

# THE CLINICAL JUDGMENT OF NURSES IN FALL RISK ASSESSMENT

## Julgamento clínico do enfermeiro na avaliação do risco de quedas

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### ABSTRACT

**OBJECTIVE:** This study aimed to describe the clinical judgment of nurses in fall risk assessment for hospitalized older adults. **METHOD:** This exploratory, descriptive study with a qualitative approach was conducted in Unified Health System hospitals in Cuiabá, MT, Brazil. A total of 18 nurses in medical and surgical clinics participated. The data were collected from March to August 2013 using a semi-structured interview and were assessed through thematic analysis based on Tanner's clinical judgment model (2006). **RESULTS:** Fall risk evaluation in older adults is performed unsystematically and superficially. The nurses considered the most appropriate time to collect data and assess the fall risk of older patients to be at patient admission, although shift changes, patient visits, conversations or information exchange with hospital reception staff contributed. Although the signs or factors of patient fall risk were identified, inferences were produced and opinions were issued, the inferences were not validated. **CONCLUSIONS:** The two initial stages of CJ — recognition and interpretation — are unsystematic, incomplete and inconsistent, which can lead to inaccurate assessment of fall risk among hospitalized older adults. **KEYWORDS:** fall accidents; older adult health; judgment.

### RESUMO

**OBJETIVO:** Descrever o julgamento clínico realizado pelo enfermeiro no processo de avaliação do risco de quedas de idosos durante período de internação. **MÉTODOS:** pesquisa exploratória, descritiva, de abordagem qualitativa desenvolvida em três hospitais do município de Cuiabá, Mato Grosso, conveniados ao Sistema Único de Saúde (SUS). Fizeram parte da pesquisa 18 enfermeiros lotados nas clínicas médicas e cirúrgicas. Os dados foram coletados de março a agosto de 2013 por entrevista semiestruturada e analisados pela análise temática e sob ótica da Teoria do Julgamento Clínico de Tanner (2006). **RESULTADOS:** A avaliação do risco de quedas dos idosos é realizada de forma assistemática e superficial. A admissão do paciente foi considerada o momento mais adequado para se coletar os dados e avaliar o risco de quedas dos idosos, além da passagem de plantão e/ou visitas aos pacientes, conversas/troca de informações com a equipe de recepção do hospital. A identificação dos indícios ou fatores de risco de quedas dos pacientes, geração das inferências e emissão do parecer são realizados. A validação das inferências não foi identificada. **CONCLUSÕES:** Conclui-se que as duas etapas iniciais do julgamento clínico — o reconhecimento e a interpretação — ocorrem de maneira assistemática, incompleta e inconsistente, podendo gerar avaliações imprecisas do risco de quedas de idosos hospitalizados. **PALAVRAS-CHAVE:** acidentes por quedas; julgamento; saúde do idoso.

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## INTRODUCTION

Falls are one of the most common incidents among hospitalized older adults<sup>1</sup> and can have serious consequences for patients (including death), families and hospitals (due to increased costs).<sup>2</sup>

Fall prevention programs are universally multidisciplinary and should have multifactorial approaches.<sup>3</sup> The role of nursing in such programs is decisive, since it can help reduce or even prevent the occurrence of falls, or, when they do occur, it can minimize the damage. Among the nurse's activities, the first is assessing patient fall risk, which can be done using validated scales, some of which have been adapted for specific situations and types of patients.<sup>4-6</sup> However, scholars have emphasized the importance of the nurse's clinical judgment (CJ) as an equally essential requirement for fall prevention among hospitalized older adults.<sup>5,7</sup>

CJ is a nurse's interpretation of a patient's health needs and a decision about which interventions are necessary. CJ involves four stages: recognition, interpretation, response and reflection.<sup>8</sup> This important tool, which is based on knowledge, critical thinking and evidence-based decision making, guarantees improvement in care practice by evaluating subjective data and the goals of the patient, family and community.<sup>9</sup>

In addition to being a low-cost fall prevention technology, CJ is a process that can be as accurate, whether used alone or in association with patient screening instruments.<sup>10</sup> However, there has been little research on nurses' CJ and fall prevention in older adults. One Australian hospital study compared the use of instruments with nurses' CJ as a predictor of falls in older patients.<sup>10</sup> Another Australian study compared nurses' ability to predict patient falls in different types of clinics using the STRATIFY Score and CJ.<sup>11</sup> A U.S. study tested the accuracy of the Downton Index, the STRATIFY Score and nurses' CJ for assessing fall risk in a hospital geriatric rehabilitation unit.<sup>12</sup>

The objective of this study was to describe nurses' CJ in fall risk assessment for hospitalized older adults.

