# Institutional actions based on nursing diagnoses for preventing falls in the elderly

Ações institucionais alicerçadas em diagnósticos de enfermagem para prevenção de quedas em idosos

Acciones institucionales basadas en diagnósticos de enfermería para prevención de caídas en ancianos

Rafaela Vivian Valcarenghi¹, Silvana Sidney Costa Santos², Karina Silveira de Almeida Hammerschmidt¹, Edison Luiz Devos Barlem², Giovana Calcagno Gomes², Bárbara Tarouco da Silva²

This study aimed to propose institutional actions based on nursing diagnoses for the prevention of falls in the elderly. Qualitative, exploratory and descriptive research, with 30 institutionalized senior citizens from Rio Grande, RS, Brazil. During data collection five instruments were applied from March to July 2009. One presents the elderly's profile; aspects that favored the falls; nursing diagnoses; proposals for institutional actions to prevent falls. The nursing diagnoses were identified: impaired physical mobility, decreased ability to transfer, shower self-care deficit, dressing self-care deficit, impaired environmental interpretation syndrome, chronic confusion, impaired memory; syndrome of stress due to changes; risk of falls, risk of trauma. Through the identification of nursing diagnoses it was possible to make a proposal for institutional actions aimed at preventing falls in the elderly who reside in long-stay institutions.

Descriptors: Geriatric Assessment; Accidental Falls; Health of Institutionalized Elderly; Geriatric Nursing.

Objetivou-se propor ações institucionais baseadas em diagnósticos de enfermagem para a prevenção de quedas em idosos. Pesquisa qualitativa, exploratória e descritiva, com 30 idosos institucionalizados no município de Rio Grande, RS, Brasil. Na coleta de dados, aplicaram-se cinco instrumentos, no período de março a julho de 2009. Apresentam-se o perfil dos idosos; os aspectos que favoreceram as quedas; os diagnósticos de enfermagem; as propostas de ações institucionais para prevenção de quedas. Os diagnósticos de enfermagem identificados foram: Mobilidade física prejudicada, Diminuição da capacidade de transferência, Déficit no autocuidado para banho; Déficit no autocuidado para vestir; Síndrome de interpretação ambiental prejudicada; Confusão crônica; Memória prejudicada; Síndrome de estresse por mudança; Risco de quedas; Risco de trauma. Através da identificação dos diagnósticos de enfermagem foi possível realizar uma proposta de ações institucionais voltadas para prevenção de quedas em idosos residentes em instituições de longa permanência.

Descritores: Avaliação Geriátrica; Acidentes por Quedas; Saúde do Idoso Institucionalizado; Enfermagem Geriátrica.

El objetivo fue proponer acciones institucionales basadas en diagnósticos de enfermería para prevención de caídas en ancianos. Investigación cualitativa, exploratoria, descriptiva, con 30 ancianos institucionalizados en Rio Grande, RS, Brasil. En la recolección de datos, se aplicaron cinco instrumentos, de marzo a julio de 2009. Se presentan el perfil de los ancianos, aspectos que favorecen las caídas, diagnósticos de enfermería y propuestas de acciones institucionales para prevenir caídas. Se identificaron diagnósticos de enfermería: Movilidad física perjudicada, Disminución de moverse efectiva, Capacidad de usar el baño perjudicada, Capacidad para vestirse perjudicada, Síndrome de interpretación ambiental perjudicada, Confusión crónica, Memoria perjudicada, Síndrome de estrés por cambios, Riesgo de caídas y Riesgo de trauma. A través de la identificación de los diagnósticos de enfermería fue posible hacer propuesta de acciones institucionales para prevención de caídas en ancianos residentes en instituciones de larga estadía.

**Descriptores:** Evaluación Geriátrica; Accidentes por Caídas; Salud del Anciano Institucionalizado; Enfermería Geriátrica.

Corresponding author: Silvana Sidney Costa Santos

Rua Duque de Caxias, 197/503. Centro. CEP: 96200-020 - Rio Grande, RS, Brazil. E-mail: silvanasidney@pesquisador.cnpq.br

<sup>&</sup>lt;sup>1</sup>Universidade Federal de Santa Catarina, Florianópolis, SC, Brazil.

