



CLINICAL NURSING CARE FOR ELDERLY INSTITUTIONALIZED DIABETICS
CUIDADO CLÍNICO DE ENFERMAGEM A IDOSAS DIABÉTICAS INSTITUCIONALIZADAS
CUIDADO CLÍNICO DE ENFERMERÍA A ANCIANAS DIABÉTICAS INSTITUCIONALIZADAS

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ABSTRACT

Objective: to analyze nursing diagnoses more frequent in the care of institutionalized elderly diabetics. **Method:** a descriptive study, with a quantitative approach, in a Long Stay Institution for the Elderly, with 12 elderly women, where socio-demographic and clinical issues were used, physical examination guide, Mini Mental State Examination and Katz Scale were used. After the selection, the nursing diagnoses were submitted to a descriptive analysis, in which the defining characteristics and factors related to the identified problem were established. **Results:** 21 diagnoses were, identified, including risks of falls, aspiration, infection and impaired skin integrity, impaired dentition and memory, and self-care deficits. **Conclusion:** a Long Stay Institution for the Elderly generates changes related to the accelerated decline of functional and cognitive capacity. The management of nursing care should consider peculiarities of each resident, especially, in the presence of chronic diseases, such as diabetes. **Descriptors:** Aged; Diabetes Mellitus; Geriatric Nursing; Homes for the Aged.

RESUMO

Objetivo: analisar diagnósticos de enfermagem mais frequentes no cuidado a idosas diabéticas institucionalizadas. **Método:** estudo descritivo, de abordagem quantitativa, numa Instituição de Longa Permanência para Idosos, com 12 idosas, onde se utilizaram questões sociodemográficas e clínicas, guia para exame físico, Mini Exame do Estado Mental e Escala de Katz. Após a seleção, os diagnósticos de enfermagem foram submetidos à análise descritiva, na qual foram estabelecidas as características definidoras e fatores relacionados ao problema identificado. **Resultados:** 21 diagnósticos foram identificados, incluindo, riscos de quedas, aspiração, infecção e integridade da pele prejudicada, dentição e memória prejudicada e déficit no autocuidado. **Conclusão:** uma Instituição de Longa Permanência para Idosos gera mudanças relacionadas ao declínio acelerado da capacidade funcional e cognitiva. A gestão do cuidado de enfermagem deve considerar peculiaridades de cada residente, especialmente, na presença de doenças crônicas, como o diabetes. **Descritores:** Idoso; Diabetes Mellitus; Enfermagem Geriátrica; Instituição de Longa Permanência para Idosos.

RESUMEN

Objetivo: analizar los diagnósticos de enfermería más frecuentes en el cuidado a ancianas diabéticas institucionalizadas. **Método:** estudio descriptivo de enfoque cuantitativo, en una institución de Larga Permanencia para Ancianos, con 12 mujeres mayores, se utilizó cuestionarios sociodemográficos y clínicos, guía para examen físico, Minie-Examen del Estado Mental y Escala de Katz. Después de la selección, los diagnósticos de enfermería fueron sometidos a análisis descriptivo, en que estableció las características definitorias y factores relacionados con el problema identificado. **Resultados:** se identificaron 21 diagnósticos, incluyendo los riesgos de caídas, aspiración, infección e integridad de la piel deteriorada, dentición y deteriorado de memoria y déficit del autocuidado. **Conclusión:** una institución de Larga Permanencia para Ancianos genera cambios relacionados al rápido declino de la capacidad funcional y cognitiva. La gestión de la atención de enfermería debe considerar las peculiaridades de cada residente, especialmente, en presencia de enfermedades crónicas como la diabetes. **Descriptores:** Anciano; Diabetes Mellitus; Enfermería Geriátrica; Hogares para Ancianos.

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INTRODUCTION

Population aging has generated important social, economic and health changes in Brazil, in which the demand for alternative care models that guarantee care for the elderly is highlighted. In this context, Long-stay Institutions for the Elderly (LSIE) are considered as residential and collective organizations, serving individuals that are 60 years of age or older, with or without family support.¹

A census survey carried out throughout the country, between 2007 and 2009, identified 3,549 LSIE, with a majority (65.2%) of a philanthropic nature, but, with a gradual increase of private for-profit institutions, which indicates a trend in the profile change the same. In total, the LSIE housed about 84 thousand elderly people, who occupied 91.6% of the existing vacancies.²

As an important care setting, LSIE hosts elderly people with diverse sociodemographic and clinical profiles, the latter being characterized by the predominance of chronic diseases such as diabetes mellitus (DM). Although DM management has already been widely discussed, little research has been done on the management of diabetic patient care residing in long-term institutions.³

