

RISK FOR FALLS IN THE PERIOPERATIVE PERIOD: CROSS-MAPPING NURSING INTERVENTION AND ACTIVITIES

RISCO DE QUEDA NO PERIOPERATÓRIO: MAPEAMENTO CRUZADO DE INTERVENÇÕES E ATIVIDADES DE ENFERMAGEM

RIESGO DE CAÍDA EN EL CUIDADO PERIOPERATORIO: MAPEO CRUZADO DE INTERVENCIONES Y ACTIVIDADES DE ENFERMERÍA

Olga Benário Batista de Melo Chaves¹

Jacira dos Santos Oliveira¹

Simone Helena dos Santos Oliveira¹

Maria Auxiliadora Pereira²

Iolanda Beserra da Costa Santos²

¹ Universidade Federal da Paraíba - UFPB, Centro de Ciências da Saúde, Programa de Pós-Graduação em Enfermagem. João Pessoa, PB - Brazil.

² UFPB, Centro de Ciências da Saúde, Departamento de Enfermagem Clínica. João Pessoa, PB - Brazil.

Corresponding author: Olga Benário Batista de Melo Chaves

E-mail: olgabeniaprestes@gmail.com

Author's Contributions:

Conceptualization: Olga B. B. M. Chaves, Jacira S. Oliveira, Simone H. S. Oliveira, Maria A. Pereira, Iolanda B. C. Santos; **Data Collection:** Olga B. B. M. Chaves; **Investigation:** Olga B. B. M. Chaves, Jacira S. Oliveira, Simone H. S. Oliveira, Maria A. Pereira, Iolanda B. C. Santos; **Project Management:** Jacira S. Oliveira; **Resource Management:** Olga B. B. M. Chaves, Jacira S. Oliveira; **Statistical Analysis:** Olga B. B. M. Chaves, Jacira S. Oliveira; **Supervision:** Jacira S. Oliveira; **Validation:** Jacira S. Oliveira, Simone H. S. Oliveira, Maria A. Pereira, Iolanda B. C. Santos; **Visualization:** Olga B. B. M. Chaves; **Writing - Original Draft Preparation:** Olga B. B. M. Chaves, Simone H. S. Oliveira, Maria A. Pereira, Iolanda B. C. Santos; **Writing - Review and Editing:** Olga B. B. M. Chaves.

Funding: No funding.

Submitted on: 2019/06/19

Approved on: 2020/01/02

ABSTRACT

Objective: to identify nursing care intended to prevent falls among perioperative patients in the literature and cross-map them with interventions/activities proposed by the Nursing Interventions Classification for the nursing diagnosis "risk for falls". **Methods:** descriptive study conducted in three stages: search for nursing care reported in the literature; identification of NIC intervention; and cross-mapping based on linkage between NANDA-I/ NIC. **Results:** the 214 care actions identified in the literature were mapped with 84 activities distributed in 26 NIC interventions. The intervention with the highest number of correspondences with the literature was prevention of falls, which resulted in 70 mapped activities, followed by the intervention risk identification and supervision, with 35 and 19 activities, respectively. **Conclusion:** all the care actions identified in the literature presented correspondences to some NIC intervention/activity. Preventing falls among perioperative patients requires ensuring environmental safety; that patients, companies and workers be educated and sensitized; the early identification of risks; in addition to continuous nursing supervision.

Keywords: Nursing, Accidental Falls; Perioperative Care; Standardized Nursing Terminology; Hospitalization.

RESUMO

Objetivo: realizar o mapeamento cruzado dos cuidados de Enfermagem para a prevenção de quedas em pacientes no perioperatório encontrados na literatura com as intervenções/atividades propostas pela Nursing Interventions Classification para o diagnóstico de Enfermagem "risco de queda". **Métodos:** estudo descritivo desenvolvido em três etapas: busca na literatura dos cuidados de Enfermagem utilizados, levantamento das intervenções propostas pela NIC e o mapeamento cruzado com base na ligação NANDA-I/ NIC. **Resultados:** os 214 cuidados encontrados na literatura foram mapeados com 84 atividades distribuídas em 26 intervenções NICs. A intervenção que apresentou mais correspondência com a literatura foi prevenção contra queda, que obteve 70 atividades mapeadas, seguida pelas intervenções identificação de risco e supervisão, com 35 e 19 atividades, respectivamente. **Conclusão:** todos os cuidados encontrados na literatura apresentaram correspondência com alguma intervenção/atividade NIC. Para a prevenção de quedas em pacientes durante o perioperatório são necessários segurança ambiental, consciência educativa dos pacientes, acompanhantes e profissionais, identificação precoce dos riscos e supervisão contínua da Enfermagem.

