# CONTRIBUTIONS TO THE PROMOTION OF PATIENT SAFETY AND FALL PREVENTION

# CONTRIBUIÇÕES PARA PROMOÇÃO DA SEGURANÇA DO PACIENTE E PREVENÇÃO DE QUEDAS

## CONTRIBUCIONES A LA PROMOCIÓN DE LA SEGURIDAD DEL PACIENTE Y LA PREVENCIÓN DE CAÍDAS

Fabiele Aozane Cigana<sup>1</sup>
Rosângela Marion da Silva<sup>2</sup>
Carmem Lúcia Colomé Beck<sup>3</sup>
Liliane Ribeiro Trindade<sup>4</sup>
Ariane Naidon Cattani<sup>5</sup>
Diogo Jardel Cigana<sup>6</sup>

How to cite this article: Cigana FA, Silva RM, Beck CLC, Trindade LR, Cattani AN, Cigana DJ. Contributions to the promotion of patient safety and fall prevention. Rev baiana enferm. 2019;33:e33280.

Objective: to identify the perception of nursing technicians to promote patient safety and fall prevention at a clinical-medical inpatient unit. Method: exploratory and descriptive study, with qualitative approach, performed with nursing technicians, by means of semi-structured interviews and non-participant systematic observation, in the period from April to June 2017. For data analysis, the Operational Proposal of Minayo was used. Results: the participants were 14 nursing technicians, who realized the need for adequacy of beds, trainings and multiprofessional work. They highlighted the reduced number of nursing professionals and the absence of family/companion in care as factors that influence patient safety and fall prevention. Conclusion: the nursing technicians identified the need for adequacy of nursing human and physical resources, continuing education and the participation of the family/companion to promote patient safety and fall prevention at a clinical-medical inpatient unit.

Descriptors: Patient Safety. Accidental Falls. Nursing.

Objetivo: identificar a percepção de técnicas de enfermagem para promoção da segurança do paciente e prevenção de quedas em uma unidade de internação da clínica-médica. Método: estudo do tipo exploratório e descritivo, de abordagem qualitativa, realizado com técnicas de enfermagem, por meio de entrevista semiestruturada e observação sistemática não participante, no período de abril a junho de 2017. Para a análise dos dados, foi utilizada a Proposta Operativa de Minayo. Resultados: participaram 14 técnicas de enfermagem, que perceberam a necessidade de adequação das camas, da ocorrência de capacitações e do trabalho multiprofissional. Destacaram o quantitativo reduzido de profissionais da enfermagem e a ausência de familiar/acompanhante no cuidado como fatores que

Nurse. MSc in Nursing. Assistant Nurse, Hospital Unimed Noroeste. Ijuí, Rio Grande do Sul, Brazil aozane@hotmail.com. https://orcid.org/0000-0001-6624-0566

Nurse. PhDin Sciences. Professor, Universidade Federal Santa Maria. Santa Maria, Rio Grande do Sul, Brazil. cucasma@terra.com.br. https://orcid.org/0000-0003-3978-9654

Nurse. PhD in Sciences. Professor, Universidade Federal Santa Maria. Santa Maria, Rio Grande do Sul, Brazil. https://orcid.org/0000-0001-9060-1923

Nurse. MSc in Nursing. Nurse, Estratégia de Saúde da Família. Prefeitura Municipal de Uruguaiana. Uruguaiana, Rio Grande do Sul, Brazil. https://orcid.org/0000-0002-5906-4709

<sup>5</sup> Nurse. Specialist in Mental Health. Universidade Federal de Santa Maria. Santa Maria, Rio Grande do Sul, Brazil. https://orcid.org/0000-0002-3365-9237

Nurse. Assistant Nurse, Hospital de Caridade de Ijuí. Ijuí, Rio Grande do Sul, Brazil. https://orcid.org/0000-0001-8391-2774

influenciam na segurança do paciente e prevenção de quedas. Conclusão: as técnicas de enfermagem identificaram a necessidade de adequação dos recursos físicos e humanos de enfermagem, a educação permanente e a participação do familiar/acompanhante para promoção da segurança do paciente e prevenção de quedas em uma unidade de internação da clínica-médica.

