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## PREVALENT NURSING DIAGNOSES AND INTERVENTIONS IN THE HOSPITALIZED ELDER CARE

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*Objectives: to identify the prevalent nursing diagnoses (ND) in the hospitalized elder care; to compare the prevalent ND with the duration of hospital stay and with the prescribed cares for their respective diagnoses. Method: Transversal historical study carried through in Porto Alegre, RS, by analyzing patient records age e•60 years old, interned in clinical unities of a university hospital. Results: 1665 records were analyzed; the four prevalent NANDA nursing diagnoses – within 62 identified ones – were: Self-Care Deficit – Bathing/Hygiene, Imbalanced Nutrition – Less than Body Requirements, Risk for Infection and Ineffective Breathing Patterns, varying from 14 to 17 days of hospital stay. The main cares were: aiding bed bath, communicating diet acceptance, implementing routines of care in venous puncture and checking respiratory pattern. Conclusion: four prevalent ND were identified with the appropriate prescribed care. However, other care could have been established as a priority.*

*DESCRIPTORS: nursing, care; nursing process; nursing diagnosis; hospitalization; elder*

## DIAGNOSTICOS DE ENFERMERIA E INTERVENCIÓNES PREVALENTES EN EL CUIDADO AL ANCIANO HOSPITALIZADO

*Objetivos: identificar los diagnósticos de enfermería (DE) prevalentes en la práctica asistencial en ancianos hospitalizados; comparar estos DE con el tiempo de hospitalización y con los cuidados prescritos. Método: Estudio transversal histórico realizado en Porto Alegre, RS, mediante el análisis de historias clínicas de pacientes con edad = 60 años, internados en los servicios de un hospital universitario. Resultados: De 14 a 17 días de hospitalización, 1665 historias fueron analizadas; los cuatro DE de la NANDA prevalentes entre los 62 identificados fueron: Déficit en el Autocuidado-baño/higiene, Alteraciones en la Nutrición- menor a lo que el cuerpo humano requiere, Riesgo de Infección y Patrón Respiratorio Ineficaz. Los principales cuidados: ayuda en el baño en cama, informar la aceptación de la dieta, implementar rutinas de cuidados para la punción venosa y vigilar patrón respiratorio. Conclusión: Se identificaron cuatro DE prevalentes con sus respectivos cuidados prescritos. Sin embargo, otros cuidados podrían haber sido considerados prioritarios.*

*DESCRIPTORES: cuidados de enfermería; procesos de enfermería; diagnóstico de enfermería; hospitalización; anciano*

## DIAGNÓSTICOS DE ENFERMAGEM E INTERVENÇÕES PREVALENTES NO CUIDADO AO IDOSO HOSPITALIZADO

*Objetivos: identificar os diagnósticos de enfermagem (DE) prevalentes na prática assistencial de idosos hospitalizados; comparar os DE prevalentes com o tempo de hospitalização e com os cuidados prescritos para os respectivos diagnósticos. Método: Estudo transversal histórico realizado em Porto Alegre, RS, por meio da análise de prontuários de pacientes com idade e•60 anos, internados em unidades clínicas de um hospital universitário. Resultados: Analisou-se 1665 prontuários; os quatro DE da NANDA prevalentes dentre 62 identificados foram Déficit no Autocuidado – banho/higiene, Nutrição Desequilibrada: menos do que as necessidades corporais, Risco de Infecção e Padrão Respiratório Ineficaz, com 14 a 17 dias de hospitalização. Os principais cuidados foram auxiliar no banho de leito, comunicar aceitação da dieta, implementar rotinas de cuidado na punção venosa e vigiar padrão respiratório. Conclusão: Identificaram-se quatro DE prevalentes com os cuidados prescritos adequados aos mesmos. No entanto, outros cuidados poderiam ter sido estabelecidos prioritariamente.*

*DESCRITORES: cuidados de enfermagem; processos de enfermagem; diagnóstico de enfermagem; hospitalização; idoso*

