << Intervenções que favorecem a prevenção de eventos adversos >>. Descrições: Gerenciamento de Segurança; Unidades de Terapia Intensiva; Doença Iatrogênica; Equipe de Enfermagem.
INTRODUCTION

Risk management is one of the most discussed topics in the hospital escape in recent years, which linked to the processes of continuous improvement has contributed to quality and service excellence in the services provided. Since management activities related to nursing are the responsibility of the nurse, as well as the processes of training and continuing education, this professional has an important role in this scenario.1 2

Risk is the exposure to the consequences of uncertainty, to the potential deviations from what was planned, something that should be avoided or minimized. Thus, the management of assistance risks aims to identify and explore opportunities to improve organizational outcomes, as well as reduce the occurrence and adverse consequences. Care should be performed with quality, risk and flaw free, committed to customer security, in order to promote health without causing physical or emotional damage that can lead to the increased length of hospitalization, suffering from the customer, temporary or permanent disability and even death.1 3

These flaws are present in all hospital units and are maximized in services that absorb large number of patients with varying levels of complexity, among which may be cited the ICU and other sectors that deal with urgencies and emergencies.1

In the ICU, the hospital environment is reserved and special equipments are allocated to the assistance of critical clients/patients, with imminent risk of death. Forward to the peculiarities of working in this sector, some undesirable features can be found in professionals, such as work overload, diversion of attention, lack of knowledge, among others, which increases the predisposition to the occurrence of errors.4

One should remember that the error is characteristic of “being human” and occurs independent of personal will, professional ability and attention given to the procedure, and other factors such as the environment, the psychological and the physiological, are also responsible for its occurrence. Nevertheless, the error should be minimized and for such a situation to arise, it is necessary the involvement of a multidisciplinary team with the goal of requiring sensitivity for planning goals to be implemented in order to prevent and reduce potential errors in existing units.4 5

The adverse event, according to Mendes et al, is an unintentional injury or damage that resulted in disability, temporary dysfunction or prolonged hospitalization, due to the care provided. It may contribute to impaired health status of the patient at different levels, involving risk to life or susceptibility to injury, which may range from temporary changes to permanent sequelae of body functions or structures. These injuries may require medical intervention, hospitalization or its prolongation, and rise in health costs and the risk of patient death.6

Given that the iatrogenic processes present prominence in the current health scenario, it is justified the need to map, monitor and minimize these events, appearing in this panorama, Risk Management. It is defined as risk management the culture, structures and processes aimed at recognizing potential opportunities to concurrently manage their adverse events. In this context, the reporting of adverse events is the main tool for the implementation of actions, in the face of the flaws presented, and may be accompanied by measurement of indicators to establish goals to be accomplished.1 7

In the United States of America (USA), it is estimated that approximately 100,000 people die in hospitals annually as a result of adverse events. In Brazil, it is not possible to measure effectively the occurrence of adverse events due to the absence of a single database. However, one can cite a survey conducted in the State of Rio de Janeiro, where three hospitals were analyzed, which showed that eight (8) on each one hundred (100) hospitalized patients experienced one or more adverse events, 67% of these events, could have been avoided through management actions.8 10

Given the above, the problem of this study arose, guided by the following questions: What is the perception of the nursing staff of an adult ICU on Risk Management in healthcare? What is the level of their knowledge about this subject? How is the adherence of this team to the electronic system for reporting adverse events implemented in this institution?

When considering that the risk management and reporting of adverse events are key pieces for the assistance and safety of the client, it is important to understand the perception of the professional in this process, thereby contributing to the institution’s assessment of the impact of the workshops, level of staff knowledge and attitudes towards adverse events and notification system deployed.

This study aims to analyze the perception of the nursing team in the intensive care unit for adults regarding risk management in...
healthcare and adherence to the electronic system of reporting adverse events.

