Original Article

Changes in nursing practice to improve patient safety

Mudanças na prática de enfermagem para melhorar a segurança do paciente

Cambios en la práctica de enfermería para mejorar la seguridad del paciente

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ABSTRACT

Objective: To identify changes in nursing practice to improve the quality of care and patient safety.
Method: A case study conducted at an inpatient unit with professionals from the patient safety centre and a nursing team, totalling 31 participants. Data were collected from May to December 2015 through interviews, observations recorded in a field journal, and documentary analysis, followed by content analysis.
Results: The changes observed in the nursing practice included the identification of care and physical risks, especially the risk of falls and pressure injury, with the use of personal forms and the Braden scale; notification of adverse events; adoption of protocols; effective communication with permanent education and multiprofessional meetings.
Conclusions: Changes were observed in the nursing practice, chiefly focused on risk management.
Keywords: Patient Safety. Nursing. Delivery of Health Care.

RESUMO

Objetivo: Identificar mudanças na prática de enfermagem com vistas à melhoria da qualidade do cuidado e da segurança do paciente.
Método: Estudo de caso realizado em uma unidade de internação com profissionais do Núcleo de Segurança do Paciente e equipe de Enfermagem, 31 participantes. Entre maio e dezembro de 2015, foram realizadas entrevistas, observação com registro em diário de campo e análise documental, tendo sido submetidas à análise de conteúdo.
Resultados: Evidenciaram-se mudanças na prática de enfermagem como a identificação de riscos assistenciais e físicos; destaque para risco de queda, lesão por pressão, com adoção de impressos próprios e uso da escala de Braden; notificação de eventos adversos; identificação do paciente; adoção de protocolos; comunicação eficaz com educação permanente e reuniões de forma multiprofissional.
Conclusões: Ocorreram mudanças na prática de enfermagem, principalmente voltadas para o gerenciamento dos riscos.
Palavras-chave: Segurança do paciente. Enfermagem. Assistência à saúde.

RESUMEN

Objetivo: Identificar los cambios en la práctica de enfermería para mejorar la calidad de la atención y la seguridad del paciente.
Método: Estudio de caso en una unidad de hospitalización con profesionales del Centro de Seguridad del Paciente y el personal de enfermería; 31 participantes. Entre mayo y diciembre de 2015 se llevaron a cabo entrevistas, observación de campo y análisis diario documento, sometido a análisis de contenido.
Resultados: Se evidenciaron cambios en la práctica de enfermería como la identificación de riesgos de asistencia y físicos; destaque para riesgos de caída lesión por presión, con la adopción de formas y uso de la escala de Braden específicos; la presentación de informes de eventos adversos; la identificación del paciente; adopción de protocolos; comunicación efectiva con educación permanente y reuniones de fiorma multidisciplinaria.
Conclusiones: Los cambios ocurridos en la práctica de enfermería, se centraron principalmente en la gestión de riesgos.
Palabras clave: Seguridad del paciente. Enfermería. Atención a la salud.

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INTRODUCTION

The occurrence of incidents is considered a serious problem for patient safety and the quality of care provided all over the world. The World Health Organisation estimates that around 10% of patients suffer hospital-related injuries in western countries[1].

The International Classification for Patient Safety ("ICPS"), proposed by the World Health Organisation (WHO), defines patient safety as the reduction of risk of damage or injury associated with health care to a minimum accepted level[2]; risk as the probability of an incident occurring; error as a fault, an unplanned action or the incorrect application of a plan[2]; and adverse events as any damage or injury to the patient caused by the intervention of the health team[2].

In 2009, six international patient safety goals were introduced, namely correct patient identification; clear and effective communication; safety in the administration of medication; and greater safety in surgery to reduce the risks of infection and patient falls[3]. Brazil undertook to introduce public policies and practices focused on patient safety; however, there is still a high incidence of adverse events in Brazilian hospitals[4]. A study reveals that most of these adverse events could have been avoided. Of these events, healthcare-associated infections (HAIs) represent 24.6%; surgical and anaesthetic complications, 20.0%; damages resulting from delay or failure to diagnose and treat, 18.4%; pressure ulcers, 18.4%; damage caused by venipuncture complications, 7.7%; damage due to falls, 6.2%; and damage as a result of the use of medication, 4.6%. Moreover, these events resulted in 373 extra days spent in hospital[4].