Descritores: Segurança do Paciente. Acidentes por Quedas. Enfermagem.

Objetivo: identificar la percepción de técnicas de enfermería para promover la seguridad del paciente y la prevención de caídas en una unidad hospitalaria de la clínica médica. Método: estudio exploratorio y descriptivo, de enfoque cualitativo, realizado con técnicas de enfermería, por medio de entrevistas semi-estructuradas y observación sistemática no participante, en el período de abril a junio de 2017. Para el análisis de datos, se utilizó la propuesta operacional de Minayo. Resultados: participaron en 14 técnicas de enfermería, que comprendieron la necesidad de adecuación de camas, capacitaciones y trabajo multiprofessional. Destacaron la cantidad reducida de profesionales de enfermería y la falta de familiares/acompañantes en el cuidado como factores que influyen en la seguridad del paciente y la prevención de caídas. Conclusión: las enfermeras técnicas identificaron la necesidad de adecuación de los recursos bumanos y físicos de la enfermería, la educación permanente y la participación de la familia/acompañante para promover la seguridad del paciente y la prevención de caídas en una unidad hospitalaria de la clínica médica.

Descriptores: Seguridad del Paciente. Accidentes por Caídas. Enfermería.

#### Introduction

Patient safety has been the focus of discussions between managers and providers of health services, aiming to improve the quality of care in the health area. Among the scenarios of nursing care, the hospital environment provides a complexity of procedures and treatments to patients. Therefore, this space enhances the likelihood of accidents<sup>(1)</sup>. Patients who are in the process of health recovery are vulnerable to circumstances that can result in unnecessary damage to health, such as falls.

The fall extends the period of hospitalization, with increased costs, physical and psychological discomfort for the patient<sup>(2)</sup> and their families. It is characterized as an event in which the patient ends up involuntarily on the ground or in other low level, with presence or absence of lesions<sup>(3)</sup>.

From 2013, the National Program for Patient Safety has expanded the debate at health institutions about safety care. It has assisted in strengthening actions that seek to improve the quality of care, with the deployment of goals aimed at patient safety, especially those related to fall prevention<sup>(4)</sup>. The occurrence of falls is related to loss of balance, slipping and stumbling,

and fainting, with the bed as the most reported fall site, followed by falls in the bathroom and from the chair<sup>(5)</sup>.

A study conducted with 228 elderly patients at a large-sized teaching hospital suggests that patients suffer fall when performing any so-called simple activity, such as raising the bedside (33.3%) and walking to the bathroom (44.4%), requiring a differentiated attention from the health team, due to the vulnerability regarding the risks of hospitalization, particularly the risk of falls<sup>(6)</sup>. In this context, the team's work becomes relevant, especially in nursing, to prevent falls in the hospital environment, which implies a permanent dialog in the construction of proposals for health education grounded in care uniqueness.

Thus, this study is justified because one understands that promoting patient safety requires constant professional updating, in addition to knowing and understanding the specificities of the institution. Among the professions working at health services, the nursing team is in direct contact with the patient in all working shifts. In this sense, it is important to analyze the scenario and the organization of work, as well

as how the team develops the activities and the complexity of these actions, which can contribute to implementing strategies for safer health care practices and to signaling behaviors to be avoided<sup>(7)</sup>.

Thus, considering that the organization of work is directly related to safe actions, and these foster care with quality at hospital institutions, the following question emerges: What are the perceptions of nursing technicians for the promotion of patient safety and fall prevention at a clinical-medical inpatient unit? The objective was to identify the perception of nursing technicians to promote patient safety and fall prevention at a clinical-medical inpatient unit.

#### **Method**

Exploratory and descriptive study, with qualitative approach, performed with nursing technicians from a hospital located in a municipality in the state of Rio Grande do Sul in the period from April to June 2017. The institution had 112 beds and was considered a reference in medium and high complexity of 52 municipalities in its region. The unit selected for the study was the clinical-medical inpatient unit, with 35 beds, in which the Patient Safety Center of the institution initially deployed the protocols for identification of the patient, safety prescription, use and administration of medicines and fall prevention.