<sup>&</sup>lt;sup>2</sup>Universidade Federal do Rio Grande, Rio Grande, RS, Brazil.

#### Introduction

Nurses are knowledgeable of the changes that aging causes and must be alert to identify them, understand the needs expressed or not, and determine actions for older people's better quality of life, performing individualized care, trying to keep independence and autonomy<sup>(1)</sup>.

In order to identify possible nursing diagnoses in institutionalized elderly in the prevention of falls, one highlights the importance of the Nursing Care Systematization (NCS). The Nursing Care Systematization is the organization of Nursing work, regarding method, personnel and instruments, designed to make possible the development of the Nursing process; thus it provides a definition of the nature of the work to be performed and a definition of the Nursing process, including its theoretical, philosophical and professional foundations, methods, goals and material resources for the development of Nursing care<sup>(2-4)</sup>.

The NCS organizes professional work as to the method, personnel and instruments, making possible the operation of the Nursing Process (NP). The Nursing Process is a methodological and systematic instrument to provide care, which serves to develop nurses' intellectual activity and provides a guide to a certain style of clinical judgment<sup>(4-5)</sup>.

In order to identify possible Nursing diagnoses in institutionalized elderly in the prevention of falls, one highlights the importance of the Nursing Care Systematization. The NP is organized into five steps: history of Nursing, Nursing diagnosis, Nursing planning, implementation and evaluation<sup>(6)</sup>. This study will focus, in particular, on the diagnostic investigation and planning of Nursing care aimed at Long-term Care Facilities (LTCF) for the elderly.

It is observed that, due to the increasing number of senior citizens in our population, there is a discussion about disabling events among these people, being emphasized the occurrence of falls, very common and dreaded by most seniors because of the consequences that they can cause such as disability, institutionalization, and even death<sup>(7)</sup>. Senior citizens may live with a combination of factors related to the risk of falls, which demonstrates the importance of having established care actions for the promotion of health and prevention of falls in these individuals<sup>(8)</sup>.

Thus, it is important to highlight that falls can represent considerable health problems in the elderly, therefore, it becomes necessary intervention measures by health professionals, in order to identify the risk factors and reduce damages caused by such accidents<sup>(9)</sup>.

It is essential to carry out the assessment of the fall to identify its cause and treat it, and plan appropriate interventions. The evaluation of the fall still involves biological, physical, functional, cognitive and psychosocial aspects. The data should be related to the context and the mechanism of falls, the clinical conditions of the elderly and medications<sup>(7)</sup>. This trial is included in the Nursing consultation from the multidimensional assessment of the elderly, including physical examination, identification of basic human needs, application of specific tools that can detect the functionality, cognition, presence of depression, and the risk of falls.

Due to statistical ratios that indicate the growth of Brazilian senior citizens, by 2025 Brazil will reach 32 million people aged 60 and older(10), one can predict a considerable increase in demand for LTCFs. However, their institutionalization often leads to a decrease in autonomy, loss of identity and even loss of bonds with family and friends(11). Although there are some difficulties in LTCFs, nurses and a multidisciplinary team, through a cooperative effort, need to optimize care provided to the elderly. This action can be realized by the implementation of a multidimensional assessment which should happen in the Nursing consultation, where one can combine experience and resources to focus on the various dimensions involved in the aging process, in order to prepare action proposals that are appropriate to each senior's need.

In this sense, health professionals, specifically nurses have an important role in the assessment of the elderly, intended primarily for maintaining their functionality and cognition aiming to minimize the risk of falls. A fall is determined by multiple factors, and may also be associated with different diagnoses. Accordingly, it is intended with this study to propose actions that aim to minimize/prevent the factors that can trigger the fall. Thus, it is presented as the guiding question: what institutional actions can be proposed, based on Nursing diagnoses to prevent falls in the elderly? The aim of this study was to propose institutional actions based on Nursing diagnoses for the prevention of falls in the elderly.

#### Method

This is a qualitative, exploratory, descriptive, observational study performed in a long-term care facility in Rio Grande do Sul, Brazil, with 30 seniors institutionalized who met the following selection criteria: having cognitive conditions, being available to answer the questions in the data collection instruments.