It should be noted that patient safety initiatives in Brazil are relatively recent, especially after the National Patient Safety Programme[5]. Furthermore, the complexity of healthcare services and the use of technologies attributed to additional patient safety risks[6] warrant studies to analyse changes in nursing practices after the publication of research on medical errors and adverse events.

Errors are a sad reality in healthcare with consequences for patients, professionals, and hospital organisation. Therefore, nurses need a broader vision of the patient safety system and processes to ensure the safety and quality of the care they provide[7]. Nurses can presumably create simple and effective strategies to prevent and reduce health-related risks, including specific protocols and best practices associated with safety barriers in health systems and in permanent education[6].

Thus, the question that emerges is, have patient safety actions at an inpatient unit promoted change in the practice of nurses? Studies related to the transformation of patient safety practices involving nurses during the implementation of a safety culture and quality improvements are scarce and recent. Moreover, studies that portray the Brazilian reality and support strategies and actions to achieve patient safety goals are also needed.

Based on these considerations, the aim of this paper was to identify changes in nursing practices to improve the quality of care and patient safety.

METHODOLOGY

This study is based on a thesis[5] and the adopted approach is qualitative with a case study design. Cases studies are used to analyse a social unit and understand complex social phenomena by answering "how" and "why" they occur[8]. This research method was selected because it allows the researcher to capture significant characteristics in a real context.

The study scenario is a hospital that promotes patient safety and quality actions. This hospital initiated a process to improve quality and safety with the ProHosp, a programme to strengthen and improve the quality of care provided in hospitals of the Unified Health System of Minas Gerais, in 2005, which required risk management actions. The strategy to prevent risks and monitor adverse events included the establishment of a quality department in 2010, and, in 2012, the institution joined the sentinel hospital network and founded a risk management committee. Moving forward in the transition to a culture of safety, in 2013, the quality department and the hospital board implemented the patient safety centre ("NSP")

The institution is a philanthropic hospital, linked to a teaching hospital, with 116 beds and a monthly average of 5,232 service-users per month. It is an institution of reference in a microregion of nine municipalities. The hospital has an adult inpatient unit with six clinical medicine and surgery wards. This unit offers a variety of diagnostic services and practices. The nurses were responsible for managing this unit and for managing care. Their activities include protocols, routines, standards, medical prescriptions, and nursing care. It is worth mentioning that this study was conducted two years after the institution of the NSP and its interventions to improve patient safety in the inpatient unit.

The research participants were professionals/members of the NSP and the nursing staff of the clinical medicine and surgery wards, all of whom met the inclusion criterion of at least one-year work experience at the unit. The exclusion criteria were workers on holiday or on leave

during the data collection period. Selection of the inpatient unit was based on the results of a study conducted in Brazilian hospitals that pointed the nursing ward as the location with this highest frequency of adverse events (56.9%)[4]. The professionals of the centre were selected because they acknowledge that they are the ones who manage and prescribe action to achieve the goals of the patient safety programme.

The workers of the NSP were invited to participate in the study; however, two professionals were on medical leave and one declined, totalling 12 participants (six nurses, a nursing technician, a dietician, a pharmacist, two administrators, and a domestic economist). The nurses of the hospital wings formed a group of nine professionals who worked the night and day shifts, of which two did not meet the criteria for inclusion, totalling seven participants. The nursing technicians were selected using the saturation criterion, which interrupts the interview when the collected data become repetitive and redundant[8]. The data were saturated in the 12th interview. In all, 31 professionals participated in the research.

Data were collected from May to December 2015 through secondary data with document analysis (reports, protocols, quality indicators and records, and the action plan of the NSP), primary data from interviews with a semi-structured script after a pilot test without the need for changes, and direct observations recorded in a field journal[8]. The field journal is a data collection instrument that is used to obtain information for data analysis, such as conversations, behaviour, expressions, and other relevant issues[9].

