ORIGINAL ARTICLE

NURSING DISGNOSES FOR ELDERLY IN USE OF ORAL MEDICINES
DIAGNÓSTICOS DE ENFERMAGEM PARA IDOSOS EM USO DE MEDICAMENTOS ORAIS
DIAGNÓSTICOS DE ENFERMERÍA PARA ANCIANOS EN USO DE MEDICAMENTOS ORALES

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ABSTRACT

Objective: to identify nursing diagnoses in elderly using oral medications. *Method:* descriptive study with a qualitative approach, conducted with 20 elderly patients in a Primary Health Care Unit in Fortaleza. There were semi-structured interviews for the production of data and the diagnostic reasoning process proposed by LeFevre was used to reason the diagnoses based on the International Classification for Nursing Practice. *Results:* the following nursing diagnoses were elaborated: risk for fall, impaired ability to manage the drug regimen, decreased fluid intake, insufficient physical exercise, impaired adherence to therapy system, insufficient knowledge about medication system and low knowledge of medication. *Conclusion:* the identification of nursing diagnoses contributed to the early establishment of care actions directed to the elderly. *Descriptors:* Health; Use of Medicines; Nursing Diagnosis; Primary Health Care.

RESUMO

Objetivo: identificar os diagnósticos de enfermagem em idosos usuários de medicamentos orais. *Método*: estudo descritivo, com abordagem qualitativa, realizado com 20 idosos em uma Unidade de Atenção Primária à Saúde de Fortaleza-CE. Realizaram-se entrevistas semiestruturadas para a produção de dados e se utilizou do processo de raciocínio diagnóstico proposto por LeFevre para raciocinar os diagnósticos com base na Classificação Internacional para a Prática de Enfermagem. *Resultados:* foram elaborados os seguintes diagnósticos de enfermagem: *risco de queda, capacidade para manejar o regime medicamentoso prejudicada, ingestão de líquidos diminuída, exercício físico insuficiente, adesão ao regime terapêutico prejudicada, conhecimento insuficiente sobre regime medicamentoso e baixo conhecimento sobre medicação.* *Conclusão:* a identificação dos diagnósticos de enfermagem contribuiu para o início do estabelecimento de ações de cuidado direcionadas aos idosos. *Descritores:* Saúde do Idoso; Uso de Medicamentos; Diagnóstico de Enfermagem; Atenção Primária à Saúde.

RESUMEN

Objetivo: identificar los diagnósticos de enfermería en ancianos usuarios de medicamentos orales. *Método*: estudio descriptivo, con enfoque cualitativo, realizado con 20 ancianos en una Unidad de Atención Primaria a la Salud de Fortaleza-CE. Se realizaron entrevistas semi-estructuradas para la producción de datos y se utilizó el proceso de raciocinio diagnóstico propuesto por LeFevre para raciocinar los diagnósticos con base en la Clasificación Internacional para la Práctica de Enfermería. *Resultados:* fueron elaborados los siguientes diagnósticos de enfermería: riesgo de caída, capacidad para manejar el régimen medicamentoso perjudicado, ingestión de líquidos disminuida, ejercicio físico insuficiente sobre régimen medicamentoso y bajo conocimiento sobre medicación. *Conclusión:* la identificación de los diagnósticos de enfermería contribuyó para el inicio del establecimiento de acciones de cuidado dirigidas a los ancianos. *Descriptores:* Salud del Aciano; Uso de Medicamentos; Diagnóstico de Enfermería; Atención Primaria a la Salud.