International research conducted in 59 LSIE distributed in eight European countries, with a total of 4,037 elderly, identified a predominance of 21.8% of DM among residents. In the study, elderly diabetics had more comorbidities, a higher incidence of cardiovascular diseases, obesity, infections and urinary incontinence.⁴ Similar data were obtained in national studies that traced the epidemiological profile of institutionalized elderly persons.⁵⁻⁶

When considering the elderly diabetic institutionalized as a specific group, inserted in a care model differentiated from the others, the importance of Nursing in the construction of clinical and critical thinking focused on the management of real and potential problems of these residents stands out. The identification of these needs, established through nursing diagnoses (ND), constitutes an important step for nurses' decision-making in the face of daily complexity.

From the above, a main question emerged about the reality of this specific group: what are the nursing diagnoses in the context of care for institutionalized elderly diabetics? Thus, this study aims to:

- To analyze more frequent nursing diagnoses in the care of institutionalized elderly diabetics.

MÉTHOD

A descriptive, quantitative approach, developed from July to September 2014, in a philanthropic long-stay institution for the elderly (LSIE) of the Campos Gerais region, Paraná, Brazil.

This LSIE provides care, under permanent or temporary shelter, to the elderly victims of neglect and ill-treatment. For this, it has a link with the Secretariat of Social Action (SSA) and with the city council. It has a multidisciplinary team, with nurse, social worker, physiotherapist, nutritionist and physical educator, as well as caregivers of the elderly.

The population living in LSIE is composed of thirty elderly women, and for this study, the inclusion criteria were: to reside in the LSIE for at least six months; medical diagnosis of Diabetes Mellitus. Older women who were not in the institution at the moment of data collection were excluded. Before the criteria, the final sample was composed of twelve elderly women.

We used a structured form containing socio-demographic questions, such as age, income and schooling; and clinical, such as comorbidities and medications used. The sources for these data were medical records, Nursing record books and records of medications administered to residents.

In order to complement the clinical data collected, a simplified guide for conducting physical examination in the elderly was elaborated by the researchers. This instrument was structured based on the classification of psychobiological and psychosocial needs present in Wanda Horta's Theory of Basic Human Needs. For the theoretical, these concepts are interrelated and thus must be analyzed in order to consider the holistic concept of man.⁷

The Mental Mini State Exam (MMSE) and the Katz Scale were also used to evaluate the cognitive and functional abilities of the elderly. The MMSE is considered the most used instrument in the cognitive approach to the elderly, being quick and easy to apply.⁸ The Katz Scale is considered an important instrument for functional evaluation and evaluates the ability to perform activities essential for the maintenance of independence in relation to the Self-care, also called Activities of Daily Life (ADL), such as bathing, dressing, among others.⁹

Based on the diagnostic reasoning process,¹⁰ the data collected were classified into two types of needs, according to the Wanda Horta model: psychobiological needs and psychosocial needs. Each cluster of data was compared to normal human development patterns, and a diagnostic inference was then reported and a number of possible causes related to the problems initially described were reported. Thus, the nursing diagnoses present in the surveyed elderly women, based on the taxonomy II of the *North American Nursing Diagnosis Association (NANDA)*, which favors, with the aid of a clinical language, the standardized collection of data requirements.¹¹

It was decided to select only the diagnoses (real and risk) that were identified in at least eight elderly women, considering that these are the most relevant in the study. After the selection, these were submitted to descriptive analysis, in which the defining characteristics and factors related to the identified problem were established.

The project was sent to the Research Ethics Committee (REC) of the State University of Ponta Grossa (UEPG), with a favorable opinion in the. 561,535 and CAAE no. 27849614.3.0000.0105. The research followed all the ethical and legal precepts, based on resolution no. 466/12, the elderly being informed about the purpose of the study, and, after consent, to sign the Informed Consent Term (ICT). The preservation of the identity of the elderly was ensured, through the use of pseudonyms in the analysis of the data obtained.

RESULTS

LSIE housed 12 elderly women with DM, with a minimum and maximum age, respectively, of 61 and 89 years (mean = 76.5 years). As for comorbidities, in addition to diabetes, Systemic Arterial Hypertension

(SAH) predominated (n = 08). Eight elderly women presented capillary glycemia between 76 and 118 mg/dL at the time of data collection, while a high glycemic index was identified along with the others, with values between 191 and 230 mg/dL.