**METHOD**

Article compiled from the monograph Risk management in intensive care unit: the perception of the nursing team, presented as a course completion work of the Undergraduate course in Nursing, of the Centro Universitário UNA, Belo Horizonte - MG, Brazil. 2012

Descriptive and exploratory field research with a qualitative approach. This approach was used in order to allow a more comprehensive evaluation of the results obtained, the possibilities of description, explanation and understanding of the object of study. The qualitative method applies to the study of the history, relationships, representations, beliefs and perceptions; products of the interpretations of people regarding their experiences, their way of feeling and thinking.11-13

The field studied was the adult ICU of a general hospital of Belo Horizonte - MG, comprising 30 beds, a reference in emergencies and urgencies assistance. Awareness workshops on risk management were performed in this hospital in 2010 and the implementation of an electronic system used for reporting adverse events, with their nurses as multipliers.

The subjects involved in the study were 43 professionals from the nursing team of the unit, with 39 nursing technicians and four nurses. The exclusion criteria were the professionals out of work due to sick leave, vacation and those linked to the institution for less than 30 days.

Data collection of this study was performed in July 2012 and followed the ethical and legal precepts, following the provisions of Resolution 196/96 of the National Health Council (CNS), after approval by the Ethics Research Committee of the Centro Universitário UMA, by CCAE number 02054212.7.0000.5098. Participants were approached by appointment with orientation about the study and voluntary participation. To preserve the anonymity of the participants it was choice for the identification of individuals by the letter E followed by the number corresponding to the interview, in order of their implementation. Data collection was carried out after signing the Informed Consent Form (ICF), through audiotaped interviews, with posterior transcriptions in their entirety and storage in a database.14

The interview was recorded and a semi-structured guideline was used, with supplementary information through a field diary prepared by the researchers. These interviews were discontinued from the perception of data saturation, which is the sampling closure by theoretical saturation operationally defined as suspension of the inclusion of new participants when the data obtained begin to present, in the investigator assessment, some redundancy or repetition, not being considered relevant to persist in collecting relevant data.15-16

For data processing, the technique of content analysis of Bardin was used, which is conceptualized as a set of techniques that aim to analyze the communications through systematic procedures, describing the content of messages and following the three steps proposed by the author: pre -analysis, which consists in organizing the data; exploration of the material, determined by the coding, classification of speeches and elaboration of the categories relevant to the research objective and the third stage of the processing of results, inference and interpretation of data seeking significance and validation of thereof. A simple statistical analysis was used, through the calculation of frequencies, which is an option within the content analysis.15,17

Through the analysis of fragments of speeches, four categories of analysis emerged: << The team's knowledge of risk management in healthcare >>; << The occurrence of adverse events in an intensive care unit for adults >>; << The notification adverse events >> and << Interventions that promote the prevention of adverse events >>.

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**RESULTS AND DISCUSSION**

♦ Characterization of study subjects

Forty-three professionals from the nursing team of the ICU participated in this research nursing staff and 39 nursing technicians and 4 nurses. This sample was collected after being made the exclusion criteria, which encompass those professionals who were on vacation, sick leave and those who had a bond with the institution for less than 30 days. The analysis of the profile of the respondents shows that their ages range between 24 and 46 years, mean 33 years, with a predominance of females (81%). Regarding the employment relationship, 74% were admitted through public competition and 26% by administrative contract regimen. As for the work shift, 77% belong to the daytime and 23% at night time shift, and 79% had a workload of 40 hours per week and 21% had a workload of 30 hours per week. The average working hours of the respondents in the institution was 3 years and
9 months and when analyzed specifically in the ICU, the average was 3 years and 4 months. During the study, all were cooperative, available and interested in the subject.

♦ Category 1: The team’s knowledge of risk management in healthcare

Most respondents (88.3%) stated that patients are subject to some kind of assistance risk in hospitals, especially in ICU, as represented by the reports below:

[…] Certainly, specially us, professionals who work in intensive care, since we deal with critical patients and very invasive procedures. […] (E30)

[…] Yes, because the fatigue and exhaustion generated by the work overload can lead to professional neglect during the procedure […] (E9)

The ICU is a hospital for the care of critically ill patients at risk of imminent death, with medical and nursing care available for 24 hours a day. This sector has as main objective to restore the functioning of one or more organic systems, severely altered, until the pathology responsible for admission is adequately compensated or physiological parameters attain acceptable levels.