Palavras-chave: Enfermagem; Acidentes por Quedas; Assistência Perioperatória; Terminologia Padronizada em Enfermagem; Hospitalização.

RESUMEN

Objetivo: realizar el mapeo cruzado de cuidados de enfermería para la prevención de caídas en pacientes en el proceso perioperatorio encontrados en la literatura con las intervenciones / actividades propuestas por Nursing Interventions Classification (Clasificación de Intervenciones de Enfermería) para el diagnóstico de enfermería "riesgo de caída". **Métodos:** estudio descriptivo llevado a cabo en tres etapas: búsqueda

How to cite this article:

Chaves OBBM, Oliveira JS, Oliveira SHS, Pereira MA, Santos IBC. Risk for falls in the perioperative period: cross-mapping Nursing intervention and activities. REME – Rev Min Enferm. 2020[cited ____];24:e-1291. Available from: ____ DOI: 10.5935/1415-2762.20200020

en la literatura de los cuidados de enfermería utilizados, encuesta de las intervenciones propuestas por el NIC y mapeo cruzado basado en el enlace NANDA-I / NIC. **Resultados:** las 214 experiencias de cuidados encontrados en la literatura fueron mapeados con 84 actividades distribuidas en 26 intervenciones de NIC. La intervención que más correspondió con la literatura fue prevención de caídas, que contó con 70 actividades mapeadas, seguidas de intervenciones de identificación y supervisión de riesgos, con 35 y 19 actividades, respectivamente. **Conclusión:** todas las experiencias de cuidados de enfermería encontrados en la literatura mostraron correspondencia con alguna intervención / actividad NIC. Para la prevención de caídas en pacientes durante el período perioperatorio es necesario que haya seguridad ambiental, conciencia educativa de los pacientes, acompañantes y profesionales, identificación temprana de riesgos y supervisión continua de Enfermería.

Palabras clave: Enfermería; Accidentes por Caídas; Atención Perioperatoria; Terminología Normalizada de Enfermería; Hospitalización.

INTRODUCTION

Iatrogenesis, error or incident, is defined as an event or circumstance that could have resulted or actually did result in unnecessary harm to a patient, whether it originated in an intentional or non-intentional act. The occurrence of these events reflects a gap between real and ideal care delivery.¹

The Brazil's National Health Surveillance Agency (Agência Nacional de Vigilância Sanitária - ANVISA) published a report on adverse events; 272,689 incidents had been identified at a national level. Of these, 255,562 (93.7%) occurred in hospital settings and 30,448 (11.2%) involved patient falls.²

Falls are a multifactor event defined as unintentional displacement of one's body to a lower level, with or without injuries.³ The most common causes of falls include loss of balance, slips, and fainting and the most common sites where they occur are bed, bathrooms and chairs.² Surgical patients are included in the group with a potential risk for fall due to the effects of anesthetic drugs, prolonged fasting periods, and impaired mobility.³

Injuries accruing from falls range from abrasions, bruises, fractures up to disability or death, implicating and harming the credibility of the staff and service, increasing hospital costs and the length of hospitalizations.⁴

Decreasing the risk of injuries accruing from falls is based on constant assessment of risk for falls and adoption of actions that reduce or eliminate any risk identified.⁵ Note that the occurrence of falls is often related to a failure of systems rather than only to professional negligence or incompetence. Hence, more important than seeking to apportion blame is to identify processes' weaknesses and adopt preventive interventions.¹

In view of this scenario, nursing plays an essential and guiding role in the prevention of this adverse event, while the Nursing Process (NP) is an ally in the implementation of preventive actions and effective interventions. Nurses should use Nursing Classification systems in the application of the NP as these systems name, organize and classify diagnoses, interventions and nursing outcomes, improving care and the credibility of the staff, while favoring patient safety.⁴