## METHOD

This exploratory, descriptive and qualitative study was conducted with nursing assistants working in medical and surgical clinics in three Unified Health System hospitals in Cuiabá, MT, Brazil.

Data was collected between March and August 2013 using a semi-structured interview derived from a specially developed instrument that included questions about the

participants' identity, training and professional experience, as well as guided questions that demonstrated each participant's fall risk assessment process for hospitalized older adults. After the participants provided written informed consent, the interviews were performed and recorded in reserved spaces in the hospitals. The interviews were then transcribed and labeled as "E" plus the next cardinal number according to order of completion (E01, E02, etc.).

The content was analyzed using Bardin's content analysis technique.<sup>13</sup> To interpret the results, Tanner's critical judgment model was used,<sup>8</sup> which features four interconnected stages:

- **recognition:** This is the nurse's initial appraisal of the situation, which begins cognitively when direct contact is established with the patient, who presents, whether explicitly or not, a nursing problem (expectations). The problem is based on information collected about the patient and the environment. Several factors influence this step, such as prior knowledge from training, professional experience, patient assessment and his or her response patterns, and prior experience with similar patients. The personal and professional values of the nurse, the culture and prevailing norms, and the complexity of the care provided at the institution are also involved;
- **interpretation:** In this stage, the nurse gives meaning to the collected data. Using analytical, intuitive and narrative reasoning, the professional arrives at an opinion and decides which nursing interventions will be used in the patient's care, although no action may be immediately taken. Analytical reasoning provides an objective analysis of the situation based on the collected data, which are organized into categories and interpreted according to general patterns and situations. In narrative reasoning, the nurse analyzes the collected data based on particular experiences that the patient has recounted, including their motives, expectations, concerns, etc.<sup>14</sup> Intuitive reasoning seeks to capture what is happening and produce an "immediate" understanding of the situation, which enables decision making without recourse to conscious analytic processes;<sup>15</sup>
- **response:** In this stage, the nurse performs the action that was determined in the previous phase to be the most adequate for solving the patient's problem;
- **reflection:** In this stage the nurse reflects on the patient's response to the applied intervention (reflection in

action) and on the learning acquired from the judging and intervening experience (reflection on action). This stage requires nurses to have the knowledge and ability to connect the chosen intervention with the expected results.

This study focused on the first two stages. It was approved by the Research Ethics Committee of the Júlio Müller University Hospital (opinion 206.962/CEP-HUJM/13).

## RESULTS

The 18 participating nurses (15 female) had a mean age of 34 years (range: 26 to 53 years). Twelve graduated from private institutions and six graduated from public institutions. The majority completed their course between 2003 and 2012. One of the nurses holds a master's degree and another 13 have undertaken postgraduate study in one of the following fields: public health, urgent and emergent care, nursing, cardiology, adult intensive care, pediatrics, surgical center, health services work management and operations auditing. The participants averaged 6.5 years of professional hospital experience. Five of the nurses work at a public teaching hospital, six work at a philanthropic and teaching hospital, and seven work at a public hospital. Of the 18 participants, eight work in surgical clinics and ten work in medical clinics. Both in their current position and at previous jobs, most reported having worked in adult care units, in medical and surgical clinics, coronary and intensive care units, emergency rooms, orthopedic units and with emergency crash carts. None of the participants received fall prevention training and only one reported having any training in geriatrics/gerontology.

Clinical judgment in the fall risk evaluation of hospitalized elderly adults

The recognition stage of the Tanner CJ model was identified in the nurses' reports.<sup>8</sup> In this stage the professional assesses the fall risk based on the data collected during contact with the patient and his or her environment.

The participants reported that data collection on fall risk assessment in older adults is not usually performed and that when performed, it is superficial due to heavy workloads and time pressure in the institution's routines, which distance them from direct patient care activities.

The routine here is too much ... The turnover is very high; we do not do routine [fall risk assessment].

The truth is, it isn't done due to time constraints. So, I say we do evaluate, but only very superficially (E14).

Nurses use conversation and observation as data collection strategies, rather than instruments or scripted interviews. They reported not knowing any specific fall risk assessment instruments. Some have misunderstandings about these assessment tools, referring to them as equipment, computer programs, or nurse-patient communication.

I have no knowledge of such an instrument [fall risk assessment] (E09).

I don't know; I never saw one (E13).