The unit had 41 nursing workers (4 nurses and 37 nursing technicians), divided into morning (13 workers), afternoon (11 workers) and night (17 workers) shifts. The inclusion criteria were being a nursing technician and at least six months of experience at the unit. The exclusion criterion was not being at work due to leave of any kind. The participants were randomly selected by working shifts. Nurses were not included in the study, considering their number, because it could favor the identification in work shifts.

Data collection used semi-structured interviews and non-participant systematic observation. A researcher, a nursing postgraduate student, master's degree, performed all steps.

The interview was carried out individually, in the morning, afternoon and night shifts, at a reserved room, located in the institution, which ensured the participant's privacy. A previously elaborated guide was followed, which contemplated sociolabor data (sex, age, marital status, children, other employment, choice of the work shift, time working in the category) and guiding questions, which sought to generate knowledge about the actions taken to promote patient safety at the institution. The interview was recorded in digital recorder, after the participant's consent, with an average duration of 25 minutes each.

The end of this step occurred when the information began to repeat, not resulting in new findings, which meets the criterion of sample saturation<sup>(7)</sup>. To preserve the anonymity, the letter P (participant), followed by an Arabic numeral corresponding to the order of the interview (1, 2, 3...) and the first letters of the work shift (morning – M; afternoon – A; night – N) were used.

The non-participant systematic observation was performed in all shifts, totaling nine, with an average duration of 4 hours each, totaling 36 hours. The observations made were: dynamics of teamwork, organization/division of labor, behavior of the team regarding a problem or unscheduled activity and the occurrence of adverse events. They were recorded on a field diary and identified by the initials NO (notes of observation), followed by the corresponding date and the first letter of the shift. They were read extensively to search for convergence with the data from the interviews.

For data analysis, the Operational Proposal of Minayo was used, characterized by two interpretative moments. The first, composed of the mapping of the field of fundamental determinations, which refers to the historical context of the social group under focus. The second is the convergence with the empirical facts, where the sense, the internal logic, the projections and interpretations in the participants' reports are. In order to operationalize this second moment, data are sorted and classified in four stages: horizontal reading, first contact

with the obtained data; cross-sectional reading, generating the categories; final analysis, in which the data obtained are discussed in theory; and report, which concludes the presentation of the research results<sup>(8)</sup>.

The Research Ethics Committee approved this study, under Opinion n. 1.982.855. It meets the requirements of Resolution n. 466/12 of the National Health Council. All participants signed the Informed Consent Form. This manuscript follows the consolidated criteria for reports of qualitative studies<sup>(9)</sup>.

### **Results**

The participants were 14 nursing technicians, all female, aged between 20 and 39 years; 71.72% had children and half had a partner; they had been working in the category up to five years and had no other employment; 57.15% chose the work shift.

In relation to patient safety and fall prevention, established in the protocol, the participants reported that a distinctive look for nursing care can contribute to the promotion of safe practices.

The bed bars were not up just because the patient could walk. But the patient can sleep, and fall. Now it's much better. In relation to going to the bathroom, they don't risk going alone, they call us. It's much better for us. You know that nothing will happen. (P1, M).

It used to be different some time ago, we didn't have this vision. We used to think: if the patient is well, conscious, we could have never imagined he would fall, but some cases of patients who fell off the bed happened. (P13, N).

The adequacy of the beds was highlighted as a resource that can affect patient safety.

Physical safety, improving the beds, for example [...] the mattresses, many patients have complained that the mattresses are hard, that the beds are very high. And the beds are really high. Those with three handles, you can lower as much as possible, which is better, especially for the elderly, whose legs are not so strong, then it's easier for them to leave the bed [...] there could be different stretchers. They are too narrow for a bigger patient, anything can happen. (P4, A).

The participants mentioned that nursing work integrated with other health professions, such as physiotherapy, can assist in the planning of assistance and fall prevention.