The observations occurred during the scheduling and conducting of the interviews to record the behaviour of the subjects of the organisation, communication and work dynamics in the visited areas, and the assistance and admission of patients by the nursing staff.

The interviews were recorded and transcribed in full. The duration of the interviews ranged from 10 to 100 minutes, and they were conducted in a comfortable and favourable place for the participants to expose their ideas. The interviews were numbered according to the order in which they occurred with the acronym NSP (*Núcleo de Segurança do Paciente*), E (nurse), and TE (nursing technician). They contained questions that sought to extract knowledge of patient safety, patient safety assessments at the institution, practices to achieve safety, and difficulties and factors that facilitate the achievement of international goals.

Data were subjected to content analysis[10], specifically the thematic category, which consists of a set of communications analysis techniques based on three chronological steps: pre-analysis, material exploration, and processing of results. According to systematic procedures, coding or registry units were defined and grouped into three categories: the practice of identifying and managing risks; patient safety and nursing practices; and difficulties improving patient safety.

All the participants signed an informed consent statement in accordance with resolution 466/12 of the ministry of health, and research was approved by the research ethics committee of the hospital and by the research ethics committee of the Universidade Federal de Minas Gerais, CAEE #44109015.0.0000.5149.

RESULTS

Data analysis led to the following three categories: The practice of identifying and managing risks; patient safety and nursing practices; and difficulties improving patient safety, which reveal the changes related to risk management, practices to improve patient safety, and the difficulties encountered.

The practice of identifying and managing risks

This category included most of the record units and revealed that significant changes in the nursing practice are geared to risk management. The actions undertaken were the identification of care risks, the care setting, adverse events, which were previously restricted to the notification of technical complaints, and the implementation of forms to assess the risk of falling and pressure injury.

In relation to the identification of patient-related risks, the nurses completed a form during patient admission where they assessed the risk of falls and predisposing factors, such as medication, age, altered mental state, and other conditions, followed by a care plan in the case of fall risks. The statements below confirm these findings:

> *During patient admission, when are we going to admit the patient, we have a form for us to know the patient better and there is a check list for us to identify the risk of that patient. So we work with this instrument. It's an instrument to assess the falls, and it focuses on falls, age, the use of psychotropic medication. It was implemented a year ago more or less (E14). We look at the grid. See if he's going to fall, if there a risk of falling from the bed, things like that (TE17).*

Document analysis, interviews, and observation showed that the risk assessment included the Braden

Scale, and the nurses started to focus on care risks and daily actions to improve patient safety. The statements are as follows:

The staff can better identify the risk, the adverse event, and the related factors (NSP2).

It´s having a routine in your day to day work where you worry about providing patient safety. Paying attention to every situation that can lead to some kind of risk, anything that might harm or cause some risk to patients (E14).

Our assistance, day to day, now focuses on exchanging medication, exchanging patients, patient falls, exchanging material, the right patient. This topic is being discussed now (E30).

Adverse event notifications were also included in the routine practice of the team and helped to improve care, as stated by the respondents:

A broader view of what patient safety is about and the role of nurses in the entire process. When the centre was launched, the person responsible trained the nurses, especially in terms of notifying events, sentinel events, and after training I started to notify. Notify everything that happened to date. I think it contributes a lot (E25).

Look, it's good because each day the notifications improve patient care, right? So, is important because it improves the quality of patient care (E20).

What we do here at the hospital today, we work a lot with notifications to see if we can improve the quality of patient care. I noticed that the notifications improve everything, right? [...] We have to improve a lot more, I've seen lots of improvements (E30).

Patient safety and nursing practices

In the daily work, the nurses started to increase its focus on patient safety and best practices. The statements below also reveal their concerns related to errors and the consequences in the life of patients:

The bureaucratic part, we always say, it can be fixed. Let's pay more attention to the patient, the right test, the right technique, to prevent errors, because there is no going back with errors. So, I do continuing education, following the changes and goals of the ministry of health, that it's implementing. I'm always looking [...] and transferring it to my team and even to the whole hospital (E13).