I don't think [it's necessary to use an instrument to assess fall risk] because it would become one more thing that the hospital buys just to be left unused in the corner (E01).

The nurses considered admission to be the most appropriate time to collect data and assess the fall risk in older adults and that observation could also occur at the beginning of the shift and/or during patient visits in the wards.

We determine [the risks] when the patient is admitted. [...] So, if we do not do [data collection] at admission, if we do not talk then, we won't know. We only know when the patient falls. [...] Because the first contact you have with the patient is at the time of hospitalization. If you don't take advantage of that contact at the time of admission, you miss your chance [to assess risks]. Because the next time you have contact is when someone from the on-duty shift tells you something or upon return from the operating room (E01).

Another way to obtain patient data is through conversations or exchanging information with the hospital reception (i.e., admissions) team, with other nurses, and the patients themselves and/or their companions as they describe their health status (illnesses, complaints, changes in mental state, ability to perform activities of daily living, home routine, currently used medications, visual acuity, etc.).

So we ask [the nurse at the shift checkpoint] about the diagnosis, as well as at admission. And they pass on the information: "He is at risk of falling, is elderly, has a companion or no companion, is confused or

not.” Then you’ll talk, have a conversation with him, and do your evaluation, too (E04).

At the time of the visit, I try to talk to them [patients] and then try to talk to their companions, who are usually waiting in the corridors (E07).

Through observation, nurses collect some data related to the patient’s clinical condition, such as changes in mental state, mobility, injuries and deficiencies, the use of prostheses and/or medical devices, footwear type and clothing.

I observe his gait, because sometimes he says he’s feeling dizzy, a general assessment. I observe the state of lucidity, whether he is having any difficulty, [I observe] everything (E12).

If there is any dependency or deficiency, some problem. If [the patient] uses some type of walking device, such as a walker or crutches. If there is a prosthesis (E10).

Data on environmental risk factors for older adult falls are not systematically collected by nurses. These factors involve the structure and layout of the institution, being workplace problems that can contribute to falls.

The institution’s layout greatly favors patient falls, especially the floors. The walls do not have [handrails] for them to lean on, there are no walkers (E07).

Regarding the interpretation stage of CJ, it was observed that the signs or risk factors of patient falls were identified, inferences were produced and opinions were issued. It was not found, however, that those inferences were validated.

If he is over 60, we can already see that he is elderly, which indicates a low immune system, difficulty walking, cognitive difficulties. [...] even if he is healthy and has no risk of falling, depending on the medicine he takes, when he gets up, there is a risk of dizziness and the risk of falling will be very great (E02).

This also goes for intravenous therapy [...], which can make it difficult to get around. The patient gets out of bed with the IV in his hand, and this may make it difficult for him to move (E06).

Inadequate lighting. Often a bulb will burn out and [the staff] can’t change it right away. Then the patient has to make it to the bathroom in the dark and come back in the dark. This greatly increases the patient’s risk of falling (E01).

Regarding the interpretation stage of Tanner’s CJ model, the intuitive and narrative reasoning patterns were not recognizable among the nurses’ responses.<sup>8</sup> Analytical reasoning, however, was identified: principally when issuing opinions, the professional determines the fall risk of older patients.

If it’s a patient who does not sleep much and turns over a lot in bed, you already assume that he could fall out of bed at night too. There could be a danger of falling, right? (E01).

You put him [in bed] and he is confused, he keeps trying to get up, he slides off and falls (E09).

He may want to get out of bed alone, but he is weak and could fall (E17).

It was observed that the nurses generally issue this opinion mentally, which is then transmitted through verbal guidance to staff members, patients and family members and is occasionally recorded in the medical record as a nursing note.

I go over [the opinion] with the patient and the staff, but we’re not yet able to write it down (E06).

When possible, [...] I put it in the comment space that [the patient] is elderly. Mainly I put instructions in the space for intercurrents (E07).

Everything that is important and relevant I pass on to colleagues. In addition, verbal guidance is given to patients and companions. As for the other teams, like the laboratory, the teaching staff and the cleaning crew, we also have to give them this verbal guidance (E10).

## DISCUSSION

This study contributes to a better understanding of nurses’ CJ regarding fall prevention for older patients, since there is little relevant literature on the subject. Analysis of the nurses’ responses revealed that the CJ they exercise in assessing fall risk in hospitalized older adults is incomplete and limited due to the fact that this process is carried out in a superficial, unsystematic, and unfocused way and does not involve specific instruments (scales). The collected data is added to a body of knowledge consisting predominantly of practical experience.