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INTRODUCTION

Faced with the change in the demographic and epidemiological profile of the population worldwide, the increase of chronic degenerative diseases has been progressive, as well as the use of medications to control them. This is enhanced especially among the elderly, who experience multiple changes that make them consumers of large number of drugs and these, although necessary in many occasions, when misused can trigger serious complications.[1]

The use of drugs in old age is due to, especially, changes involving all systems and the reduced physiological reserves. This practice is common among the elderly and can be defined as polypharmacy, which is classified both qualitatively, referring to the heightened amount of continuous use medications, and qualitatively, when at least one inappropriate medication is used. Polypharmacy is associated with increased risk and severity of adverse reactions, drug interactions, cumulative toxicity, iatrogeny, non-adherence to treatment and high mortality rates.[2]

In this scenario, the nurse is one of the key individuals responsible for oversight, proper management and guidance on the use of medicines for the elderly. During their practice, nurses must be able to recognize the deleterious effects of polypharmacy and ensure the safety of the elderly in the safe administration of drugs. In the context of aging, they should consider that the elderly person using more than one drug may have complex health problems, and the identification of nursing diagnoses can contribute to better understanding the needs and to direct the care delivered.

Often, the lack of updating, knowledge and clinical experience of some nurses hampers the recognition of nursing diagnoses resulting from the indiscriminate use of medications by the elderly. Before such situation, some include in the care plan interventions that will not be effective until the unnoticed primary cause is eliminated. It is, therefore, essential that nurses know the function of drugs in use and how much these may be negatively influencing for the appearance of a diagnosis [2], and understand changes related to senescence that can significantly change the pharmacokinetics and pharmacodynamics of drugs, generating need for adjustments in posology, dosage and continuous serum monitoring of drugs.[3]

Given the importance of the application of the nursing process to identify the main needs of the elderly who takes drugs, this study aims to identify the main nursing diagnoses in elderly users of oral medications.

METHOD

This is a descriptive study conducted in a Primary Health Care Unit (PHCU) in the city of Fortaleza, state of Ceará, from September to November 2014. The studied PHCU has five health teams and serves about 360,000 inhabitants.

Participants were 20 seniors, registered and included in the selected PHCU, who used oral medication and who had cognitive ability that allowed their participation. For this purpose, the Mini Mental State Examination was applied.[4] Data production of was performed at households, with the help of a community health workers to facilitate access to homes.

Then, there was a semi-structured interview guided by an instrument with information about the presence of morbidities and their treatment, as well as knowledge of the elderly about the use of their medications, determining environmental and social factors, personal characteristics, behaviors and habits that affect health and contribute to the emergence of other conditions of illnesses and / or complications, particularly those related to use of medicines.

After collecting data, authors used the diagnostic reasoning process proposed by LeFevre to obtain the nursing diagnoses, consisting of five phases: 1) create a list of possible problems / diagnoses; 2) eliminate problems / similar diagnoses; 3) name the potential and real problems and clarify what is causing or contributing to them; 4) determine the risk factors that must be controlled; 5) identify the resources, strengths and areas for health promotion.[5]

Later, the nursing diagnoses were identified, developed according to the International Classification for Nursing Practice (ICNP®), Version 2015 [6], following the International Council of Nurses (ICN) guidelines, established in Norm ISO 18104/14 of the International Standardization Organization (ISO). This reports that the construction of statements of nursing diagnoses should use a term of the axis "Focus" and of the axis "Judgment" and include another term of other axes, if necessary.[7]

Seven nursing diagnoses that relate to the use of drugs by the elderly patient were developed. However, for discussion purposes, the priority diagnoses were considered, which prevailed: *risk for fall, impaired ability to*

manage the drug regimen and *decreased fluid intake.*

The ethical and legal principles to be followed in investigations involving human beings were respected, as required by Resolution 466, of December 12, 2012, from the National Health Council.[8] The research had the project approved by the Research Ethics Committee of the State University of Ceará, under opinion number 501721 and Certificate of Presentation for Ethical Consideration: 18669013.7.0000.5534.

RESULTS

Among the 20 elderly participants, the women prevailed (19). The mean age was 76.3 years, ten widowed, 16 retirees and 12 with educational level between 1 and 4 years of study.

Among the sickening conditions, systemic arterial hypertension (SAH) and type 2 diabetes mellitus (T2DM) were present in all the elderly. The medications used by them were antihypertensives (10), antidiabetics (04), antihypertensive and antidiabetics (06). As for health habits, 14 elderly did not practice any physical activity; 11 had 1 to 3 meals daily; and 18 drunk 1 to 3 glasses of water a day.