When making the planning, such as of physiotherapy or nursing, there should be a representative of each one, because we all work as a team. When te planning changes within the routines, is it feasible for physiotherapy? Is it feasible for nursing? Is it feasible for sanitation? One thinking about another, so both think together, in order to plan together. (P8, M).

There is the involvement of other workers, such as physiotherapy, to aid removing the patient from the bedside. Physiotherapy assesses the risk of fall and communicates to the nursing staff if the risk is identified. There is a good communication and aid between nursing and physiotherapy. (NO, 5/27/2017, M).

Another factor cited by nursing technicians, which can contribute to minimizing the adverse events, is the permanent education, such as training.

The trainings are definitely of utmost importance for the patient, the nursing team, for the family[...] that involves not only the patient, but everything. We all feel valued. (P7, N).

I think something the unit is missing today, during the night, which has not been required anymore, and is no longer being done, but there used to be, are those courses during at dawn: "People, come here, let's check the cart, let's open, let's look."; "Look here, there is a new pump!" This has been lost. I don't see this happening anymore. We had nurses who took us at dawn to the rooms, where they trained massages, trained simulation of arrest! We used to have "You, to the cart, the other, to the massage, the other, call the doctor." When I started here, we used to have it. (P10, N).

I went to a training for patient safety on bracelet, administration of drugs, diets, risks of falls, identification plate. There should be more, because it's a routine for us. We deal with people's lives every day. They should've kept the trainings, because we have plenty of new people, and even with nursing monitoring, the new ones coming, we are instructed to follow what the nurse says. But it's something so big that the person has no idea. The person is entering into a new profession, has no idea. This patient safety thing is too big. (P8, M).

The participants highlighted that the reduced number of professionals can overburden the workers and endanger patient safety.

Some days we manage to pay more attention at the patient, but there are other when we barely manage to talk to them, and every day is a day. (P2, A).

At the nursing station, at night, there are fewer workers in comparison to other work shifts. In the division of patients, the workers are with a greater number of patients, when compared to the morning and afternoon shifts. (NO, 5/29/2017, N).

The absence of family/companion in the bedrooms was mentioned as a factor that can influence the safe practices.

Some patients stay alone, and there should be a law regarding the obligation of a companion. Because you can't manage to stay with that patient all the 6 hours of your duty and, sometimes, that patient requires much from you, by being alone. I think that this should be a guideline for the family. (P1, M).

The workers seek to clarify information requested by patients and relatives, being belpful. The workers develop a differentiated attention to patients, through conversations, support, they establish bond with patients and family members. (NO, 6/12/2017, A); (NO, 5/22/2017, N); (NO, 5/27/2017, M); (NO, 5/29/2017, N).

At the nursing station, the nursing technician reported to the unit nurse the occurrence of a patient's fall. The technician reported leaving the bars of the bedside up, but the patient came out of bed without the nursing's aid, suffering a fall. In the report, the nursing technician mentions that the relative helped until the displacement to the bathroom, but the patient presented dizziness, suffering fall on site, when sitting on the toilet. The nurse went to the room to evaluate the patient and communicated it to the physician. This fact has been notified by the nurse in the box of notifications at the unit, by means of a notification description form. (NO, 6/12/2017, A).

#### Discussion

The results showed that the nursing technicians perceived situations of the work process that could be changed, such as adequacy of physical resources and teamwork, because they were instruments that could prevent falls and promote patient safety. Moreover, there was a need to disseminate the safety culture at health services, this being one of the institutional goals<sup>(10)</sup>.

The joint linkage with workers from other areas is capable of reducing incidents with interference in the patient safety<sup>(11)</sup>. The multiprofessional practice can help prevent falls, when there is communication between workers from different health professions. The nursing and physiotherapy teams have directed care in conjunction to prevent falls, thus contributing to patient safety.

The trainings contribute to safe practices, but this initiative must base on actions collectively agreed with the hospital's management and administration. Nurses' participation in this practice is essential, especially in the organization of these moments with the team and to identify the needs of themes to be worked out, because the practice of trainings with workers makes assistance safer, directly influencing the patient and occupational safety<sup>(12)</sup>. A nursing technician mentioned the role and the importance of the nurse to stimulate some practices of patient safety, such as training in the workplace.