At the recognition stage, nurses understand a situation through data collection, although incompletely, since not all relevant information about fall risk in older

patients can be collected. Given that data collected occurs only through non-systematic conversations and observations, these professionals lose important information that could help increase the accuracy of fall risk assessment for older patients.

The lack of systematization has implications that are numerous and detrimental to the quality of nursing care and patient safety.<sup>16</sup> They lead nurses to collect data unintentionally, randomly, superficially and differently for each patient, including the collection of data that is unnecessary for fall risk assessment.<sup>17</sup> This makes it difficult to establish care plans that meet the real health needs of older patients and to develop fall prevention protocols.<sup>18</sup>

Nevertheless, it is important for nurses and management that specific validated instruments are used to assess and predict fall risk in hospital patients. Such instruments enable fall risk factors to be identified objectively and more accurately<sup>19</sup> and contribute to the systematization of nursing care. However, nurses must use them critically, understanding their limitations, and adjust their knowledge about which risk factors are modifiable and non-modifiable so that they can reduce fall risk in hospitals.<sup>20</sup>

It is important to point out that clinical data about patients and their situation are acquired through patient-nurse interaction and that the quality of this interaction affects the obtained information and the judgment based on it.<sup>21</sup> Systematized data collection broadens the nurse's view of patients and their situation, generates clarity about nursing problems, helps accurately determine nursing diagnoses and helps establish care plans and follow-up.<sup>19</sup>

Several factors can influence the recognition stage of CJ, including training and professional experience, which have been shown to be decisive in a nurse's CJ.<sup>8,22</sup> A study on professionals who work in care units for older adults with dementia concluded that there is a greater increase in sensitivity and attention to environmental fall risk factors with years of experience than with education level.<sup>23</sup> This could explain the participating nurses' ability to collect important data for assessing fall risk through interview and observation, since skill development occurs gradually, beginning at graduation and improving with experience. It could be expected that the CJ of a nurse with three years of professional experience would be sufficiently competent to predict and meet patient health needs.<sup>22,24,25</sup>

Thus, it can be inferred that the participating nurses' data collection for fall risk assessment is incomplete.

To the extent that scientific knowledge is not added to experiential knowledge the professional will fail to make significant inferences about the findings, such as collecting data about the patient's mental state. Good CJ can be developed from experiential knowledge if nurses continue reading the specialized literature after graduation, reflecting on their practice, developing fall prevention programs and participating in continuing education programs.<sup>8,17,24</sup>

In the interpretation stage of CJ, nurses employ different reasoning patterns, such as identifying signs, making inferences, validating these inferences and issuing an opinion. Although this is a sequential process, these steps can seem simultaneous in a nurse's mind.<sup>26</sup> According to the results, at this stage the nurses were identifying signs and establishing diagnostic assumptions. However, knowledge derived from professional experience predominated in their CJ.

It can be understood that their inferences and assumptions are also inconsistent, since the nurses are expected, at the interpretation stage, to determine relationships between the data, which involves a combination of theoretical and practical knowledge, validating the data and forming an opinion that accurately predicts fall risk.<sup>8</sup>

Studies have shown that care quality can be impaired due to insufficient knowledge on the part of nursing professionals, both in evaluating patients and determining care actions, especially when analyzing and interpreting more complex situations.<sup>26</sup> Research has shown that nurses have difficulty identifying, quantifying, and treating pain in trauma patients due to insufficient knowledge, and that training significantly benefitted their pain assessment and treatment.<sup>27</sup> Another study considered nurse documentation of patient nutritional status and concluded that the documentation was poor, probably due to insufficient knowledge.<sup>28</sup>

Evidence-based clinical studies may also help nurses identify and gauge fall risk in older patients during evaluation, bringing scientific consistency to their practice.

Considering these nurses' overall evaluation process, their CJ does not articulate all the necessary elements for reliability and, thus, the opinions they issue are inconsistent. This results in care plans that are insufficient at preventing falls in older patients and at reducing damage when they do occur.

Another barrier to fall prevention among older patients is poor record-keeping practices. Corroborating the present results, another study found that although nurses who

care for older adults in special units discussed patient falls, only 60% of them reported fall risk in their care plans.<sup>23</sup>

The infrequent registration of patient information through comments in the medical records and/or oral transmission alone violates the legal requirements of nursing practice — i.e., the nursing diagnostic record.<sup>29,30</sup> Inadequate documentation could lead to an inattentive (and consequently negligent) team that fails to plan appropriate fall prevention measures.<sup>23</sup> Moreover, poor record keeping impedes good nursing practice and contributes to the invisibility of nursing care.<sup>18</sup>

This study was limited by the fact that the nurses' CJ was analyzed solely through their reports, with no other measures applied. Thus, certain aspects of CJ, such as data validation and narrative and intuitive reasoning, did not appear and were not explored. However, the results have important safety implications for patients, family members, nurses and hospitals, considering that inaccurate opinions can lead to insufficient preventive measures and a greater probability of falls among older patients.