Studies conducted in Brazilian hospitals, by Fundação Oswaldo Cruz, showed that, during the period of hospitalization, 7.6% of patients suffered some damage due to care. This percentage is similar to that observed in other countries such as Canada, Denmark and Spain. In another study conducted in a private hospital in São Paulo, it was shown that 44.9% of adverse events occurred in patients hospitalized in ICU.

Whereas these data are of such magnitude and social impact, it is essential that practitioners know the tool “Risk Management” to control and prevent these occurrences. However, on the knowledge of professionals regarding the Risk Management and Adverse Events, more than half of respondents (65.1%) presented conceptual difficulties and said they had not participated in any awareness on the subject, including by the institution itself.

The statements below confirm this idea:

Management is the service that the Occupational Medicine and the Hospital Infection Control (CCIH) perform […] (E38)

Risk management should be biohazardous risk and risk with X-ray for not having all the proper parametation […] (E37)

Risk management is to observe the risk that the patient is predisposed in the institution, the CCIH performs it […] (E29)

The speeches above highlight the need to develop training and capacitation on the topic above, so that there is improved knowledge of the professionals and the quality of services provided by the nursing staff.

Thus, by proper contributions to the institution and society in relation to Risk Management and Adverse Events, there will be a reduction in differences in knowledge among professionals in the unit, especially with regard to the care of the patient.19

However, despite having conceptual difficulties, 51.1% of respondents stated that all professionals involved in the care are responsible for managing risks in care. Some speeches point to this:

[…] All who are involved in patient care: doctors, nurses, technicians and other professionals are responsible for managing risks, to provide patient safety […] (E35)

[…] The multidisciplinary team is responsible for managing the risks that the patient is subject […] (E29)

The entire multidisciplinary team should be involved to assist the achievement of patient care, so that it is responsible for managing the risks that occur in assistance. It is necessary to emphasize that strategic actions must be implemented so that all staff is technically and ethically trained and feel co-responsible for quality care, seeking to minimize the occurrence of adverse events.20

♦ Category 2: The occurrence of adverse events in the intensive care unit for adults

The adverse events recognized as the most frequently in the ICU by respondents were: error in medication administration (30.2%) and accidental extubation (18.6%). Other events were reported less frequently, among them falling out of bed (17.7%), withdrawal of tubes by the patients (17.2%), loss of venous access (16.3%), as can be seen in the speeches below:

[…] At ICU, we have more often extubation and medicatin error […] (E11)

[…] There may be change of medication, and even self extubation […] (E22)

[…] Sometimes the patient may fall off the bed, but is less frequent. The more I observe here in ICU is error in medication administration […] (E30)

Given the samples submitted and based on the statements of the subjects, there is a clear need for the creation of mechanisms that are able to minimize or stop the occurrence of these events, because prevention is crucial for those who want to provide quality care and to minimize the risks.
According to research conducted at Harvard University, 38% of adverse events in hospitals are related to medication error. Studies conducted in the United Kingdom indicate the occurrence of more than 200,000 falls within one year. There is a similar Brazilian study, conducted in a university hospital in São Paulo, which was also able to demonstrate that error in the administration of medications and falls are the most common events in the hospital environment.2,21

In relation to drug administration, it is essential to note that this practice is one of the major responsibilities of the nursing team; it determines that the care provided is exercised in an appropriate and safe way for the patient, it is indispensable that the errors are avoided on this context. Therefore, it is necessary to standardize the knowledge among the team of nurses and their followers, with regard to the ethical-legal aspects involving quality deviations in providing assistance, particularly in the medication administration process and its implications.