In a study on patient safety culture, participants also expressed the desire to improve their training to provide a safe assistance. There is the participation in trainings, qualifications, improvements, study groups, monitoring of new employees, meetings between nursing technicians, nurses and sub-managers (13), stressing the importance of incorporating permanent educational programs with health unit workers.

Educational actions with the nursing team are a strategy that can be used to motivate their work. Permanent education is considered a practice aiming to reduce harm to the patient, because it encourages the sharing of knowledge and experiences. It provides space for health professionals to discuss and share everyday situations, reducing the burden of work and equipping them in relation to experiences from the occurrence of adverse events. It assists in the progression of a patient safety culture more meaningful to workers<sup>(14)</sup>, which makes it an important practice, which can promote behavioral changes and collaborate in safe actions.

The practice of continuing education allows for reflecting on the various issues present in daily work<sup>(15)</sup>. The present study revealed the need for continuous trainings, including those on risk of falls, justified by the direct action of the nursing team in patient care. Furthermore, the execution of trainings allow for the approximation with the theme of patient safety.

The Note of Observation showed that the number of workers is a situation that suggests overload for workers, because there is a disproportion between the number of nursing workers and patients. This fact may favor the increase in the incidence of adverse events. This corroborates the findings of a Chinese study, which found a direct relationship between improved patient safety in the hospital scenario and the proper sizing of the nursing team<sup>(16)</sup>.

6

The overload observed in the workers' reports, when mentioning there were days on which they were not able to provide the necessary attention to the patient, can interfere with the well-being and cause stress, factors that are also associated with the occurrence of damage to patients. It can also affect the time dedicated to the care, intrinsically related to safe practices, because the reduced surveillance and support time in the activities of patients increases the risk of falls and other incidents.

English study shows evidence of the association between well-being and excessive stress and patient safety, i.e., the self-reported errors are associated with people, with harms to the well-being<sup>(17)</sup>. The work overload requires efforts of the worker to maintain the quality of care offered. The participation of a companion/family member in the care process is an important factor to minimize this burden, in addition to promoting the sharing of information.

The family/companion, in this process, may be one of the patient-safety-promoting agents, bearing in mind that the care for fall prevention involves guiding the patient and family, in order to encourage their participation in care<sup>(12)</sup>. Situations in which the patient remains hospitalized without the presence of a family member/companion may increase the risk of falls and compromise his/her safety.

Thus, the permanence of the family/companion with the patient is important, because their presence is one of the factors that assists in the prevention of adverse events. Promoting their participation allows for their integration into the care according to their ability. This approach enables a collaborative practice among family members/companions and nursing workers, thus contributing to the promotion of a safety culture (18).

Although the presence of family members/companions in the hospitalization period is important, the health team is responsible for promoting patient safety and preventing falls. The nursing practice must be centered on the care, based on scientific knowledge, dialog and the

establishment of healthy interpersonal relations with a view to promoting a safe environment (19).

Moreover, the health team is responsible for notifying the occurrence of adverse events, such as falls. At the institution where the research was conducted, the notifications received by the Patient Safety Center were discussed at monthly meetings, in the search for strategies that could make the actions safer. When necessary, they were informed on the System for Health Surveillance (Notivisa). Importantly, patients and their relatives can also perform the notifications, contributing to the decision-making by the Patient Safety Center.

For the establishment of preventive measures for adverse events, such as the falls, some recommended practices include the use of nonskid flooring, installation of security lights in the bathrooms and corridors, use of assistive devices for ambulation with supervision, installation of support bars in the bathroom and shower, maintenance of bars on the patient's bed and strengthening of guidelines for patients' companions with diagnosis of risk for falls<sup>(1)</sup>. The physical, materials and organization settings of health services, such as facilities, equipment, financial resources, qualification and amount of human resources, relate to the quality of health care<sup>(20)</sup>.