## CONCLUSION

The study identified that nurses' CJ in assessing fall risk among hospitalized older adults is used in an unsystematic, incomplete and inconsistent manner.

It should be pointed out that developing CJ for assessing fall risk is a decisive strategy toward reducing falls during the hospitalization of older adults. Its development involves not only the formation of a theoretical point of view about the clinical situations presented in daily work, but also training and continued education until CJ becomes a skill. It is recommended that research into nurses' CJ for assessing fall risk be continued in realistic simulation training environments, an experience widely referenced in international studies.

## CONFLICT OF INTERESTS

The authors report no conflict of interests.

## REFERENCES

1. Tanaka B, Sakuma M, Ohtani M, Toshiro J, Matsumura T, Morimoto T. Incidence and risk factors of hospital falls on long-term care wards in Japan. *J Eval Clin Pract.* 2012;18(3):572-7. <https://doi.org/10.1111/j.1365-2753.2010.01629.x>
2. Hill KD, Vu M, Walsh W. Falls in the acute hospital setting - impact on resource utilization. *Aust Health Rev.* 2007;31(3):471-7.
3. Tzeng H-M. Nurses' Caring Attitude: Fall Prevention Program Implementation as an Example of Its Importance. *Nurs Forum.* 2011;46(3):137-45. <https://doi.org/10.1111/j.1744-6198.2011.00222.x>
4. Oliver D, Daly F, Martin FC, McMurdo ME. Risk factors and risk assessment tools for falls in hospital in-patients: a systematic review. *Age Ageing.* 2004;33(2):122-30. <https://doi.org/10.1093/ageing/afh017>
5. Haines TP, Hill K, Walsh W, Osborne R. Design-related bias in hospital falls risk screening tool predictive accuracy evaluations: systematic review and metaanalysis. *J Gerontol A Biol Sci Med Sci.* 2007;62(6):664-72.
6. Chapman J, Bachand D, Hyrkäs K. Testing the sensitivity, specificity and feasibility of four falls risk assessment tools in a clinical setting. *J Nurs Manag.* 2011;19(1):133-42. <https://doi.org/10.1111/j.1365-2834.2010.01218.x>
7. Milisen K, Coussement J, Flamaing J, Vlaeyen E, Schwendimann R, Dejaeger E, et al. Fall Prediction According to Nurses' Clinical Judgment: Differences Between Medical, Surgical, and Geriatric Wards. *J Am Geriatr Soc.* 2012;60(6):1115-21. <https://doi.org/10.1111/j.1532-5415.2012.03957.x>
8. Tanner CA. Thinking Like a Nurse: A Research-Based Model of Clinical Judgment in Nursing. *J Nurs Educ.* 2006;45(6):204-11.
9. Roza BA. Pensamento crítico e julgamento clínico na enfermagem. In: Bork AMT, ed. *Enfermagem Baseada em Evidências.* Rio de Janeiro: Guanabara Koogan; 2011.
10. Myers H, Nikolett S. Fall risk assessment: a prospective investigation of nurses' clinical judgement and risk assessment tools in predicting patient falls. *Int J Nurs Pract.* 2003;9(3):158-65.
11. Webster J, Courtney M, Marsh N, Gale C, Abbott B, Mackenzie-Ross A, et al. The STRATIFY tool and clinical judgment were poor predictors of falling in an acute hospital setting. *J Clin Epidemiol.* 2010;63(1):109-13. <https://doi.org/10.1016/j.jclinepi.2009.02.003>
12. Vassallo M, Poynter L, Sharma CJ, Kwan J, Allen SC. Fall risk-assessment tools compared with clinical judgment: an evaluation in a rehabilitation ward. *Age Ageing.* 2008;37(3):277-81. <https://doi.org/10.1093/ageing/afn062>
13. Bardin L. *Análise de conteúdo. Edição revista e ampliada.* Lisboa: Edições 70; 2010.
14. Mattingly C. The narrative nature of clinical reasoning. *Am J Occup Ther.* 1991;45(11):998-1005.
15. Silva AL, Baldin SM, Nascimento KC. O conhecimento intuitivo no cuidado de enfermagem. *Rev Bras Enferm.* 56(1):7-11, 2003.
16. Silva AL, Baldin SM, Nascimento KC. O conhecimento intuitivo no cuidado de enfermagem. *Rev Bras Enferm.* 2003;56(1):7-11. <http://dx.doi.org/10.1590/S0034-71672003000100002>
17. Andrade JS, Vieira MJ. Prática assistencial de enfermagem: problemas, perspectivas e necessidade de sistematização. *Rev Bras Enferm.* 2005;58(3):261-5. <http://dx.doi.org/10.1590/S0034-71672005000300002>
18. Lunney M. Coleta de dados, julgamento clínico e diagnósticos de enfermagem: como determinar diagnósticos precisos. In: Nanda I, ed. *Diagnósticos de enfermagem da NANDA: definições e classificação 2012-2014.* Tradução de Regina Machado Garcez. Porto Alegre: Artmed; 2013.
19. International Council of Nurses. *Describing the nursing profession: Dynamic language for advocacy.* Genebra: Imprimerie Fomara; 2007.
20. Lima LR, Stival MM, Lima LR, Oliveira CR, Chianca TCM. Proposta de instrumento para coleta de dados de enfermagem em uma Unidade de Terapia Intensiva fundamentado em horta. *Rev Eletr Enferm [Internet].* 2006 [cited on Apr. 9, 2014];8(3):349-57. Available at: [http://www.fen.ufg.br/revista/revista8\\_3/v8n3a05.htm](http://www.fen.ufg.br/revista/revista8_3/v8n3a05.htm)
21. Oliver D, Healey F, Haines TP. Preventing Falls and Fall-Related Injuries in Hospitals. *Clin Geriatr Med.* 2010;26(4):645-92. <https://doi.org/10.1016/j.cger.2010.06.005>
22. Gordon M. *Nursing diagnosis: process and application.* 3ª ed. St. Louis, Missouri: Mosby; 2004. 421 p.
23. Lasater K. Clinical judgment: The last frontier for evaluation. *Nurse Educ Pract.* 2011;11(2):86-92. <https://doi.org/10.1016/j.nepr.2010.11.013>