There was a pretty significant improvement, so the girls are really emphasising what is necessary, and the result is positive. In fact, before, the other employees had no idea what patient safety was. Actually, everyone knows that the patient has to be well cared for, well looked after and everything, but not with so much emphasis on it. I didn't work with that in mind. What I did was automatic, I can't let the patient fall, can't administer the wrong medication, now it's more systematized. That's what I noticed (NSP11).

To improve patient safety in the inpatient unit, the practice of identifying patients was adopted with the proposal of implementing bracelets with a barcode:

Patient identification, for example, [...] Identification is something that has to be done as soon as the patient arrives. I doesn't take more than 10 seconds to assess the risk of falling or injury, and it's the nurse who does that. So, it's done at admission and we only have to transcribe to the identification sheet. These are things that don't slow down the service, part of your service (E25).

We have done good things, such as patient identification, which we already do. We managed to implement the pressure ulcer assessment protocol, we managed to do the Braden Scale, we managed to identify patients, and it helps us a lot having this identification in the bed (NSP6).

It was observed that the nurses use a patient identification form that is clipped under the headboard of the patient's bed, where they mark the existence of fall or pressure injury risks. The team also highlighted the practice of permanent education, effective communication, formal meetings, and study groups based on patient safety, as stated below:

The notification is of great importance because it is our basis for permanent education work, work the ways of to improving the provided care (NSP24).

We're putting together strategies to try to change this scenario (individual work) and multidisciplinary meetings, know more about each other's work, communicate more. Have a more effective communication regarding patients and working closer. Initially, we had a meeting because of a health fair that took place. I was with social worker, psychologist, nurse, nutrition, and doctors. Now,

we intend to convene all the professionals involved in assistance and focus on patient safety. Monthly meetings and priorities in the possible actions. This team already some idea of patient safety, but they are individual actions. They give priority to the risks that the patient is running in there, the risk of a fall, the nutritional risk. I communicate a lot with the team (E1).

With the training, the extension projects that the university offers us in the area, the realistic simulation, joining the sectors we manage to see better. We surveyed the 2012 notifications here and started separating by sector to do permanent education. With this survey of 2012 to today some years had 6 notifications in a year and now until May there have been 40 notifications and that forces the NSP to look for a solution (NSP 2).

The testimonials, documentary analysis, and observation revealed that the nurses adopted strategies to ensure that patient safety is considered a shared responsibility and not merely the nurse's responsibility, with multidisciplinary meetings, training based on notifications, realistic simulations of errors and adverse events, and study groups. Other initiatives include a partnership with the local university, with extension projects in the area of safety and quality to support permanent education.

One change highlighted by the respondents was the description of protocols. Documentary analysis and observation identified some of these protocols, namely for falls, pressure injury, safe surgery, patient identification, hand sanitation, enteral and parenteral therapy, and the administration of blood products. However, there was no medication administration protocol, justified by the lack of a clinical pharmacist. Below, some of the statements that corroborate this finding:

We started to establish protocols, indicators, permanent education, bedside training, notification of adverse events, multimodal strategy for hand hygiene, and bedside patient identification (NSP 9).

We managed to implement a pressure ulcer assessment protocol (NSP6).

We implemented fall and injury protocols. The safe surgery protocol we have it on paper [...] needs more professionals to deploy (NSP2).

Safety protocols were created. So they were created because they were not formalised in this format, on our part it was diets, control of the offered diet, labelling the trays (NSP4).

It was noted that one of the practices that most concerns the participants of the survey was the administration of medication. When mentioning this task, they refer to it as something that needs to be improved. Their concerns did not merely focus on safe administration, but also on dispensing medication. The statements also reveal that the improvements are in the planning stages:

The first thing is focusing on the medication we are going to administer. Medication, caution during administration, whether there are allergies, allergy to dipyrone, those things (TE23).

Here everyone worries a lot about the patients, there is a lot of affection, a lot of attention with the patient. Of course, as in every sector something always has to improve, for example, the issue of medication, delayed prescriptions (TE21).