The limitations of this study are related to the method adopted, because the descriptive study restricts the results to the investigated site, not allowing for generalization to other contexts. Another factor considered as limiting factor was the non-inclusion, as participants, of other health professionals, once patient safety is a crosscutting theme for all professions. Nevertheless, the analysis offered information that could allow for planning safer practices related to prevention of falls and consequently to reducing the occurrence of this adverse event, in addition to enabling the planning and implementation of actions, by the Patient Safety Center and the managements of nursing services, making the period of hospitalization safer.

#### Conclusion

The adequacy of human and physical resources of nursing, as a multiprofessional work, and the proper sizing of nursing professionals, continuing education and the participation of the family/companion in care were perceptions reported by nursing technicians from a clinical-medical inpatient unit that helped promote patient safety and fall prevention.

These results are expected to contribute to the scientific community, undergraduate nursing students, workers, professors, nursing staff and Patient Safety Centers, so that actions are defined collectively, becoming safe practices. Patient safety represents a challenge for the excellence of quality at the health service, but the results presented may contribute to better patient care in relation to safe care.

#### **Collaborations:**

- 1. conception, design, analysis and interpretation of data: Fabiele Aozane Cigana, Ariane Naidon Cattani and Rosângela Marion da Silva;
- 2. writing of the article and relevant critical review of the intellectual content: Fabiele Aozane Cigana, Rosângela Marion da Silva and Carmem Lúcia Colomé Beck;
- 3. final approval of the version to be published: Rosângela Marion da Silva, Liliane Ribeiro Trindade and Diogo Jardel Cigana.

## References

- Rede Brasileira de Enfermagem e Segurança do Paciente. Estratégias para a segurança do paciente: manual para profissionais da saúde. Porto Alegre: Edipucrs; 2013. 132 p.
- Kim K, Jung HK, Kim CO, Kim SK, Cho HH, Kim DY, et al. Evidence-based guidelines for fall prevention in Korea. Korean J Intern Med [Internet]. 2017 [cited 2018 Jun 10];32(1):199-210. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/ PMC5214733/

- Health Services Research Group University of Newcastle. Australasian Clinical Indicator Report. 15th ed. Newcastle; 2014. 132 p.
- 4. Brasil. Ministério da Saúde. Agência Nacional de Vigilância Sanitária. Resolução da Diretoria Colegiada nº 36, de 25 de julho de 2013. Institui ações para a segurança do paciente em serviços de saúde e dá outras providências [Internet]. Brasília (DF); 2013 [cited 2018 Jan 13]. Available from: http://portal.anvisa.gov.br/documents/10181/2871504/RDC\_36\_2013\_COMP. pdf/36d809a4-e5ed-4835-a375-3b3e93d74d5e
- 5. Brasil. Ministério da Saúde. Agência Nacional de Vigilância Sanitária. Boletim Segurança do Paciente e Qualidade em Serviços de Saúde: Incidentes Relacionados à Assistência à Saúde [Internet]. Brasília (DF); 2016 [cited 2018 Jan 12]. Available from: https://www20.anvisa.gov.br/ segurancadopaciente/index.php/publicacoes/ category/boletins-estatisticos
- Vaccari É, Lenardt MH, Willig MH, Betiolli SE, Andrade LAS. Segurança do paciente idoso e o evento queda no ambiente hospitalar. Cogitare Enferm [Internet]. 2016 [cited 2018 Feb 20];21(esp):1-9. Available from: https://revistas.ufpr.br/cogitare/ article/view/45562/pdf
- Siqueira CL, Ferreira KM, Souza TC, Feldman LB. Sentimentos experimentados por equipes de enfermagem acerca dos erros de medicação. Cogitare Enferm [Internet]. 2016 [cited 2018 Jun 16];21(esp.):1-10. Available from: https://revistas.ufpr.br/cogitare/article/view/45411
- Minayo MCS. O desafio do conhecimento: pesquisa qualitativa em saúde. 14a ed. São Paulo: Hucitec; 2014.
- Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32item checklist for interviews and focus groups. Int J Qual Health Care [Internet]. 2007 [cited 2017 Sep 30];19(6):349-57. Available from: https://academic. oup.com/intqhc/article/19/6/349/1791966
- 10. Dias JD, Mekaro KS, Tibes CMS, Zem-Macarenhas SH. Compreensão de enfermeiros sobre segurança do paciente e erros de medicação. REME [Internet]. 2014 [cited 2017 Dec 10];18(4): 866-73. Available from: http://www.reme.org.br/artigo/detalhes/969
- Pasa TS, Magnago TSBS, Urbanetto JS, Baratto MAM, Morais BX, Carollo JB. Avaliação do risco e incidência de quedas em pacientes adultos