24. Benner P. From novice to expert. *Am J Nurs* [Internet]. 1982 [cited on May 23, 2012];82(3):402-7. Available at: <http://www.jstor.org/stable/3462928> <https://doi.org/10.2307/3462928>
25. Struknes S, Bachrach-Lindström M, Hall-Lord ML, Slaasletten R, Johansson I. The nursing staff's opinion of falls among older persons with dementia: a cross-sectional study. *BMC Nurs* [Internet]. 2011 [cited on Apr. 12, 2014];10:13. Available at: <http://www.biomedcentral.com/content/pdf/1472-6955-10-13.pdf>
26. Lasater K, Nielsen A. The influence of concept-based learning activities on students' clinical judgment development. *J Nurs Educ*. 2009;48(8):441-6. <https://doi.org/10.3928/01484834-20090518-04>
27. Lunney M. Uso do pensamento crítico para o alcance de resultados positivos de saúde. In: Lunney M. *Pensamento crítico para o alcance de resultados positivos em saúde: análises e estudos de caso em enfermagem*. Tradução de Regina Machado Garcez. Porto Alegre: Artmed; 2011.
28. Magalhães PAP, Mota FA, Saleh CMR, Secco LMD, Fusco SRG, Gouvêa AL. Percepção dos profissionais de enfermagem frente à identificação, quantificação e tratamento da dor em pacientes de uma unidade de terapia intensiva de trauma. *Rev Dor*. 2011;12(3):221-5. <http://dx.doi.org/10.1590/S1806-00132011000300005>
29. Geurden B, Wouters C, Franck E, Weyler J, Ysebaert D. Does Documentation in Nursing Records of Nutritional Screening on Admission to Hospital Reflect the Use of Evidence-Based Practice Guidelines for Malnutrition? *Int J Nurs Knowl*. 2014;25(1):43-8. <https://doi.org/10.1111/2047-3095.12011>
30. Conselho Federal de Enfermagem. Resolução nº 358, de 15 de outubro de 2009. Dispõe sobre a Sistematização da Assistência de Enfermagem e a implementação do Processo de Enfermagem em ambientes, públicos ou privados, em que ocorre o cuidado profissional de Enfermagem, e dá outras providências. *Diário Oficial de União*. 2009.