All residents surveyed used four to ten medications. Anti-hypertensives were the most consumed class (n = 07), followed by hypoglycemic agents (n = 06), anxiolytics (n = 05) and vitamin complex (n = 05), among others.

Regarding the evaluation for the ability to perform ADL, only one elderly woman was classified as independent; ten had dependence to perform several activities and one elderly woman was completely dependent. Of the investigated activities of daily life, food was the most preserved (n = 10), followed by transference and continence, both of which were maintained in four elderly women. The activities related to bathing, dressing and personal hygiene were the least preserved (n = 01).

In relation to the MMSE, a mean score of ten points was observed, with a minimum and maximum total, respectively, of five and thirteen points obtained by the elderly women. The most preserved cognitive function was that of language, and the least preserved were memory recall, followed by constructive praxis and attention and calculation.

◆ Nursing diagnoses (ND) identified in institutionalized diabetic elderly women

We identified 17 nursing diagnoses that represented the problems collected with the elderly, with a minimum and maximum, respectively, of five and 17 ND per elderly, in a total of 93 diagnostic classifications in the sample. Only four diagnoses were characterized as risk: risk of falls, risk of aspiration, risk of infection and risk of impaired skin integrity (Figure 1).

Categories	Subcategories	Nursing diagnoses	n
Psychobiological Needs	Physical integrity	Risk of falls	12
		Risk of infection	03
	Skin and mucous integrity	Impaired skin integrity risk	05
		Oxygenation	01
		Risk of aspiration	01

Figure 1. Distribution of risk diagnoses in institutionalized diabetic women, according to categories and subcategories established by the Horta Model. Ponta Grossa (PR), Brazil, 2014.
ND: Nursing diagnoses

In this study, as a highlight among those at risk, there is a risk of falls (n = 12), that was identified from the following factors related to the elderly: history of falls, age over 65, use of wheelchairs, use of auxiliary devices, difficulty in walking, hearing and visual

impairment, impaired balance, lack of sleep, decreased strength in the lower extremities, incontinence, impaired physical mobility, changes in sugar levels after meals, lowered mental status, use of certain medications, unfavorable environmental conditions.

Thirteen real nursing diagnoses were identified, with the most frequent being impaired dentition and impaired memory, both in twelve elderly women (Table 2).

Categories	Subcategories	Nursing Diagnostics	n
Psychobiological Needs	Neurological regulation	Memory impaired	12
	Nutrition	Impaired Dentition	12
		Impaired swallowing	02
	Body care	Self-care deficit for food	09
		Self-care deficit for bath	09
		Deficit in self-care for dressing	08
	Sleep and rest	Insomnia	05
	Locomotion	Impaired walking	04
	Skin and mucous integrity	Impaired skin integrity	03
Psychosocial needs	Elimination	Functional urinary incontinence	02
		Intestinal incontinence	01
	Motility	Impaired transferability	01
	Participation	Social isolation	04

Figure 2. Distribution of the actual ND of institutionalized diabetic elderly, according to categories and subcategories established by the Wanda Horta Model. Ponta Grossa (PR), Brazil, 2014.
ND: Nursing diagnoses

In this study, impaired dentition ND was related to the ineffective oral hygiene factor, represented by the absence characteristics of teeth, damaged teeth and halitosis.

Regarding impaired memory, the defining characteristics observed in the study participants were: experiences of forgetfulness, inability to perform a previously learned ability, to remember events and to retain new information. Neurological disorders were considered as an important factor related to this Nursing Diagnosis.

The most affected subcategory was body care, which presented three important nursing diagnoses: self-care deficit for nourishment (n = 09), self-care deficit for bathing (n = 09) and self-care deficit for dressing (n = 08) (Table 02).

The factors related to these NDs in this study were: environmental barriers, pain, cognitive impairment and musculoskeletal impairment. The defining characteristics were, for ND deficit in self-care for food: inability to safely eat food, to carry food from a container to the mouth, to handle utensils and to pick up food with utensils. For ND deficit in self-care for bath: inability to access the bathroom, to wash and dry the body. For ND deficit in self-care for dressing: impaired ability to put items of necessary clothing, close garments, and take out needed clothing items.