This study was a research subproject: "Cognitive status and falls: Study about the correlation in the elderly residents of a long-term care facility for seniors in Rio Grande/RS".

Data collection was conducted from January to July 2009, by scholarship holders who were trained to administer the multidimensional assessment of the elderly, using the instruments: Observation Form of the LTCF, investigated about the presence of favorable aspects to falls in the elderly, consisting of questions concerning the physical structure of the LTCF (presence of non-slip floor, carpets stuck to the ground, among other data) and clothing/accessories of the elderly (clothes and shoes with appropriate sizes, shoes with non-slip material), developed by the authors. The instruments were nationally validated: characterization of institutionalized seniors, consisting

of personal and social profile; Index of Independence for activities of daily living, of Katz (KATZ-ADL)(7), which assesses the independence of the elderly in the performance of six functions: bathing, dressing, going to the bathroom, transferring, continence and feeding; Mini Mental State Examination<sup>(7)</sup> which assesses the cognitive function, composed of questions related to time and space orientation, registration, attention, calculation, memory for the evolution of words and language; Geriatric Depression Scale<sup>(7)</sup>, version of fifteen questions with objective answers, positive or negative, assessing the presence of depression; Questionnaire for risk of falls, consisting of questions about previous falls, medication, sensory deficits, mental status and gait, scale used globally and nationally, for being easy to apply<sup>(12)</sup>.

From the results of the instruments applied, two nurses performed the analysis process, providing a survey of the affected basic human needs and their defining characteristics. These led to the development of nursing diagnoses through the NANDA-I<sup>(13)</sup>, then proposals were prepared for institutional actions to prevent falls in institutionalized seniors, based on the authors' experiences in gerontology.

The project received a favorable opinion of the Research Ethics Committee in the health area from the Federal University of Rio Grande (FURG), number 31/2008.

### Results

According to the physical infrastructure of the institution, it was possible to identify the aspects that favor falls in the elderly, such as unevenness on the ground, floors without non-slip material, no signals indicating ramps and stairs, loose rugs, furniture with sharp contour, beds without guardrails and inadequate lighting. Most elderly people wear large clothes and shoes, without appropriate sole with antislip mechanism. Some support objects as walkers and canes are unfit to be used. All these aspects mentioned

favor the decline in the elderly.

Regarding the profile of the elderly, 30 seniors who live in an LTCF took part in this study, 20 (66.7%) women and 10 (33.3%) men. Out of these, 13 (43.3%) fell last year, being the majority (nine) with ages between 70 and 79 years old and females<sup>(11)</sup>. In the study, it was found that eight (26.7%) participants fell in the first semester of institutionalization, number that shows the decrease with longer duration of residence in an LTCF. This may have happened because the elderly were not adapted to the new house yet.

Regarding the use of medications, 12 (40%) seniors used diuretics, 10 (33.3%) were taking antihypertensive medication, and 16 (53.3%) were using other types of medication. It was found as reported above that there was influence of continuous drugs and falls.

Most seniors did not need help for Activities of Daily Living. However, in the case of certain ADLs and their influence on the occurrence of falls, residents who had more falls during bathing were those who did not need help with ADLs. Out of the 20 (66.7%) seniors who needed help with bathing, 11 (55%) suffered falls. Out of the 22 (73.3%) institutionalized seniors who got dressed without assistance, 13 (59%) fell. Out of the 23 (76.6%) seniors who do not get help for personal hygiene, 13 (56.5%) of them fell. Out of the 22 (73.3%) elderly patients with independence to lie down, stand up or sit down, 13 (59%) fell. Out of the 24 (80%) seniors who are independent to eat, 13 (54.1%) fell. Regarding continence, 25 (83.3%) seniors who have completed toilet training, 12 (48%) fell in the previous year. In this sense, it was noted in the study that independence to perform ADLs does not prevent the elderly from falling, since there may be other factors that predispose to this event.

Concerning cognitive assessment, out of 30 seniors, five could not have the Mini Mental State Examination for not being able to communicate verbally, it was found that out of the 25 seniors who took the test, 20 (80%) had score of 23 or less, which is an indication of cognitive deficits.