Among the classification systems in nursing there is the Nursing Interventions Classification (NIC), a standardized language that comprises interventions implemented by nurses that can be used in all settings and specialties, favoring planning, documentation and communication of care. The NIC is composed of 554 Nursing interventions and approximately 13,000 activities. To facilitate its use, interventions are grouped into 30 classes and seven domains.⁶ Having prior knowledge of interventions, nurses can plan care delivery, calculate the most appropriate number of workers to implement it, and understand the staff's needs regarding improvements.⁷

Given the preceding discussion, this study's objective was to cross-map nursing care intended to prevent falls among perioperative patients reported in the literature with the interventions/activities proposed by the NIC for the nursing diagnosis "risk for falls".

METHOD

Descriptive study conducted in three stages using the cross-mapping method, a useful tool that encourages the development of clinical reasoning among nurses and improves nursing practice, especially in regard to the use of standardized language systems.⁸

The first stage corresponded to an integrative literature review according to the following guiding question: "what are the nursing care actions reported in the literature to prevent falls among perioperative patients?" Databases included Scopus Elsevier (SCOPUS), Latin America and Caribbean Health Science Literature (LILACS), Cumulative Index to Nursing and Allied Health Literature (CINAHL), Medical Literature Analysis and Retrieval System Online (MEDLINE), and Web of Science (WOS). The controlled descriptors/MeSH used were: "accidental falls", "perioperative assistance" and "nursing". The equivalent terms in Portuguese were accessed in the LILACS database. The full texts of papers, monographs, theses, dissertations, and opinion of experts published in Portuguese, English or Spanish between 1988 and 2018, addressing nursing care to prevent falls in the perioperative period and available online free of charge, were included. The selected studies were classified into five levels of evidence.⁹ Of the 118 references, 19 were excluded either because they were

unavailable or appeared more than once, while another 43 texts were excluded for not addressing the study topic. A total of 56 publications remained and after reading their full texts, a final sample of 28 studies was obtained.

The second stage included a search for NIC's nursing intervention based on the nursing diagnosis "risk for falls"¹⁰ based the linkages between NANDA-I/NIC.⁶ The interventions and Nursing activities suggested were listed, along with optional, additional suggestions, as well as interventions not linked to NANDA-I/NIC. The latter were included because they were considered pertinent and efficacious in the prevention of falls among perioperative patients.

The third stage consisted of cross-mapping care identified in the literature (first stage) and comparing it to NIC interventions (second stage). The author, and a PhD nurse with experience in the field of patient safety and cross-mapping¹¹, conducted this stage using an adapted instrument that presented the title and definition of the intervention at the top, the activities proposed by the NIC in a column at the left, and blank space was left in the right column to include the activities identified in the literature that were considered by experts to correspond to those proposed by the NIC.

Mapping was conducted according to the following stages and guidelines available in the literature:^{12,13} a) NIC interventions selected according to the linkages between NANDA-I/NIC for the ND "risk for falls"; b) knowledge and context of ND, as well as the "meaning" of the word, is used; c) a "key word" is selected in the intervention/activity found in the literature to support the identification of interventions/activities that corresponded to NIC; d) use of verbs as key words; e) identification and description of interventions/activities that could not be mapped within the linkages between NANDA-I/NIC.

Ethical principles set out by Resolution 466/12, Brazilian Research Ethics Commission at the Ministry of Health (*Comissão Nacional de Ética em Pesquisa do Ministério da Saúde*) were complied with and the project was submitted to and approved by the Institutional Review Board at the Health Sciences Center at UFPB (*Centro de Ciências da Saúde - CCS/ UFPB*) under CAAE: 85295918.0.0000.5188.

RESULTS

Most of the 28 publications that composed the sample of the integrative review are Brazilian and were published in 2014, with a cross-sectional design, a level of evidence of four, and authored by nurses.