- hospitalizados. Rev Latino-Am Enfermagem. 2017;25:e2862. DOI: 10.1590/1518-8345.1551.2862
- 12. Aruto GC, Lanzoni GMM, Meirelles BHS. Melhores práticas no cuidado à pessoa com doença cardiovascular: interface entre liderança e segurança do paciente. Cogitare Enferm [Internet]. 2016 [cited 2018 Apr 15];21(n.esp.):1-9. Available from: https://revistas.ufpr.br/cogitare/article/view/45648
- 13. Fermo VC, Radunz V, Rosa LM, Marinho MM. Professional attitudes toward patient safety culture in a bone marrow transplant unit. Rev Gaúcha Enferm. 2016;37(1):e55716. DOI: 10.1590/1983-1447.2016.01.55716
- 14. Wegner W, Silva SC, Kantorski KJC, Predebon CM, Sanches MO, Pedro ENR. Education for culture of patient safety: Implications to professional training. Esc Anna Nery. 2016;20(3):e20160068. DOI: 10.5935/1414-8145.20160068
- Figueiredo ML, Oliveira e Silva CS, Brito MFSF, D'Innocenzo M. Analysis of incidents notified in a general hospital. Rev Bras Enferm. 2018;71(1):111-9. http://dx.doi.org/10.1590/0034-7167-2016-0574
- 16. Liu X, Zheng J, Liu K, Baggs JG, Liu J, Wu Y, et al. Hospital nursing organizational factors, nursing care left undone, and nurse burnout as predictors of patient safety: A structural equation modeling

- analysis. Int J Nurs Stud. 2018;20(86):82-9. DOI: 10.1016/j.ijnurstu.2018.05.005
- Hall LH, Johnson J, Watt I, Tsipa A, O'Connor DB. Healthcare Staff Wellbeing, Burnout, and Patient Safety: A Systematic Review. PLoS One. 2016;11(7):e0159015. DOI: 10.1371/journal. pone.0159015
- 18. Passos SSS, Henckemaier L, Costa JC, Pereira A, Nitschke RG. Cuidado quotidiano das famílias no hospital: como fica a segurança do paciente? Texto contexto-enferm. 2016;25(4):e2980015. DOI: 10.1590/0104-07072016002980015
- Cavalcante AKCB, Rocha RC, Nogueira LT, Avelino FVSD, Rocha SS. Cuidado seguro ao paciente: contribuições da enfermagem. Rev cuba enferm [Internet]. 2015 [cited 2018 Nov 6];31(4). Available from: http://www.revenfermeria.sld.cu/index.php/ enf/article/view/907
- Moore L, Lavoie A, Bourgeois G, Lapointe J. Donabedian's structure-process-outcome quality of care model: Validation in an integrated trauma system. J Trauma Acute Care Surg. 2015;78(6):1168-75. DOI: 10.1097/TA.0000000000000663

Received: August 26, 2019

Approved: November 2, 2019

Published: February 4, 2020



The *Revista Baiana de Enfermagem* use the Creative Commons license – Attribuition -NonComercial 4.0 International. https://creativecommons.org/licenses/by-nc/4.0/

This article is an Open Access distributed under the terms of the Creative Commons (CC BY-NC). This license lets others remix, adapt and create upon your work to non-commercial use, and although new works must give its due credit and can not be for comercial purposes, the users do not have to license such derivative works under the same terms.