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## INTRODUCTION

The elderly population has increased considerably worldwide both in absolute numbers and in average of years lived. Demographic transition has been slow and gradual in the industrialized countries in Europe and the US<sup>(1)</sup>. However, in Latin-American countries the accelerated drop in mortality since 1940 has contributed for the progressive increase in the number of elderly in these populations. In 2000 in Brazil for each group of 100 children aged 0-14 there were 18.3 elderly aged 65 or up, and the estimate for 2050 is for this ratio to be 100 to 105.6. Moreover, it has been verified in this aging process seen in the Brazilian population that in 2000 there were 1.8 million people aged 80 or up and that in 2050 this figure could reach 13.7 million<sup>(2)</sup>. Therefore, elderly people will live longer, will thus tend to develop chronic illnesses inherent of the aging process and will more likely need hospitalization. These chronic damages are defined as usually incurable conditions, which call for individual adaptive processes in order to prevent, minimize, and control long-term complications<sup>(3)</sup>. The rapidly growth of the aging population and consequent demand for good health care is increasing and imposing a greater burden on health care professionals, policy makers, governments and society as a whole. This issue makes urgent for health care providers, irrespective of their country, to understand the characteristics of their elderly communities, their strengths and their requirements. Nurses play an important role in the care for chronic patients. Innovations relating to the nursing practice and care for chronic patients are being implemented in many countries to produce new forms of health care<sup>(4)</sup>.

One approach is to allow specialist nurses to take over the follow-up of the patient in order to promote self-caring, to improve health related quality of life and decrease health care costs<sup>(5)</sup>.

Published in 2005 in the *Annals of Internal Medicine*, in which the programs of Self-management for and osteoarthritis were evaluated. Self-management programs for diabetes mellitus and hypertension probably produce clinically important benefits. In the osteoarthritis, the articulation (joint) malfunction and pain are not completely controlled.

Therefore, the chronic illness in the elderly patients is inserted in a context where there is room for implementation of self-care strategies.

In one analysis of nursing interventions – used mostly during an acute hospital stay and documented in an electronic database – the patients were divided into three groups older than 60 years: 1035 with heart failure; 567 with hip fracture procedures and 11756 recipients of the nursing interventions fall prevention. Each patient in the heart failure group received an average of 18 different interventions. In this group, 57 % were men, 94 % white, 58 % married, the mean age was 73 with a median length of stay of 6 days. Eleven interventions were used in a high rate and a high percentage of hospitalization: surveillance, in 95,3 % of the visits, routine care: adult (96,7%); cardiac care (88,4%), intravenous therapy (94,5%), fluid management (99,7%), pain management (61,5%), bed rest care (78%), diet staging (99,7%), oxygen therapy (49%), teaching (86,3%) and infection prevention in 73,2 % of the visits. This data was obtained in a large medical center from 33 general hospital inpatient units in the period of four years, and the study based on such data indicated that interventions differed from one patient to the other, pointing out that nursing care was individualized to daily patient need and was continued right up to the time of hospital discharge<sup>(6)</sup>.

Nursing Process currently called Nursing Assistance Systematization in Brazil is the methodology used by nurses to develop individualized and humanized care at the hospital where this study was conducted. This method is developed by a computerized prescription system that includes nursing diagnoses according to NANDA Taxonomy<sup>(7)</sup>, conceptual framework based on basic human need theory, as well as the checklist of care for each of the nursing diagnosis (ND)<sup>(8)</sup>.

In a hospital atmosphere where the Nursing Process has been used for a long time, one of the ways of knowing the needs of the elderly patients hospitalized for chronic illness is to identify ND in this group of patients, as it was done, for example, in this article published by our colleagues in 2006. The purpose was to identify the ND and their most frequent related factors or risk factors in patients admitted to an intensive care unit and to provide the best nursing interventions for the desired outcomes.

As we work in an Institution that uses Nursing Process and the issue of the elderly patients and chronic illness is growing in importance, the objectives of the present study were to identify the prevalent ND present in the nursing practice with hospitalized elderly; to compare prevalent ND with duration of hospital stay and to compare prescribed nursing care with these diagnoses.