The studies selected addressed 240 nursing care that were grouped according to similarity into 17 theme categories: 71 in control of safety environment (29.58%); 30 in education (12.5%); 23 in risk assessment (9.58%); 20 in protocols and

programs (8.33%); 17 in hygiene (7.08%); 16 in orientation (6.66%); nine in medications (3.75%); nine in vital signs and comorbidities (3.75%); eight in pain and analgesia (3.33%); seven in deambulation (2.91%); six in monitoring/assistance (2.5%); five in surveillance/verification (2.08%); five in level of consciousness (2.08%); four in restraint (1.66%); four in location of patients (distance from the nursing station) (1.66%); three in companion/families (1.25%); three in nutrition (1.25%).

Thirty-five interventions and 911 nursing activities were listed according to the Nursing Diagnosis (NDx) "risk for falls"¹⁰ and the linkages between NANDA-I/NIC.⁶ Of these, 18 (51.43%) were classified as interventions suggested to solve problems and 17 (48.57%) were additional, optional interventions, with 497 and 414 activities, respectively. Another 12 NIC interventions not connected to NANDA-I/NIC were selected because they were efficacious and pertinent to preventing falls, with 347 activities. Note that interventions and activities related to newborns or children were removed, considering that the criterion established for this study was being an adult or elderly individual. Thus, 47 interventions and 1,252 activities were selected for mapping.

The third stage involved cross-mapping using an adapted instrument¹¹ (Figure 1).

Before starting cross-mapping, we noticed that 26 care actions identified in the literature had the same spelling, hence, were repeated and were excluded for this reason, so that the initial 240 nursing care were reduced to 214 that were considered good to be mapped with NIC.

Of the 47 NIC interventions listed in this study, 26 (55.32%) were mapped, so that the number of activities fell from 1,252 to 735 mappable activities. A total of 84 NIC activities were obtained after mapping and presented correspondence with the 214 care identified in the literature (Figure 2).

The 21 (44.68%) NIC interventions not incorporated into nursing care reported in the literature are distributed into two levels of categories indicated to solve problems: suggested and optional/additional (Figure 3).

DISCUSSION

A Nursing intervention is any treatment performed by nurses based on their clinical judgment intended to intensify patient, group or community outcomes while nursing activities are specific actions intended to implement an intervention and promote an expected result.⁶ Note the literature does not make a distinction between "interventions", "prescriptions", "actions" or nursing "activities", and most are considered nursing "care", a fact that hinders the mapping process and standardization of language.

Table 1 - Nursing interventions and activities for the prevention of falls in patients perioperative - example of cross-mapping. João Pessoa, PB, Brazil, 2019

6486 – Control of Environment: Safety Definition: Monitoring and handling of physical environment to promote safety	
NIC activities	Care mapped in the literature
1. Modify the environment to minimize hazards and risk	<ul style="list-style-type: none"> Physically adapt the environment and hospital infrastructure (e.g., furniture) ² Improve how units admit elderly individuals ⁷ Implement appropriate environmental arrangements ¹⁶ Improve maintenance of the unit's material, equipment and environment ⁷ Improve the hospital's physical structure ^{1,20}
1. Provide adaptive devices (e.g., step stools and handrails) to increase the safety of the environment	<ul style="list-style-type: none"> Provide properly located toilet seats and handrails in order to expand accessibility to bathrooms and ensure safe transfers ²³ Provide a wheelchair ^{4,12} Provide wheeled serum support ^{4,12}
1. Educate high risk individuals and groups about environmental hazards	<ul style="list-style-type: none"> Sensitize elderly individuals to the risk of falls in the hospital environment and encourage them to be co-responsible for their own safety and ask the multidisciplinary staff or companions to help them to get out of the bed, go to the bathroom or walk through the corridors ¹⁴

Source: own data.