Regarding the use of medication, 15 individuals reported forgetting to take medications sometimes; 11 did not know the purpose of the drugs taken; 9 reported differentiating the medicines by size and 8 by color. With respect to health claims, pain was reported by 9 subjects and 7 reported dizziness.

Thus, the following nursing diagnoses were elaborated: *risk for fall (20) impaired ability to manage the drug regimen (18), decreased fluid intake (18), insufficient physical exercise (14), impaired adherence to therapeutic regimen (12), insufficient knowledge about drug regimen (11)* and *low knowledge about medication* (8).

For discussion purposes, the most present diagnoses among the elderly were considered, namely: *risk for fall, impaired ability to manage the drug regimen* and *decreased fluid intake.* These diagnoses include the others developed, given that, by intervening in these, the others can be remedied.

The diagnosis *risk for fall* was related to intrinsic factors inherent to the elderly, to the extrinsic factors related to environmental conditions and to the use of medicines. Factors considered for the preparation of diagnosis were: report of previous falls, age over 65, arthritis, visual difficulties, problems in the lower limbs, use of antihypertensive and antidiabetic medications, as well as identification of the presence of stairs, slippery floor, several obstacles at households, loose rugs and use of inappropriate footwear, identified at the time of data collection.

The diagnosis *impaired ability to manage the drug regimen* was characterized by the fact that elderly reported sometimes forgetting to take the drugs and need help from others to remind them; not knowing their purpose; having difficulties to differentiate them from each other, given that they distinguished them based on size and color.

The nursing diagnosis *decreased fluid intake* was prepared based on reports of low intake of water per day; not feeling thirsty; and taking fluids only after meals and when taking medicines.

DISCUSSION

The falls stand out among the factors that have contributed to aggravate the conditions of health and life of the elderly population, as they constitute the leading cause of accidents in people over 65 years old.[1] These, however, are preventable, and there is need for educational activities involving both the elderly and family members and caregivers, and strategies for careful prescription and administration of drugs.

Aging causes physiological changes that favor the occurrence of falls, as decline in muscle strength, changes in bone mass, deficit in balance, slowing of reaction time, increase of body swing, declining of reflexes, decreased postural control, coordination motor, flexibility, and impairments in vision, in the vestibular system and proprioception.[9] There is a decline in motor performance and gradual reduction of movement, and muscle weakness is a major contributor to gait disorders, affecting ultimately the work capacity and adaptability to the environment.

Among the intrinsic factors, falls are associated with the female gender, advanced age, sedentary lifestyle, history of falls, bad self-rated health, chronic diseases and highest number of continuous use medicines.[9] It is noteworthy that women have a greater loss of muscle mass and bone due to reduced estrogen, which contributes to deteriorating their functional state, added to the multiple tasks they perform at home, which leads them to a greater propensity to fall.[10]

One of the determining factors for the increase in the index of falls in the elderly is polypharmacy, setting up a strongly associated

variable.[11] Similarly, the drug type and class also have potentiating effect on negative clinical outcomes in the elderly. For example, in the case of this study, the use of antihypertensive drugs, such as thiazides and loop diuretics, may increase the risk of orthostatic hypotension, a common event in the elderly due to changes in plasma volume.[12-13] the beta-blockers may cause decreased chronotropism and beta-adrenergic response, coupled with changes of senescence, such as decreased carotid baroreceptor response, and maximize event falls. Antidiabetic drugs, especially when poorly managed, can cause dizziness, weakness, delirium and confusion in the elderly, especially in those who use a class of drugs called sulfonylureas (glyburide, gliclazide and glimepiride), which cause hypoglycaemia more often and more severely.[14]

The identification of this nursing diagnosis allows for the establishment of appropriate intervention in order to prevent the occurrence of such event in the elderly. A very effective measure is the physical training, which improves functional performance, quality of life, emotional health and prevent falls in frail patients,[15] because it promotes the increase of maximum oxygen consumption and increased muscle mass,[16] also influencing the losses related to sarcopenia.