## METHOD

The present was a cross-section historic study that was conducted in 2005; 1665 medical records of patients aged  $\geq 60$  were included; patients were hospitalized in clinical units of a university hospital in the south of Brazil. The computerized prescription system contemplates the ND according to NANDA Taxonomy in this institution; the prescribed nursing care does not follow a standardized classification. The following patients were excluded from the sample: patients who underwent surgical intervention; patients whose registers did not include ND, and those whose duration of hospitalization was less than 48 hours. By means of the computerized system of the Institution the registers of nursing diagnoses and prescriptions were obtained, as well as demographic and clinical variables. Statistical analyses were done using the statistics program SPSS version 12. Continuous variables are expressed as mean  $\pm$  standard deviation, and category variables, as percentages. The project was approved by the Research Ethics Committee of the Institution where the study was conducted.

## RESULTS

Mean age of hospitalized patients was  $72 \pm 8$  years; 54% of patients were female; 89.6% were white; 56.2% had incomplete middle school, and 91.3% were from the metropolitan region. The following were most frequent clinical causes of hospitalization: 28.4% circulatory diseases, 17.9% neoplasias diseases, and 16.6% respiratory diseases. These diseases are in agreement with the ND established, since they are a result of degenerative processes that are common in the aging process<sup>(9)</sup>. The remaining sample characteristics are shown in Table 1.

Table 1 - Sample characteristics

Total of hospitalizations	N = 1665
Age (years)*	72 $\pm$ 8
Female	890 (54)
White	1492 (89.6)
School attainment	
Middle School: incomplete	935 (56.2)
Middle School: complete	241 (14.5)
Origin	
Metropolitan region	1520 (91.3)
Countryside	145 (8.7)
Main CIDs at hospital discharge	
CID I (circulatory diseases)	473 (28.4)
CID C (neoplasias)	298 (17.9)
CID J (respiratory diseases)	276 (16.6)

\* Mean and standard deviation; category variables n (%)

Table 2 shows the four prevalent ND of the 62 ND prescribed. Median hospitalization in days were: Self-Care Deficit – Bathing/Hygiene, 14 days; Imbalanced Nutrition – Less than Body Requirements, 14 days; Risk for Infection, 17 days, and Ineffective Breathing Patterns, 15 days. On average, each patient presented 4 ND.

Table 2 - Nursing Diagnoses and duration of hospitalization

Prevalent Nursing Diagnoses	N (%)	Days of hospitalization
Self-Care Deficit - Bathing/Hygiene	793 (11.7)	14 (8-25)
Imbalanced Nutrition - Less than Body Requirements	640 (9.4)	14 (8-25)
Risk for Infection	585 (8.6)	17 (9-30)
Ineffective Breathing Patterns	535 (7.9)	15 (8-27)

Median and percentiles; category variables n (%)

For the four prevalent ND, 197 different cares were prescribed. As to the ND – Self-Care Deficit – Bathing/Hygiene, the most frequent etiology was the disease evolution (27%), and the predominant care was *bed bath* (28.7%). As to the ND – Imbalanced Nutrition – Less than Body Requirements, the etiology was inappetence (29%), and the main care was *communicating diet acceptance* (34%). In the ND – Risk for Infection, the etiology present in 96.4% of the records was invasive procedure (96.4%), and the most frequent care was *implementing routines of care in venous puncture* (100%). As to the ND – Ineffective Breathing Patterns, the main etiology was airway infectious processes (24.3%), and care was *checking respiratory pattern* (46.3%).

## DISCUSSION

The present study detected the following prevalent ND: *Self-Care Deficit – Bathing/Hygiene, Imbalanced Nutrition – Less than Body Requirements, Risk for Infection*, and *Ineffective Breathing Patterns*. The most frequent reasons for hospitalization of the sample population were circulatory diseases, followed by neoplasias and respiratory diseases. These diseases are in agreement with the ND established, since they are a result of degenerative processes that are common in the aging process<sup>(9)</sup>. Another study developed in the same city to identify the health and disease condition of elderly people from a Family Health Program presents similar characteristics, which are: more women, low education level, presence of non-transmissible chronic diseases, among others<sup>(10)</sup>.