Within the perspective presented, the Code of Ethics of Nursing, reformulated by Resolution 311/2007 of the Federal Board of Nursing (COFEN) establishes criteria related to the rights, duties and prohibitions for this profession, as well as fundamental principles for the provision of risk-free assistance arising from carelessness, clumsiness and negligence.22,23

Some factors were cited by the respondents as facilitators for the occurrence of adverse events, such as: work overload (25.6%), absenteeism (23.9%) and inadequate physical structure (16.8%). Other factors cited were less prevalent among them: inattention (10.9%), inexperience (9.4%), lack of training (8.2%) and lack of routines (5.2%). The data are affirmed, according to the speeches presented:

[…] Excessive workload, since most professionals work in two institutions. The reduction of the scale of employees is also a detrimental factor […] (E35)

[…] When there an employee is absent, we have to take on more patients, it causes an overload, as each patient demands much attention […] (E33)

According to the statements reported by the subjects, the result of work overload is due to insufficient number of nursing professionals, as well as the double shift service related to low pay. This leads to precarious support to customers and contributes to the occurrence of adverse events.

Therefore, errors can be influenced by several factors. Adverse events rarely occur by a single mistake, but by a break in the barrier of defense against the occurrence of events. There are other factors that favor the occurrence of adverse events, such as: incompatibility of technological advancement with the necessary personal improvement, distancing of own actions of each professional, demotivation, inexperience, lack of training/capacitation, absence or limitation of systematization and documentation of the nursing care, delegation of care without adequate supervision and overload services.20,24-5

Thus, there is evidence that those mistakes can happen as a result of single or multiple factors, such as excessive workload, reducing the scale of staff shifts, double shifts among others. Thus, the scenario could be modified through a sufficient number of collaborators, in order to provide a closer relationship between patient and professional, providing comprehensive and qualified care.26

Regarding the evaluation of the performance of professionals, it was revealed that 85% of collaborators hold multiple employments, justified by the low wages.

[…] For working at two, we are already tired when we arrive decreasing attention, causing the error to happen […] (E8)

[…] If the professional was more appreciated, it would not work at more than one job and would avoid the fatigue of the professional […] (E36)

[…] If the nursing team had a better salary it would not work in more than one job, it would have more attention and better working conditions […] (E34)

After the reports, it was revealed that the decreased in performance caused by the multiple work places is justified by work overload, causing the professional to become inattentive and tired. The result is the increased probability of errors in assistance.

Despite the environment being reserved and with restricted access, the ICU presents work conditions with excessive pace and physical exertion, due to the complexity of the patients and the assistance given. These factors associated with the double work shift, increase the incidence of errors of the professionals working in this sector.27

♦ Category 3: The notification of adverse events

Most respondents (81.3%) are unaware of the existence of an electronic program for reporting adverse events in the institution. The speeches below evidence this argument:
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value the importance of reporting […] (E4) (E5)
[…] Many times we let it all for latter and then end up forgetting to notify, due to the work demand […] (E10)
[…] For fear of punishment people fail to notify […] (E18)

Health professionals, like any other human beings, are prone to flaws. However, these are not identified when they are sympathetic and mask the situation. This underreporting is due to fear of professional judgment after the occurrence of errors, by not following ethical and moral principles or even the ignorance and depreciation of notification tools.29

As a result of the imminent need to prevent the occurrence of adverse events, it is necessary to identify the type and frequency of failures through the notification, being used as strategies to reduce the quantitative evidenced. Therefore it is essential that professionals become aware of the value of reporting and de-mystify that the act of notifying generates punishment.3

♦ Subcategory 3.2: Supervisor stimuli for the notification

Regarding the stimulation of supervisors for the notification to happen, 34.8% of the subjects claim to have received this stimulus, which can be evidenced in the reports below:

[…] The nurses encourage us, always ask to be cautious and to report any event so that the problem is solved […] “(E2)
[…] My boss always encourages me to notify any unwanted occurrence […] “(E6)

According to the reports of the subjects, it was possible to notice that stimulation from the supervisors needs to be improved to sensitize a larger proportion of professionals, making them aware of the importance of the act of notifying, enabling the reduction of the incidence of these occurrences.