The Geriatric Depression Scale - Version of fifteen questions - was applied with 25 seniors because out of the 30 seniors, five did not communicate verbally. Out of these 25, 22 (88%) had an indicative index of depression (greater than or equal to five points). Out of these, 11 (50%) suffered falls and 11 (50%) did not fall. Therefore, the data suggest that there was no significant influence of depression on the occurrence of falls in this research.

From the results of the data collection instruments: Katz Index of Independence in Activities of Daily Living, Mini Mental State Examination, Geriatric Depression Scale and the Questionnaire for the risk of falls, one was able to identify the defining characteristics that pointed to the proposal of Nursing diagnoses and development of institutional actions.

The following are the labels of Nursing diagnoses<sup>(13)</sup> and Nursing interventions<sup>(14)</sup> aiming at the prevention of falls in institutionalized seniors:

Impaired physical mobility: promote motivation and adherence to physical exercises; guide the conduction of exercises for specific muscle groups on alternate days, to facilitate the muscles' adaptation to the training; encourage walking for short and frequent periods; guide seniors about the availability of assistive devices (crutches, walkers, canes), teaching them how to use them and monitoring the use that the elderly make of these resources to ambulate; assist the elderly in the initial ambulation as needed; encourage independent walking within safe limits<sup>(14)</sup>.

Impaired ability to transfer: provide a low height bed, as appropriate; teach methods of transferring from the bed to the chair, to the toilet and to the standing position, considering the prevention of falls; advise the elderly on ways to position themselves during the transfer process, helping them to be transferred, if necessary; identify methods of preventing injuries during transfers; advise on the availability of assistive devices and implement/offer their use to walk if the elderly are unstable<sup>(14)</sup>.

Self-care Deficit: Bathing: determine quantity and type of assistance needed; facilitate the elderly to take a bath by themselves, as appropriate, keeping their routine and schedule for the bath; provide adaptive equipment as required; maintain barrier-free environment, aimed at preventing falls; monitor the integrity of the elderly's skin; maintain hygiene rituals; offer assistance until the patient is fully able to assume self-care<sup>(14)</sup>.

Self-care Deficit: dressing: promote independence through continuous and unaided practice; be available to help the elderly to get dressed, if necessary; maintain privacy while seniors get dressed; help them with ties and buttons, if necessary; allow enough time for the resident senior to undress and dress; strengthen their attempts to get dressed by themselves<sup>(14)</sup>.

Impaired environmental interpretation syndrome: present the LTCF's environment, staff and other seniors to the new resident; create a safe environment for the elderly, removing environmental hazards such as loose rugs and small and removable furniture; put within the reach of the elderly objects of frequent use; reduce the environmental stimuli as needed; adjust the lighting for therapeutic benefit of the elderly; individualize the daily routine in order to meet the needs of the elderly; maintain the constancy of professionals working in the LTCF, if possible<sup>(14)</sup>.

Chronic Confusion: present changes gradually; keep the elderly oriented as to time, place and people; talk to the elderly, reinforcing or repeating information; present information in a gradual and objective way; put familiar objects and photographs in the elderly's environment; use mnemonic aids such as calendars, large clocks and reminders; use therapeutic touch<sup>(14)</sup>.

Impaired memory: recall past experiences with the elderly, as appropriate; implement memorization techniques, such as visual imagery, mnemonic devices, memory games, name tags; provide memory recognition of pictures; identify and correct guidance errors with the patient; monitor changes in memory after training<sup>(14)</sup>.

Syndrome of stress due to changes: present the facilities, staff and other seniors in the admission of the new senior resident; suggest the family to take to the LTCF personal belongings of the elderly; monitor the occurrence of signals, physiological and psychological symptoms of change, such as anorexia, anxiety and depression; offer leisure activities and promote interaction with other seniors; assess the impact of the disruption of life style and adaptation to the new environment of the LTCF<sup>(14)</sup>.