The problem is the medication, I've seen pathway administration errors, administration. One day, the nursing technique forgot to administer medication because of it. She thought the patient didn't need the medication now. Because he had symptoms and so on. But instead of notifying the physician, she took him off it alone. It wasn't her decision to make. Nebulising, I've always used four drops, but then he reduces the dose "the patient will have a tachycardia". I say you have to put what's on the prescription. They make the decisions without the presence of the nurse (E3).

In the crash cart, at the next conference we will identify the kcl for instance. Put red contractible paper with a high surveillance label. The right thing would be for the dispensing to the separated in the actual pharmacy, something individual, but for lack of funds we can't start that now. Our reality does not allow it. I haven't created a protocol, yet. It would be interesting (NSP11).

The testimonials and the observations suggest a lack of safety in relation to the administration of medication. The absence of a protocol to administer medication arises recurrently. However, planning was identified to mark high-risk medication before being discharged from the pharmacy as a way of improving patient safety. According to these data, the correct administration of medication depends not only on the nurses, but also on the interaction of other professionals, such as the physician who prescribes,

the pharmacist, and the pharmacy assistants who separate and dispense the medication. All the elements and steps mentioned should favour patient safety.

Difficulties improving patient safety

This category shows that despite the efforts of the nursing staff to improve patient safety, with changes in the work process, some professionals stressed institutional difficulties such as lack of proper structure and a shortage of financial, material, and human resources, as shown below:

Sometimes there is a shortage of equipment. There is a lack of material to work with (TE 22).

[...] Investigate the fall because there can be several factors [...] we don't have the bell, and he has to notify by shouting, or to the family member. And it's something that we fight about, there should be a bell and there isn't one. There isn't a light signal on the top of the bed and that's complicated (NSP2).

We have here today, in relation to care, a small number of people which can lead to falls from the beds, because sometimes we have three technicians to attend a unit with 30 beds, 30 occupied beds (NSP6).

What messes things up, it's a small hospital, with little resources, we can still make do with the very little we have. We have to make do with what we have (NSP 13).

Today for us to improve and achieve the goals there is a shortage of resources. Resources because everything you are going to improve and deploy, for example, is a needle that you want to change to have technical and patient safety, you will pay more and with that you have to the resources, and that involves everything. Our chairs are very bad, shower chairs, what is that? It's lack of resources to replace them. We do the maintenance, but it is not enough because we use them a lot. Everything is resources (NSP 7).

The things that help maintain safety can be wheelchair, beds with wheels help. There's a lot that helps and nothing happens. We're stuck with the financial situation (TE29).

During the observation, it was also possible to detect the lack of a suitable structure, such as the absence of materials, outdated equipment, and old facilities. The testimonies also revealed the concern of the participants with developing best practice, although some factors directly affect their work. The professionals stress their excessive workload due to the reduced nursing staff and high turnover, as shown below:

The workload here is huge. Too much workload for the nurse. Everything in the ward is the nurse (NSP2).

The difficulty that I think is too many patients that we take care of in this ward (TE27). It has to be improved [...] we have the problem of a small amount of people, and a lot to be done and a few to do it, and a lot of work (NSP 5).

The workers are always changing. So, there are lots of hindrances, but it would be interesting to switch the technical employees, but not the ones with other positions. I don't know if it's remuneration. The remuneration in the area of health is the bigger problem. We don't have [nurses] the [salary] we should have, but it got a little better (NSP13).

Today a nurse starts here and tomorrow he might not be here or he is transferred to another ward. And I had this routine and you had to let it pass, but there comes a time when the routine is all lost. I'm always arguing because when we manage to get a nurse that is in clinical surgery and everything is good, they take him away, it disrupts everything. We start from scratch (NSP12).

DISCUSSION

The actions undertaken in the inpatient unit according to data analysis include the identification of care risks, the notification of adverse events, which was previously restricted to the notification of technical complaints, and the use of forms to assess the risk of falling and pressure injury.

Many efforts were made to ensure a quality and safe care; however, during the hospital stay in the room or nursing ward, patients can suffer more than one avoidable adverse event, that is, injury that can be avoided with actions that prevent infection or surgical complications and conditions that depend on appropriate nursing care[4]. The development of activities to improve quality in hospitals therefore becomes paramount. The findings of this study show some actions in this direction developed by the nurses, even with all the infrastructure deficits.