Table 2 - Nursing interventions and activities for the prevention of falls in patients perioperative - mapping between literature and NIC. João Pessoa, PB, Brazil, 2019

Category level	NIC interventions mapped	Number of NIC activities	Number of NIC activities mapped	Number of care identified in the literature
SUGGESTED	Self-care assistance: transfer	23	02	02
	Self-care assistance: toileting	14	02	02
	Control of urinary elimination	17	02	03
	Control of medications	36	02	02
	Control of environment: Safety*	13	03	09
	Risk identification	19	03	35
	Vital signs monitoring	25	02	04
	Positioning: Wheelchair	25	01	02
	Prevention of Falls*	60	26	70
OPTIONAL ADDITIONAL	Exercise therapy: Muscle Control	37	01	02
	Pain Control	43	04	08
	Control of hypoglycemia	26	02	02
	Improve Communication: Visual Deficit	25	01	01
NO LINKAGE	Improve Sleep	25	02	03
	Self-care assistance: Dressing/grooming	19	01	01
	Shower	13	05	09
	Physical Restraint	33	02	04
	Control of Nutrition	27	03	03
	Control of Sedation	19	02	04
	Control of Environment	44	04	11
	Care with lesions	28	02	02
	Post-anesthesia care	33	01	01
	Workers training	23	05	11
	Postoperative training	33	01	01
	Teaching: Individual	29	02	03
	Supervision	46	03	19
TOTAL	26	735	84	214

* Highlighted by NIC as main

Source: own data.

Table 3 - NIC interventions not mapped with nursing care in the literature. João Pessoa, PB, Brazil, 2019

Category level	Nic interventions	Number of activities
SUGGESTED	Positioning	36
	Precautions against seizures	18
	Exercise therapy: balance	22
	Transfers	24
	Control of Dementia	45
	Control of Dementia: Shower	35
	Body Mechanics Promotion	20
OPTIONAL ADDITIONAL	Area Restriction	22
	Self-care assistance	13
	Control of Diarrhea	25
	Control of delirium	39
	Bowel control	18
	Circulatory care: Arterial Insufficiency	17
	Circulatory care: Venous Insufficiency	16
	Cognitive stimulation	26
	Improved Communication: Hearing deficit	30
	Exercise Promotion	24
	Exercise Promotion: Stretching	17
	Exercise Promotion: Strengthening Training	30
	Exercise therapy: Walking	20
	Exercise therapy: Joint mobility	20
TOTAL	21	517

Source: own data.

One study conducted in the south of Brazil verified that 26.5% of the terms identified in nursing documentation, despite being written differently, had the same meaning, showing there is a gap between classification languages used by nurses, and therefore, a need to standardize terms in order to allow for measuring and comparing results accruing from practice, facilitating communication among workers and contributing to qualified and safe care delivery.¹⁴

Many of the NIC activities reported in the literature as interventions/care are applicable to specific groups, which corroborates NIC orientations that only the titles and definitions of interventions need to be the same for all patients and situations, considering that activities may, and should be modified, facilitating the use of different approaches and the possibility of nurses to individualize care.⁶

In regard to nursing interventions intended to prevent falls among perioperative patients identified in the literature, note that activities concerning control of safe environment were prioritized. This finding is explained by the fact that the process of preventing falls in a hospital setting, as reported by various studies, depends on establishing and maintaining a safe environment, which is obtained through the implementation of

various activities: bed rails, nurse call buttons, keeping patients' belongings close by, non-slip floors, appropriate furniture and lighting, handrails, and adapted bathrooms. Environmental safety is important from risk assessment to the planning of preventive strategies.¹⁵⁻¹⁷

The literature shows the importance of providing fall prevention education to workers as well as patients, families and caregivers. A total of 30 activities addressing this topic were identified. One study conducted in *Rio Grande do Sul*, Brazil implemented educational actions and measures intended to prevent falls over the course of five years, decreasing falls by 69.9%.¹⁸

Educational practices include health education actions, training, encouraging the staff to provide guidance, allowing patients/families/caregivers to participate, minimizing risks and strengthening safe practices. One Portuguese hospital implemented an innovative strategy to promoting safe care, that of designating a worker to be responsible for mediating between the staff and the risk management, quality and patient safety department. These workers implement actions that are a priority for the prevention of incidents, such as actions related to safe surgeries, prevention of infection, falls and pressure

ulcers. These actions focused on patient safety are the result of an effort and commitment on the part of the entire staff who are directly or indirectly responsible for care delivery.¹⁹ In addition to providing continuing education to workers, ensuring decent working conditions and planning for the appropriate number of workers is necessary, which promotes feelings of co-responsibility among all those involved in the care process and patient safety.³

In regard to cross-mapping the main results, the 214 care actions found in the literature were mapped with 26 interventions and 84 NIC activities. The NIC interventions that most frequently corresponded to the literature were prevention of falls, risk identification and supervision. These findings corroborate the results reported by other studies assessing hospitalized patients with a risk of fall. One of these studies reports that the interventions most frequently corresponding to the literature were prevention of falls, environmental control: safety and risk management.¹⁶ The other study reports environmental control: safety and prevention of falls,¹⁵ both highlighted by the NIC as the main ones in the list of interventions suggested to solve problems.