Risk of falls: identify cognitive or physical deficits of the elderly, capable of increasing the potential for falls in the LTCF's environment; review the history of falls in the elderly and their families; identify environmental characteristics that increase the potential for falls, such as slippery floors and stairs without protection; provide auxiliary devices such as canes and walkers to make their walking firmer; establish environmental safety measures such as avoiding the use of loose rugs; provide non-slip surfaces; provide handrails in hallways, stairs and bathrooms; Remove sharp objects from furniture; keep bed side rails raised and the bed on a lower level; provide adequate lighting, especially in bedrooms and bathrooms; eliminate objects scattered on the ground, and very waxed floors; ensure that their shoes have non-slip soles and have suitable size for them; ensure the use of clothes with appropriate length; guide, supervising the safe use of walking aids; investigate the medications being used, prescribed or selfmedicated(14).

Risk of injury: keep bed rails raised, when necessary; reduce or eliminate obstacles in the environment; investigate the difficulties of self-care and intolerance to activities; pay attention to the elderly's diet, provide an increased calcium intake, discussing this action with a nutritionist; pay attention to the musculoskeletal strengthening of the elderly through physical activities, aiming at the risk of falls and traumas.

#### Discussion

The morbidity and mortality among the elderly increase due to falls, however, they are preventable. To do so, it is necessary to conduct the Nursing Process associated with multidimensional assessment of the elderly and their environment, in relation to the factors that predispose to falls, allowing the development of prevention strategies that are considered potentially useful<sup>(8)</sup>. Some of the causes of a higher number of falls in elderly women than in men may be related to the physical weakness of women compared to elderly men, the highest prevalence of diseases<sup>(10)</sup> and their higher life expectancy. In Brazil, the absolute number of women is higher, when confronted with males<sup>(15)</sup>. This study also revealed a higher number of falls in older women, which is consistent with the literature.

According to a study carried out in Londrina (PR) to identify the profile of older people who have experienced trauma, it was found that most of them were due to falls, out of the 121 seniors surveyed, 75 of them fell<sup>(16)</sup>. The risk of falling increases substantially with the advance of age, making this accident to be a major public health problem. Due to the aging process, the elderly often become less active and therefore they may have their physical ability decreased, which might cause disability, dependency and an increasing prevalence of non-communicable chronic diseases<sup>(17)</sup>. The present study showed a similar aspect, since the elderly who had more falls were those over 70 years old.

Nurses have an important role in the admission of the elderly to LTCFs and they should show them their routine, the entire institution, show them the physical structure, introduce them to other residents and to the staff, ie, the elderly need to be welcomed in order to provide a better and faster adaptation to LTCFs<sup>(18)</sup>.

As to possible causes of falls in the elderly, it has been investigated in the literature the influence of drug use and the occurrence of this event. Although one cannot tell the cause of this influence, it is known that the use of drugs increases the risk of falls, particularly in more frail elderly people<sup>(19)</sup>. In a study about the analysis of the risk of falls in the elderly and its impact factors, it was identified that one of the intrinsic factors very common in the occurrence of falls, was the use of drugs, caused by physiological changes from the aging process and potential vulnerabilities resulting from illnesses. According to the research, the most widely used drugs were antihypertensives (47%)<sup>(20)</sup>. In the research one identified the relationship between falls and the use of continuous medication.

It is imperative to monitor the effects of medications, especially those that may predispose to falls in the elderly, such as anxiolytics, antihypertensives, antidepressants, diuretics and tranquilizers, providing the involvement of doctors and nurses and all the health staff to perform the required treatment. Special attention should be given to falls in elderly patients with functional and cognitive disability and presence of depression, seeking to recover their autonomy by implementing appropriate actions.

In this sense, the functional capacity evaluation is essential to choose the best type of intervention and monitoring of the elderly's clinical and functional status. Furthermore, it is essential to establish a correct clinical diagnosis, since they help in the treatment of each specific senior citizen. Functional assessment serves as a parameter that, together with other health indicators, is used to define the effectiveness and efficiency of the actions planned<sup>(7)</sup>.

Another factor that is possibly related to falls in the elderly is related to dementias. These are among the diseases that cause progressive functional decline and loss of autonomy, whose incidence and prevalence increases with age<sup>(7)</sup>. Some symptoms of dementia in the elderly are common such as memory deficit, spatial and temporal confusion, difficulty in speech, lack of understanding of what is said, changes in vision or hearing, among others. As the disease

progresses, the symptoms become more evident<sup>(21)</sup>.