Risk management, with risk identification and adverse event notifications, was also highlighted in another study that analysed strategies to promote patient safety in hospitals[6]. The identification of shared risk can be considered the first strategy to establish a culture of safety at the institution[6].

In the inpatient unit, the workers adopted a practice to prevent and mitigate the risk of falling and injury from pressure. With document analysis, observation, and the participant testimonials, it was possible to identify that the nurses used the Braden Scale tool to improve their risk assessment practice. In this regard, fall prevention involves identifying the synergy between the multiple factors that lead to this incident, intrinsic factors (individual factors such as age, diseases, drug use), extrinsic factors (environmental hazard such as poor lighting, inadequate chairs and beds)[11], and assessment tools, such as the Braden Scale used at the institution, and others, such as Stratify[4] and the Morse Scale[11].

It is important to consider these adverse events in patient care since they can prolong hospital stays or even lead to death[4, 11]. A Brazilian study showed that patient falls inside the hospital, whether from the bed, in the bathroom or anywhere else in the hospital, and pressure injuries account for around 25% of avoidable adverse events[4].

The adoption of a nursing care plan after assessing risk and its predisposing factors in the study scenario was fundamental. Fall prevention, for example, is not restricted to risk assessment; it includes intervention in risk factors, training of professionals, and learning with the occurrence of falls, which is possible by analysing notifications or indicators[11]. These actions were performed at the studied institution.

The results reveal a team that is highly concerned with adopting best practices and updating and enhancing their knowledge to follow the proposals made by the WHO. As discussed earlier, the WHO proposes international security goals to ensure correct patient identification, clear and effective communication, care related to high-risk medication, increased safety during surgery, and diminished risks of infection and falling of patients[3,12].

When it comes to inpatient units, these goals do not merely apply to a safe surgery checklist; however, there was no emphasis on practices to achieve the goals related to the safe administration of medicine or infection control, and only one participant mentioned the use of a multimodal hand hygiene strategy. Such findings reveal opportunities to improve patient safety.

Moreover, the results indicate faults in relation to the administration of medication. The workers expressed their concerns and their plans to improve the work process, with emphasis on high-risk medication before it is dispensed by the pharmacy. However, medication administration depends on the interaction of workers, such as the physicians who prescribe, the pharmacist, the pharmacy assistant who separate and dispense medication, and the nursing team that administers, all of which must favour patient safety.

In the scope of nursing care, the most frequent errors are related to the administration of medication. Practices to improve this area focus on reinforcing the basic steps of administrating medication with the team, which is also the most universal approach to reducing this error. The analysis of three medication error cases involving nurses[13] reinforces the idea that this error can be considered a fault in the process, and can increase patient morbidity and mortality.

The nursing team is the group of healthcare workers who are most involved in the process of administering medication, and the surest way to perform this task is eliminating risk. In this regard, workers must understand the risks and potential damage, comprehend the service and all the processes involved in the administration of medications, and remain vigilant during the administration periods[13].

Safety actions to reduce errors also include the identification of high-risk or alert medication, known to cause harm if incorrectly employed; the use of technology, such as smart pumps and other devices, including examining storage and proximity with other products; and access to potentially hazardous products, such as those with similar names. Furthermore, prior to administering medication, two nurses can check whether the items are correct, known as double checking[13]. These measures are effective and do not require huge investments.

Compliance with all the goals means increasing patient safety and allows institutions to improve their processes, enabling worker safety, who, in turn, feels safer and calmer to conduct routine work[12].

In relation to improving communication and permanent education, effective communication is a determining factor of patient security, together with interdisciplinary diversity and work, training and education to perform functions, and the sharing of knowledge[14].

The adoption of multiprofessional and permanent education strategies based on notification data in the study scenario corroborates a study conducted in 2012. The referred study shows that the key strategies to reduce avoidable adverse events in paediatric patients include staff training geared toward patient safety, education based on analysing the root cause, classifying adverse events, safe behaviour, the use of indicators, and nursing leadership[15]. Moreover, continuing education that focuses on protocols and evidence-based practices helps to change standards[6].