DISCUSSION

hyperglycemia states in the elderly are considered as a predisposing factor for worse functional mobility and cognitive performance, even before the onset of vascular or neuropathic complications.¹²

Likewise, the identification of polypharmacy and the high burden of chronic diseases, such as DM and SAH, in the participants of this study, tend to hamper the management of elderly care. The use of various drugs is associated with non-adherence to medications, drug interactions and adverse events to certain drugs.¹³

The decline in functionality, signaled by the loss of ability to perform one or more ADLs, affects the elderly's competence for self-care and may reflect the resident's lack of engagement with the institution's routine activities, as well as with his or her own therapy, and compromise their quality of life.¹⁴⁻⁵

Regarding cognition, a prospective population-based study, with 3777 elderly French people, identified a greater cognitive decline in the group that was institutionalized during the follow-up period of the survey, compared to the elderly who remained residing in their homes.¹⁶ It is understood that the partial absence or total physical and/or cognitive activities with the elderly in LSIE may be one of the important factors associated with the decrease of cognition in this group.¹⁷

♦ Nursing diagnoses (ND) identified in diabetic institutionalized elderly

Risk NDs related to the elderly investigated are possibly associated with the process of reducing the functionality and cognition of these individuals, since such declines have been identified as important predictors of the

risk for certain adverse health events, such as falls and immobilization.^{6,15,18} In case of loss of mobility, the risk rises for outcomes such as infections, pressure ulcers, aspiration, among others.¹⁹ In this study, a low cognitive score was observed, as well as partial dependence of care in ten elderly women, which suggests the need for attention focused on the rehabilitation of these residents, in order to enhance their autonomy and functionality.

As an important ND identified is that of impaired dentition. Inadequate oral health is a common health problem among institutionalized elderly people, especially those diagnosed with chronic diseases,²⁰ and causes important outcomes such as periodontal disease. In elderly diabetics, the prevalence of inadequate oral hygiene and periodontal disease is high, especially in situations of low glycemic control.²¹⁻²

Considering cognitive impairment as one of the main factors associated with the deterioration of oral health-related functions,²²⁻³ it is important to carry out periodic cognitive and functional evaluations of the elderly, in order to plan and direct actions aimed at establishing an oral care routine, for stimulus and/or aid in the brushing and management of prostheses.²³

Regarding impaired memory, memory is considered to be one of the cognitive functions that most influences the autonomy, independence and quality of life of the elderly. In LSIE diabetic residents, due to the complex management of various comorbidities, the use of polypharmacy and recurrent episodes of hypo and/or hyperglycemia,²⁴ cognitive decline is accelerated.¹⁶ Memory changes in these elderly individuals tend to compromise diet-related habits and maintenance of the pattern Glycemic index. Designing individualized plans for care management in diabetic patients with cognitive impairment, as well as stimulating the use of concentration and memory in daily activities constitute important strategies for the exercise of cognitive function.

Similar to cognition, the functionality of the elderly diminishes over time, compromising the ability to perform daily life activities (ADL), such as those related to body care. Common geriatric syndromes among residents, such as the fragility syndrome, are considered as important predictors of this decline. A multicenter cohort study with 324 institutionalized elderly people from Cuba and Spain identified an association between physical frailty and the incidence of inability to perform ADL.²⁵

The performance of ADL may be altered according to the degree of cognitive loss. A European study identified accelerated decline in activities of bathing and dressing in the elderly from mild to severe dementia. Activities such as going to the toilet, transference and feeding have remained relatively intact throughout the worsening of the cognitive picture.²⁶ Regarding the performance of ADLs, Nursing interventions should be related to the help of the elderly dependent, stimulating the use of auxiliary devices, when necessary, improvement of body mechanics, balance, and continuous monitoring of functional and cognitive capacity.²⁷

CONCLUSION

The sample of this study consisting of twelve institutionalized diabetic women, presented predominantly with several comorbidities, using polypharmacy, with functional dependence and reduced cognitive capacity. Twenty-one different nursing diagnoses were identified, with particular emphasis on: risk of falls, impaired dentition, impaired memory, self-care deficit for food, self-care deficit for dressing, and self-care deficit for bathing.

The problems identified in this study point to the challenges faced by the nurse in the context of care for the institutionalized elderly. Residency in an LSIE leads to profound health changes for the resident, especially related to the accelerated decline in functional and cognitive capacity. The rigorous management of gerontological nursing care should consider the peculiarities of each resident inserted in a long-stay institution, especially in the presence of chronic diseases, such as diabetes.

It should be emphasized that this study presents, as limitations, the cross-sectional delineation that makes it impossible to establish cause and effect relationships between the variables investigated. Further studies related to the systematization of nursing care for the institutionalized elderly are suggested, in order to foster the development of clinical care directed to the needs of this clientele.

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Sousa JAV de, Grden CRB, Silva MT da et al.

Clinical nursing care for elderly...

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