In relation to depression, it is often related to cognitive disorders and worse performance on neuropsychological tests. The main cognitive changes associated with depression are related to changes in attention and mental flexibility<sup>(22)</sup>. It is a health problem that occurs frequently among people of advanced age, though its identification is often difficult in clinical practice. One might think that individuals aged 80 and over have a more impaired physical health than younger seniors. Thus, it can be inferred that there is a greater risk of depressive symptoms not due to increased age, but due to compromised health<sup>(23)</sup>.

Regarding Nursing, it is important to know the complex situation related to falls in the elderly, because this is a population with several limitations and special needs<sup>(9)</sup>. Thus, nurses should carry out a care plan with the elderly, seeking to resolve the problems identified, based on the potential resources of the elderly and of the LTCF where they live. This plan individualizes the care provided to elderly residents in LTCFs because it meets the specific needs of each individual.

Moreover, it is necessary that nurses use tools that allow the performance of periodic evaluations of the institutionalized elderly's functional capacity, enabling the identification of affected needs. From these assessments, the nurse has information to perform a new plan, implementing interventions that meet the real needs of the elderly.

#### Conclusion

In this study, through the identification of Nursing diagnoses it was possible to elaborate proposals of institutional actions related to the presentation of the facilities, staff and other seniors in the new resident's admission; adaptation to the environment, keeping it safe and free of obstacles; skeletal muscle strengthening through the conduction of physical activities and/or assisted passive and

active exercises; investigation and training in the use of auxiliary equipment; promotion of independence through continuous and unaided practice; and assessment of the elderly's clinical conditions, considering acute and non-transmissible chronic diseases, as well as the use of drugs, among others.

These actions are aimed at the prevention of falls in elderly residents in long-term care facilities. The study suggests that the combination of theory, practice and knowledge construction can support managers/health professionals who work in LTCFs to plan actions in order to prevent falls in elderly residents.

The methodological approach led to the achievement of the goal. As a positive point of the study it is highlighted the involvement of members of the study group in the LTCF studied, contributing to the planning of actions by health professionals from the service, and consequently, to improve the care provided to elderly residents in this institution.

LTCFs are shown as a growing need, due to the great demand of the elderly/families, playing an important role in receiving these people. In this sense, it is expected that this study will contribute to health professionals, especially nurses working in LTCFs, for the prevention of falls and to implement interventions constructed from the identification of nursing diagnoses, in order to minimize the consequences of this event and contributing to the maintenance of active aging.

This study has limited time to implement the actions proposed, being an intention for future actions; one could also deepen interventions with Nursing prescriptions appropriate to each situation.

#### **Collaborations**

Valcarenghi RV contributed to creation of the study, data collection, analysis, data interpretation and writing of the article. Santos SSC contributed to the creation of the study, analysis, data interpretation,

writing of the article. Hammerschmidt KSA contributed to write the article and final approval of the version to be published. Barlem ELD contributed to analysis and data interpretation. Gomes GC contributed to write the article. Silva BT contributed to write the article and with the final approval of the version to be published.

## References

- Tier CG, Lunardi VL, Santos SSC. Cuidado ao idoso deprimido e institucionalizado à luz da Complexidade. Rev Eletr Enf. [periódico na Internet]. 2008 [citado 2014 jan 21]; 10(2):530-6. Disponível em: http://www.fen.ufg.br/revista/v10/n2/v10n2a24.htm
- Backes DS, Schwartz E. Implementação da Sistematização da Assistência de Enfermagem: Desafios e Conquistas do Ponto de Vista Gerencial. Ciênc Cuid Saúde 2008; 4(2):182-8.
- 3. Leopardi MT. Teoria e método em assistência de enfermagem. 2ª ed. Florianópolis: Soldasof; 2006.
- 4. Fuly PSC, Leite JL, Lima SBS. Correntes de pensamento nacionais sobre a sistematização da assistência de enfermagem. Rev Bras Enferm. 2008; 61(6):883-7.
- 5. Cruz AMP, Almeida MA. Competencies in the education of nursing technicians to implement the nursing care systematization. Rev Esc Enferm USP. 2010; 44(4):921-7.
- 6. Conselho Federal de Enfermagem. Resolução COFEN-358/2009. 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. Brasília: COFEN; 2009.
- Ministério da Saúde (BR). Caderno de Atenção Básica: envelhecimento e saúde da pessoa idosa. Normas e Manuais Técnicos. Brasília: Ministério da Saúde; 2006.
- 8. Brito TA, Fernandes MH, Coqueiro RS, Jesus CS. Falls and functional capacity in the oldest old dwelling in the community. Text Contexto Enferm. 2013; 22(1):43-51.
- 9. Costa AGS, Araujo TL, Oliveira ARS, Morais HCC,