With regard to protocols, the findings are consistent with a study conducted with 14 risk managers and showed that the least employed patient security initiatives are related to the control and prevention of adverse events with medication. The clinical pharmacist is not a current reality

in Brazilian hospitals[16]. However, in this study, the protocols were mostly identified in the prescriptive stage.

To guide patient safety in the professional practice, the National Quality Forum (NQF) published a set of highly reliable safety practices based on sufficient evidence to reduce adverse events and injury to patients that can be applied universally in any healthcare setting[14].

The NQF signals that improving the safety culture is one of the first recommendations to foment safety in hospitals, and serves as a basic structural indicator to implement good clinical practices, including the effective use of other strategies, such as incident notification and learning from errors. The practices are organised into seven functional categories to improve patient safety, namely creating a culture of safety; informed consent, life-support, disclosure and care for who cares; combining healthcare needs with a qualified service; facilitating the transfer of information and clear communication; managing medication administration; preventing infections; and practices for local and specific conditions[14].

In relation to the results presented in the latter category, findings such as lack of proper structure and the shortage of financial, material and human resources corroborate recent studies where the lack of structure and shortage of professionals, equipment, and materials in some public hospitals and charitable institutions hindered the full course of protocols[6, 17].

Other studies found that the excessive workload and low number of nursing staff were also contribute to errors and breaches of patient safety[6, 18]. These findings suggest that patient safety involves human resources and decision making at all levels of the organisation, as the a highly reliable organisation has a collective awareness with regard to patient safety and commitment on all levels, including top management. Therefore, the commitment of the administration is critical to change the culture and behaviour of organisations[19-20].

In this regard, the commitment to improve must be continuous and come from all directions, thus promoting a physical, human and organisational structure to ensure a culture of safety in the hospital[6]. The fact that it is a teaching hospital that assumes a social, economic, political and scientific role reinforces this commitment.

Therefore, the action of nurses is imperative for the adoption of safe practices and better quality healthcare. Despite the difficulties, the nurse managed to coordinate management and care actions to improve patient safety and, consequently, the quality of healthcare. These findings corroborate the reflection of the NQF, in which leaders should be involved in the process of creating and transforming the culture of patient safety to raise awareness, responsibility, qualification, and action in favour of the safety of patients[14].

Furthermore, it is important to promote teamwork and establish proactive, systematic, and organisational training with skill-building to improve the performance of teams and reduce preventable damage[14].

FINAL CONSIDERATIONS

Patient safety programmes and the dissemination of research findings in the area have specifically encouraged nurses to develop safer practices. However, challenges still exist, and they must be reported and addressed. Nursing has sought to address existing risks in inpatient units and implement better care and management practices in an attempt to reach the patient safety goals proposed by WHO.

This study revealed the changes in the nursing practice to improve patient safety, such as identifying, managing, and proposing care plans according to the physical and care-related risks identified in the inpatient unit. The Braden Scale was used to calculate the risks of falling and pressure injury. Patient identification was implemented with improvements in communication, permanent education, multidisciplinary meetings with a study group and realistic simulation. The described hygiene protocols were hand sanitation, falls, pressure injury, patient identification, enteral and parenteral therapy, and the administration of blood products. There was no protocol for the safe administration of medication, implying a risk to patient safety. The detected changes also sought to improve the quality of care.

Moreover, this study helped identify deficiencies, such as lack of proper structure, a shortage of financial resources, and a deficit of human resources, generating a heavy workload and high turnover. The suggestions to overcome these problems are their acknowledgment, joint efforts, and greater focus of nursing management to develop collaborative work strategies with the involvement of senior management.

The limitations of this study were the design and choice of research method. The case study design chosen for this study reduces the probability of generalising the results. However, case studies can be generalised according to theoretical propositions and not to populations or universes, in addition to the possible bias of the investigator if research is not properly conducted. The limitation refers to the researcher since no bonds were formed for the participants to express their ideas openly.

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