For the patients with ND – Self-Care Deficit – Bathing/Hygiene, there were 10 etiologies and the most frequent etiology was the Evolution of the Disease (27%). For this ND, 43 nursing care were prescribed and the predominant one was *bed bath* (28.7%). Other nursing cares were *Help or perform oral hygiene, Perform hair hygiene and Implement routine for shaving*.

A recent study aiming to assess the meaning of comfort from the standpoint of patients and caregivers showed that cares related to body hygiene and daily cares are the focus of comfort for hospitalized patients. These cares are not essential for the survival rate related to the evolution of the disease; however, they are important for the well-being of patients<sup>(11)</sup>.

The ND – Imbalanced Nutrition – Less than Body Requirements, has 11 etiologies and the most frequent one was inappetence (29%). For this ND 46 nursing cares were prescribed, and the main care was *communicate diet acceptance* (34%). Other nursing care were *monitor hypoglycemia signs and symptoms, implement procedures to verify capillary glycemia, stimulate food and liquid ingestion*.

Nutrition is an essential factor for the promotion, maintenance and/or recovery of health at all stages of life and, with aging, people may lose their interest in preparing and eating meals<sup>(12)</sup>. At the study hospital, this care is prescribed to be implemented by the nursing staff aiming at daily nutritional control. As a result of aging, physiological changes may affect various organs and systems resulting in malfunctioning<sup>(13)</sup>. Nutritional disorders in

the elderly may result in a broad range of diseases that may aggravate the nutritional status of these individuals. Thus, the need of an adequate nutrition in all stages of life is a determining factor for quality of life and is reflected in the old-age<sup>(13)</sup>. The identification of inadequate nutritional patterns during hospitalization is essential so that the health staff, especially nurses, start early follow-up and monitor nutritional strategies in these most vulnerable patients.

The ND – Risk for Infection had 6 etiologies. The etiology present in 96.4% of the records was Invasive Procedure. For this ND 54 nursing cares were prescribed and the most frequent one was *implementing care routines in venous puncture* (100%). Other nursing cares prescribed were implement care routines in vesical probe, implement routine for change/manipulate wound dressing of central venous, observe probe hole and catheter insertion places and make wound dressing.

During hospitalization, the elderly have a greater chance of developing hospital infections, and the most common sites are infections of the urinary tract, pneumonia, and sepsis<sup>(14-15)</sup>.

The ND – Ineffective Breathing Patterns presented 9 etiologies and the main one was airway infectious processes (24.3%). For this ND 54 nursing cares were prescribed and the prevalent one was *monitoring oxygen saturation* (46.3%). Other nursing cares prescribed were *keep the head of the bed elevated, implement routines with oxygen therapy/nasal catheter, monitor respiratory pattern and communicate respiratory pattern alterations*.

The respiratory tract may suffer anatomical and functional changes at different degrees that are inherent to the elderly and that should not be assessed in isolation. There are several factors that may affect pulmonary function and that often worsen the aging process, such as smoking and other environmental factors, besides of course previous pulmonary diseases<sup>(16)</sup>. The weather in the region where the present study was conducted is humid and has great variability, what may also predispose respiratory infections in the elderly.

## CONCLUSION

From the 1665 records of elderly patients analyzed in the hospital, the four prevalent ND amongst the prescribed 62 were: Self-Care Deficit – Bathing/Hygiene, Imbalanced Nutrition – Less than

Body Requirements, Risk for Infection, and Ineffective Breathing Patterns. The hospitalization time average ranged from 14 to 17 days for the prevalent ND.

The main prescribed nursing care were: aiding bed bath, communicating diet acceptance, implementing routines of care in venous puncture and checking respiratory pattern that are appropriate to the identified ND. However other cares could have been labeled priority.

The prevalence of these ND and the most frequent clinic situations characterize the inherent limitations of this age group and the risks to which the aged are exposed to tend to aggravate with hospitalization time. The individualized plan of nursing care should be devised with the objective of reducing or minimizing the risk factors, aiming at excellent results and independence within the limits imposed by age.

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