- Silva VM, Lopes MVO. Risk factors for falls in the elderly. Rev Rene. 2013; 14(4):821-8.
- 10. Ministério da Saúde (BR). Secretaria de Atenção à Saúde. Departamento de Ações Programáticas e Estratégicas. Atenção à saúde da pessoa idosa e envelhecimento. Brasília: Ministério da Saúde; 2010.
- 11. Borges CL, Silva MJ, Clares JWB, Bessa MEP, Freitas MC. Frailty assessment of institutionalized elderly. Acta Paul Enferm. 2013; 26(4):318-22.
- 12. Meyer G, Köpke S, Haastert B, Mühlhauser I. Comparison of a fall risk assessment tool with nurses' judgement alone: a cluster-randomised controlled trial. Age Ageing. 2009; 38:417-23.
- NANDA Internacional. Diagnósticos de enfermagem da NANDA: definições e classificação 2012-2014. Porto Alegre: Artmed; 2013.
- 14. Bulechek GM, Butcher HK, Dochterman JM. Classificação das Intervenções de Enfermagem. Rio de Janeiro: Elsevier; 2010.
- 15. Martins JJ, Shneider DG, Coelho FL, Nascimento ERP, Albuquerque GL, Erdmann AL, et al. Quality of life among elderly people receiving home care Services. Acta Paul Enferm. 2009; 22(3):265-71.
- 16. Biazin DT, Rodrigues RAP. Perfil dos idosos que sofreram trauma em Londrina Paraná. Rev Esc Enferm USP. 2009; 43(3):602-8.
- 17. Pinho TAM, Silva AO, Tura LFR, Moreira MASP, Gurgel SN, Smith AAF, et al. Assessing the risk of falls for the elderly in Basic Health Units. Rev Esc Enferm USP. 2012; 46(2):320-7.
- 18. Santos SSC, Silva BT, Barlem ELD, Lopes RS. The nurse role in the seniors' long permanence institution. Rev Enferm UFPE On Line. [periódico na Internet]. 2008 [citado 2013 nov 13]; 2(3):262-8. Disponível em: http://www.revista.ufpe.br/revistaenfermagem/index.php/revista/article/view/351
- Gonçalves LG, Vieira ST, Siqueira FV, Hallal PC. Prevalência de quedas em idosos asilados do município de Rio Grande, RS. Rev Saúde Pública. 2008; 42(5):938-45.
- 20. Lima DWC, Cruz AMM, Morais FMP, Torres ADM, Freitas MC. Impact of a fall in the elderly: an analysis of the risk factor. Rev Rene. 2013; 14(4):929-37.

- 21. Yassuda MS, Abreu VPS. Avaliação cognitiva em gerontologia. In: Freitas EV, Py L, Cançado FAX, Doll J, Gorzoni ML, organizadores. Tratado de geriatria e gerontologia. Rio de Janeiro: Guanabara Koogan; 2011. p.1252-9.
- 22. Silva ER, Souza ARP, Ferreira LB, Peixoto HM. Prevalence and factors associated with depression among institutionalized elderly individuals: nursing care support. Rev Esc Enferm USP. 2012; 46(6):1387-93.
- 23. Macedo AML, Cerchiari EAN, Alvarenga MRM, Faccenda O, Oliveira MAC. Functional assessment of elderly with deficit. Acta Paul Enferm. 2012; 25(3):358-63.