The intervention prevention of falls is defined as “instituting special precautions with patient at risk for injury from falling”.⁶ Of the 60 NIC activities for this intervention, 26 were cross-mapped with 70 activities identified in the literature. Considering that the occurrence of falls is a multifactor event, activities should be very diversified, encompassing actions related to the patient, environment and workers,¹⁵ and for this reason, some mapped activities also present correspondence with other interventions.

In regard to the intervention prevention of falls, eight activities related to the placement of accessories (e.g., bedside lamp, telephone, water, nurse call button, bedpans, and urinals) close to patients were cross-mapped, along with six activities concerning the identification of environmental characteristics that may increase the potential for falls and five activities related to the use of signs to alert the staff that the patient is at a high risk of falling – computer device, safety sticker, colored bracelets, and visual indicator on the bedroom door were some of the suggestions found.

The NIC defines the identification of risk factors intervention as: “analysis of potential risk factors, determination of health risks, and prioritization of risk reduction strategies for an individual or group.” A total of 35 activities were identified in the literature and mapped with three NIC activities, all addressing orientation/discussion of risk factors and planning/implementation of activities to reduce risks. Assessment of risk for falls involving the identification of factors like history of falls, level of mobility, age, and medications and should be conducted using instruments validated for specific populations at the time a patient is admitted, every three days of hospitalization, and

whenever there is a change in terms of clinical condition or after a fall.¹⁶

Supervision is defined as “purposeful and ongoing acquisition, interpretation and synthesis of data for clinical decision-making”.⁶ This intervention had 19 activities mapped, which focus on the monitoring and surveillance of patients and managerial actions nurses should develop with the staff, seeking safe care: improving communication and relationship between the staff and patient, reorganizing activities within the unit, increasing the number of workers, implementing active search measures in order to report events, reinforcing precautions, informing about patients at risk, and encouraging collective and active safety responsibility.

Prevention of falls and identification of risk are classified by the NIC as interventions likely to solve the NDx “risk of falls”.⁶ Note, however, that the intervention supervision is missing in the linkage between NANDA-I/NIC. This absence is of concern, considering that safety in the National Program for Patient Safety (*Programa Nacional de Segurança do Paciente -PNSP*) is directly related to periodical monitoring, seeking to assess comfort, safety and the use of medications that may increase the risk of falls.²⁰ Even though it does not present a linkage, this intervention should be adopted and patients should be systematically monitored to collect and interpret data, identify changes in a patient’s status, and early identification of existing risk factors. By implementing this intervention, we are expanding and recognizing the role of nurses in providing safe and qualified care.

After cross-mapping nursing care presented in the literature (214) with the NIC interventions presented in this study (47), 21 (44.68%) NIC interventions lacked a correspondence with the literature: 13 (61.9%) were classified as optional, additional interventions and eight (38.1%) are only suggested. Even though these interventions are indicated to prevent falls, they are not specific to the perioperative period, which perhaps justifies their absence in related care reported in the literature in the field. Among these, nine (42.86%) address body mechanics (positioning, transference, and exercise) and five (23.81%) address neurological processes (convulsions, delirium, dementia, cognition) and present activities that had been addressed in other NIC interventions that were mapped, such as self-care assistance: transference; positioning: wheelchair, prevention of falls; exercise therapy: muscle control, risk identification, vital signs, sedation control, and post-anesthesia care. However, due to the complexity of cross-mapping and the high number of interventions and activities brought by the NIC, we recommend that NIC interventions that were not mapped be investigated in depth by other studies for making comparisons, establishing linkages, and eliminating repetition, facilitating care practice and the correct use of standardized systems of nursing language.