Nurses may intervene through prevention, by encouraging or monitoring the practice of physical exercise, assessing possible domestic risks (slippery rugs and floors) and monitoring medications that make the elderly most vulnerable to falls. Fall prevention is essential by the potential to reduce morbidity and mortality among the elderly and the number of hospital admissions, and thus by contributing to maintaining the autonomy of these people.

About the diagnosis *impaired ability to manage the drug regimen*, forgetfulness was well reported by the elderly as one of the reasons for irregularity in taking the medications. There are several factors that contribute to the difficulty of management and adherence, including complaints relating to memory changes that are often more associated with depressive disorders or personality traits than dementias;[17] the intake of more than five drugs per day, illustrating the complexity of the regimen; and the inability to manage their drug regimen alone, generating the need for systematic monitoring and dependence on family or on a caregiver.

The deficit of knowledge of the elderly about using and differentiating medications can be explained by low education, lack of guidance and polypharmacy. In this case, the concern of health professionals must be even greater, given that many different medications have the same shape and color, which can lead to errors in taking the medication and damage to the health of the elderly. Moreover, pharmacotherapy must be supervised in order to manage adverse events, therapeutic duplication, drug interactions, iatrogenic complications, hospitalizations and unnecessary expenses.[18] A simple and important strategy in the nurses' work in the Family Health Strategy is to provide a very careful guidance on the use of drugs for the elderly or families and caregivers who live with and / or monitor such elderly. Thus, nurses should consider the possibility of identifying the causes that interfere the elderly's ability to manage their medicines and take care of their own health, as these can harm the well-being and quality of life through decompensation of comorbidities and associated factors.

Regarding the nursing diagnosis *decreased fluid intake*, elderly are more prone to lose the total amount of body water; and if intake decreases, the individual gets more vulnerable to the risk of dehydration and acute cases of diseases that can easily progress to death. The presence of this diagnosis in old age is due to elements derived from cognitive disorders, decreased thirst and physical weakness.

This condition may influence by enhancing or canceling actions and pharmacologic mechanisms, particularly for drugs that are water soluble, such as the digoxin, a digitalic that has toxic effects (ventricular arrhythmias and atrioventricular blocks) that can be lethal in healthy patients. In this context, nurses should seek strategies to encourage regular fluid intake by the elderly in order to reduce the health problems of this population, and encourage the control of diet and medicines, especially for seniors who require greater care.[17]

Nurses, not only in primary care but in all environments, must understand the specific changes of aging, acquiring professional skills to deal with the diversity of situations presented by the use of polypharmacy. Thus, they will be able to stimulate the judicious and cautious use of drugs, the correct use regarding dosage, type and intervals, and advising elderly and caregivers that following the correct therapy is a major contributor to the maintenance of the quality of life of the elderly.

The use of the nursing process, emphasizing the step of nursing diagnoses, is

of fundamental importance for the development of nursing actions / prescriptions in order to minimize and even remediate the demands of this population. It is noteworthy that the use of ICNP® has contributed to the documentation and systematic communication of nursing care in the care to elderly in the community.

In this context, nurses seek a way to advance and spread their knowledge guided by theoretical and scientific knowledge, as well as by social demands. Therefore, in primary care clinical practice, whose precepts are the development activities for the promotion, maintenance and recovery of health, nurses' practice needs to turn to listening to the people's needs, extending their look to the family and the context in which users live, contemplating the real health needs of users.[18]

CONCLUSION

From the use of a diagnostic reasoning, it was possible to elaborate nursing diagnoses related to the use of oral medications by the elderly, and this contributed to the beginning of the establishment of care actions consistent with the real needs of this population.

The use of a standardized and international language proved to be a viable alternative for qualification of clinical nursing practice in different care settings, including in the context of Primary Health Care.

It was possible to see the challenges of polypharmacy, which need further discussion, since the population has been aging and the number of comorbidities per person has been increasing, as well as the rate of disabilities, frailties and dependence that are strongly associated with the use indiscriminate drugs.

Thus, the need for constant search of tools that indicate ways to improve the quality of nursing practice is a duty of every nurse involved with their practice, and nursing diagnoses provide a possible way for the development of clinical and critical reasoning focused on the elderly living in the community.

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