The notification of adverse events, according to Beccaria et al., facilitates the investigation of the quality of care. This should favor communication between the team and the institution, being held through the stimulation of the supervisors.20

♦ Subcategory 3.3: Feedback from the institution to the notifications made

Of the employees who performed the notification in the electronic system, only 9.3% reported receiving feedback from the institution. It is possible to note this in the reports below:

[…] Whenever I report any event, the nurse gives me a feedback […] “(E10)
[…] There is a feedback, she even says that through the notification is a way to reduce adverse events […] “(E11)
Melo CL, Oliveira LBM de, Reis CS et al.

Given the above, it is observed that the return offered by the supervision, concerning the notification, is essential for any organization seeking to improve and increase productivity. This provides benefit to patients and to the institution, because enable the minimization of faults generated in care giving.

The motivation of the act of notifying is an aspect that interferes with the process of human relations, productivity and quality of assistance. Accordingly, the feedback from the supervisors is extremely important for professionals to feel valued and motivated to carry out the notifications. This is a tool connected to the process of work.  

4. Category: Interventions that promote the prevention of adverse events

After questioning about interventions that could prevent adverse events, professionals reported that the main interventions are to maintain full scale of employees (30%) and the provision of training for the staff (27%). It was also mentioned, with lower prevalence, the interaction between the multidisciplinary team (19.6%), adequacy of material resources (17.8%) and improvement in the physical structure of the institution (5.6%). It is what is stated in the following reports:

… To maintain the full range and conducting training can help in the reduction of adverse events […] (E9)

… The interaction between the multidisciplinary team favors a qualified, efficient and effective assistance to the patient […] “(E12)

… If there is incentive and encouragement we will work with more attention and we will not be too tired […] (E16)

According to the statements above, it is observed that it is essential to maintain the full range of employees in that institution so that, it is possible to obtain the effectiveness of care provided due to the complexity of the patient, avoiding the employee to refold in assistance, allowing the occurrence of errors.

Being still a feature, of the professionals working in the ICU, to absorb large number of patients with varying levels of complexity associated with the existence of several daily conflicts that are related to human resources, technological and physical structure not always adequate, offering no conditions to accommodate users safely and with quality.  

However, the reports bring measures that can change this situation in the ICU, intervening in ways that would avoid the faults generated by health professionals. These interventions would be through the structuring of collaborators, training, as well as changes in the quantity of employees, with consequent benefits to the care provided.

Thus, continuing education is essential for the development of professional and ensures the quality of care for customers, should also be focused on the institution reality and staff needs. Faced with the new requirements of health organizations, nursing faces continual changes, and professionals need to look for the best way to expand their knowledge through education and continuous learning. 

FINAL REMARKS

In health institutions, it is necessary to promote safety and quality of the care provided in order to prevent the unwanted occurrences of adverse events. However, this study showed the deficiency of knowledge regarding the identification and reporting of adverse events, mainly due to the lack of trained staff and lack of awareness in relation to the importance of risk management.

To mitigate this deficiency, health professionals, especially those working in the intensive care unit should be subjected to continuous training and education, so that these professionals start to understand and master the existing tools for risk management, as well as to understand the importance and benefits generated by the use of adverse events reporting.

In addition to training and capacitation, health professionals should seek the transformation of its cultural concepts, aimed at identifying causes and executors of the adverse event, acting in correcting and preventing new events and excluding the fear of judgment and punishment. It is also essential that supervisors perform the feedback of notifications to the multidisciplinary team, so that the reasons for the occurrence of the events can be investigated, in order to minimize such eventualities and avoid underreporting related to lack of motivation because of the absence of feedback from the supervisors.

The research shows, however, some limitations. The method used in this research, a qualitative approach with content analysis, evaluated the perception of the nursing team of the ICU at a specific hospital in the city of Belo Horizonte, Minas Gerais, not allowing generalizations to other institutions. The data analyzed bring a subjective perception of these nurses related to their work process and prior knowledge. It is essential to emphasize that, although the categories surveyed are significant, according to the theoretical
framework presented, the do not exhaust the possibilities of the subject under study.

Therefore, it is expected that the results presented in this study may contribute to the strengthening of an organizational culture focused on patient safety, as well as to encourage and contribute to the creation and development of new projects, research and measures on the subject.

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