All nursing care presented in the literature concerning prevention of falls among perioperative patients corresponded with some NIC intervention, even if not presenting a linkage between NANDA-I/NIC. Even though standardized language is seldom used, cross-mapping used in this study shows that what nurses have been doing in their practice corresponds to what is proposed by the NIC exactly, showing the importance and possibility of applying this taxonomy in nursing care in the perioperative context. For this application to be maximized, however, nurses need to acquire knowledge concerning classification systems, developing care instrumentalized by the nursing process in light of the theoretical framework, which contributes to the implementation of interventions with more specific and directed results.²¹

In addition to presenting correspondence with the NIC, these activities meet the requirements of the Ministry of Health to prevent falls in hospital settings: risk assessment, multiprofessional interventions, environmental safety, and educating patients and companions.²⁰

This study's limitations are related to the possibility of not having mapped care in all NIC interventions/activities available, considering the number of care identified in the literature (214) and the number of NIC (13,000) activities, as well.

CONCLUSION

Cross-mapping enabled comparing Nursing care to prevent falls among perioperative patients identified in the literature with NIC interventions and standardized activities. The 214 care actions found in the literature were mapped with 84 activities contained in 26 NIC interventions. Twenty-one NIC interventions do not correspond to any intervention/activity reported in the literature.

The NIC intervention that most frequently found correspondence to the literature was prevention of falls, which corresponded to 70 mapped activities, followed by the interventions risk identification and supervision, with 35 and 19 activities, respectively.

Preventing falls during the perioperative period requires one to pay attention to environmental safety, implement educational strategies for all those involved in the process, including patients, companions, and workers, identify risks early on, establish specific measures, and implement continuous nursing supervision.

REFERENCES

- Duarte SCM, Stipp MAC, Silva MM, Oliveira FT. Eventos adversos e segurança na assistência de Enfermagem. *Rev Bras Enferm*. 2015[cited 2018 June 14];68(1):144-54. Available from: <http://www.scielo.br/pdf/reben/v68n1/0034-7167-reben-68-01-0144.pdf>
- Agência Nacional de Vigilância Sanitária (BR). Relatórios dos Estados - Eventos Adversos. 2018[cited 2019 Jan 22]. Available from: <https://www20.anvisa.gov.br/segurancadopaciente/index.php/publicacoes/category/relatorios-dos-estados>
- Reiniack S, Silva CF, Paz M, Cunha KCS. Notificação de queda do paciente cirúrgico antes e após treinamento em serviço. *Cogitare Enferm*. 2017[cited 2018 Apr 22];22(1):1-8. Available from: <https://revistas.ufpr.br/cogitare/article/view/47656>
- Luzia MF, Argenta C, Almeida MA, Lucena AF. Conceptual definitions of indicators for the nursing outcome "Knowledge: Fall Prevention". *Rev Bras Enferm*. 2018[cited 2019 Jan 17];71(2):431-9. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-71672018000200431&lng=en&tlng=en
- Organização Mundial de Saúde. Segundo desafio global para a segurança do paciente: Cirurgias seguras salvam vidas (orientações para cirurgia segura da OMS. Rio de Janeiro: Organização Pan-Americana da Saúde; 2009[cited 2017 Nov 03]. Available from: http://bvsms.saude.gov.br/bvs/publicacoes/seguranca_paciente_cirurgias_seguras_salvam_vidas.pdf
- Bulechek GM, Butcher HK, Dochterman JM, Wagner CM. Classificação das intervenções de Enfermagem (NIC). Rio de Janeiro: Elsevier; 2016.
- Ferreira AM, Rocha EN, Lopes CT, Barchion MM, Lopes JL, Barros ALBL. Nursing diagnoses in intensive care: cross-mapping and NANDA-I taxonomy. *Rev Bras Enferm*. 2016[cited 2017 Dec 06];69(2):285-93. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-71672016000200307&lng=pt&tlng=pt
- Morais SCR, Nóbrega MML, Carvalho EC. Cross-mapping of results and Nursing Interventions: contribution to the practice. *Rev Bras Enferm*. 2018[cited 2019 Jan 07];71(4):1883-90. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-71672018000401883&lng=en&tlng=en
- Joanna Briggs Institute. Joanna Briggs Institute Reviewers' Manual: 2014 Edition. Adelaide: Joanna Briggs Institute. 2014[cited 2018 Apr 17]. Disponível em: <http://joannabriggs.org/assets/docs/sumari/ReviewersManual-2014.pdf>
- Herdman TH, Kamitsuru S. Diagnósticos de Enfermagem da NANDA-I: definições e classificação, 2018-2020. Porto Alegre: Artmed; 2018.
- Oliveira JS. Risco de quedas: aplicabilidade de intervenções de Enfermagem da NIC em adultos e idosos hospitalizados [tese]. Ribeirão Preto: Escola de Enfermagem de Ribeirão Preto, Universidade de São Paulo. 2013[cited 2017 Mar 08]. Available from: <https://www.teses.usp.br/teses/disponiveis/22/22132/tde-26092013-201408/pt-br.php>
- Delaney C, Moorhead S. Synthesis of methods, rules, and issues of standardizing nursing intervention language mapping. *Nurs Diagn*. 1997[cited 2017 Mar 08];8(4):152-6. Available from: <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1744-618X.1997.tb00471.x>
- Lucena AF, Barros ALBL. Mapeamento cruzado: uma alternativa para a análise de dados em Enfermagem. *Acta Paul Enferm*. 2005[cited 2017 Mar 08];18(1):82-8. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0103-21002005000100011
- Cubas MR, Pleis LE, Gomes DC, Costa ECR, Peluci APVD, Shmeil MAH, et al. Mapeamento e definição de termos registrados por enfermeiros de um hospital especializado em emergência e trauma. *Rev Enferm Ref*. 2017[cited 2018 July 02];2:45-54. Available from: http://www.scielo.mec.pt/scielo.php?script=sci_arttext&pid=S0874-02832017000100006
- Luzia MF, Almeida MA, Lucena AF. Nursing care mapping for patients at risk of falls in the nursing interventions classification. *Rev Esc Enferm USP*. 2014[cited 2018 Oct 14];48(4):632-9. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0080-62342014000400632&lng=en&tlng=en
- Alves VC, Freitas WCJ, Ramos JS, Chagas SRG, Azevedo C, Mata LRF. Actions of the fall prevention protocol: mapping with the classification of nursing interventions. *Rev Latino-Am Enferm*. 2017[cited 2018 Oct

- 14];25:e2986. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0104-11692017000100410&lng=en&tlng=en
17. Luzia MF, Victor MAG, Lucena AF. Nursing diagnosis risk for falls: prevalence and clinical profile of hospitalized patients. *Rev Latino-Am Enferm*. 2014[cited 2017 Nov 10];22(2):262-8. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0104-11692014000200262&lng=en&tlng=en
18. Luzia MF, Cassola TP, Suzuki LM, Dias VLM, Pinho LB, Lucena AF. Incidence of falls and preventive actions in a University Hospital. *Rev Esc Enferm USP*. 2018[cited 2019 Jan 08];52:e03308. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0080-62342018000100405&lng=pt&tlng=pt
19. Fassarella CS, Ferreira SS, Camerini FG, Henrique DM, Luna AA, Almeida LF. Profissionais mediadores da qualidade e segurança do paciente como estratégia para o cuidado seguro. *REME - Rev Min Enferm*. 2017[cited 2018 Feb 12];21:e-1068. Available from: <http://www.reme.org.br/artigo/detalhes/1206>
20. Ministério da Saúde (BR). Portaria n. 529, de 1º de abril de 2014. Institui o Programa Nacional de Segurança do Paciente (PNSP). Brasília: MS. 2013[cited 2018 Feb 02]. Available from: http://bvsms.saude.gov.br/bvs/saudelegis/gm/2013/prt0529_01_04_2013.html
21. Silva HVC, Souza VP, Silva PCV. Sistematização da assistência em Enfermagem perioperatória em uma unidade de recuperação pós-anestésica. *Rev Enferm UFPE on line*. 2016[cited 2019 Aug 25];10(10):3760-7. Available from: <https://periodicos.ufpe.br/revistas/revistaenfermagem/article/view/11441/13251>
-