

FACTORS ASSOCIATED WITH HOSPITAL ADMISSION IN PATIENTS WITH CHRONIC DISEASES

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ABSTRACT

The aim is to describe the profile of adult and elderly patients hospitalized for aggravation of NCD. A descriptive and cross sectional study with quantitative approach, carried out in the months of January and March 2012 with 60 adults and elderly inpatients in the general medical male and female wards of a University Hospital in the State of Rio de Janeiro. Two instruments were used for data collection: one for the socio-demographic variables and other to evaluate the habits of life considered inappropriate to the NCD. The data were organized into tables with absolute and relative frequency distribution. Most of the participants were male (58.33%). The prevailing age group ranges from 61 to 70 years (25%). As for the anthropometric profile and habits of life considered inappropriate, 66.7% were overweight, 50% were drinking, 78.3% smokers and 26.7% sedentary. Hospitalization constitutes an important moment so the nurse may provide information on chronic disease control, since they present multifactorial etiology and improper living habits will be subject to modification.

Keywords: Hospitalization. Chronic Disease. Nursing. Health Education. Risk Factors.

INTRODUCTION

The social and economic transformations of recent decades and its consequent changes in lifestyles of contemporary societies, such as changes in eating habits, increased physical inactivity and stress, and increasing the population's life expectancy, contributed to the increased incidence of Chronic Non-communicable diseases (NCDs) such as cardiovascular, cancer, diabetes, obesity and respiratory⁽¹⁾.

The NCD have gradual onset with long duration, in general, with multiple causes and whose treatment involves life-style changes, in a continuous treatment process, which usually does not cure. These diseases are the leading causes of death and disability worldwide, accounting for 72% of deaths in Brazil^(2,3).

Therefore, the NCDs is a public health

problem, causing numerous social costs and the health institutions. However, there are ways to avoid them, mainly through prevention and health promotion actions, beyond the control of risk factors or behaviors that minimize their complications through appropriate treatments and controls.

Thus, some risk factors for NCDs, such as overweight, high blood pressure, smoking, physical inactivity, inadequate consumption of fruits and vegetables, excessive alcohol consumption and hyperglycemia are responsible for 45.9% of the global diseases^(4,5).

Most NCDs when not properly treated, can become decompensated, bringing serious problems to the individual, which interfere with their daily life and hinder to carry out their usual activities, reflecting therefore the autonomy, independence and functional capacity⁽⁶⁾.

Thus, the presence of some NCDs makes the individual more vulnerable, becoming a decisive

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factor to becoming ill. The way of living, the lifestyle and the choices of each person can indicate risk factors and vulnerability to diseases and the potential risk for hospitalization process. This study aims to describe the profile of adult and elderly patients hospitalized for worsening of NCDs.

MATERIALS AND METHODS

It is a study of descriptive cross-sectional design with a quantitative approach, performed in a university hospital located in the state of Rio de Janeiro, whose scenario involved the wards of male and female medical clinic, with 23 beds each, a total of 46 beds.

The research was conducted between January and March 2012, the selection was through a consecutive sample, the participants were 60 patients admitted to the wards based on the following inclusion criteria: be 18 years old or more; have some NCDs medical diagnosis in medical records. Exclusion criteria were: patients whose medical records were not available in the data collection period. However, there was no loss during the collection period.

To collect data, two instruments were used: the first to identify the sociodemographic variables and the second to assess past health history along with the evaluation of personal lifestyle habits, demographics and lifestyles considered inadequate to NCDs.

Data collection was carried out in three stages: at first all patients admitted with NCDs in the wards were screened; in the second stage the records were selected to complete the form, and finally, the selected patients were asked to sign the Consent Form. The form has been completed on the ward by the researcher according to document analysis in medical records and answers reported by hospitalized patients.

In tabulating the data, Microsoft Office Excel 2007® was used. The study variables were divided into: 1) biological data: gender and age; 2) Anthropometric nature data: weight, height and body mass index (BMI); 3) health history data: a history of overweight and obesity occurrences; changes in the lipid profile and elevated blood pressure; 4) data on family history: in first and second degree relatives; 5) habits related to lifestyle: eating pattern, physical

activity and smoking practice. After the analysis, the findings were presented in tables with distribution of absolute and relative frequencies being used position and dispersion measures.

Biological data (gender and age) and changes in lipid profile (cholesterol and triglyceride) were extracted from patient records. Anthropometric data were collected by the researcher, with barefoot patients and with the pajama of the institution. Height and weight in a mechanical scale available in the ward were measured. BMI was calculated from measurements of weight and height ($BMI = \text{weight (kg)} / \text{height in m}^2$), considering the following parameters: underweight ($<18.5 \text{ kg/m}^2$); normal ($18.5\text{-}24.9 \text{ kg/m}^2$); overweight ($25\text{-}29.9 \text{ kg/m}^2$); and obesity ($\geq 30 \text{ kg/m}^2$)⁽⁷⁾.

The blood pressure measurement was performed on the upper limbs with the patient seated. Sphygmomanometer and stethoscope were used. The classification of blood pressure values are in accordance with the provisions of the Ministry of Health⁽⁸⁾ for patients over 18 years old: Normal (systolic BP <130 and diastolic BP <85); Limiting (systolic BP between 130-139 or diastolic BP between 85-89); Stage 1 hypertension (systolic BP between 140-159 or diastolic BP between 90-99); Stage 2 hypertension (systolic 160-179 or diastolic BP 100-109); and Stage 3 hypertension (systolic BP ≥ 180 or diastolic BP ≥ 110).

Concerning the physical activity, individuals who did not perform at least 30 minutes daily for at least five days a week, from mild or moderate activity; or 20 minutes a day of vigorous activity three or more days of the week were regarded as sedentary⁽⁹⁾.

As to smoking, patients were classified into three categories: smokers, those who smoked at least one cigarette a day; non-smokers, patients who reported never having smoked; and ex-smokers, those who had stopped smoking for at least a month.

As for the alcohol consumption, the patients were classified into three categories: those who consume alcoholic beverages for at least one dose per week; those who do not drink and those who reported never having consumed alcoholic beverages; and those who have stopped consuming alcoholic beverages for at least a month.

As this research involves human beings, directly or indirectly, in whole or in part, including the management of information, it becomes extremely important to ensure and respect the rights of the study subjects, according to Resolution 466/12 of the National Council of Health of the Ministry of Health. Thus, the Protocol was submitted to the Research Ethics Committee of the University

Hospital, and was approved in October 2011 under the CAAE: 0277.0.258.000-11.

RESULTS AND DISCUSSION

Demographic characteristics

Table 1 refers to demographic characteristics of the research participants.

Table 1. Distribution of hospitalized adults and elderly people with NCDs, according to demographic characteristics. Niterói (RJ), 2012.

VARIABLES	n	%	Average \pm SD
Gender (n= 60)			
Men	35	58.33	
Women	25	41.67	
Age distribution (n= 60)			53.20 \pm 16.34
18 + 30 years old	09	15.00	
31 + 40 years old	03	5.00	
41 + 50 years old	10	16.70	
51 + 60 years old	14	23.30	
61 + 70 years old	15	25.00	
71 + 80 years old	07	11.70	
>80 years old	02	3.30	

Source: the authors (2012).

Regarding demographic data of patients hospitalized with NCDs, there were mostly male, with predominant age group of 61-70 years old.

The prevalence of male patients is supported by research showing that hospital admissions are higher in men with NCDs mainly by the difficulty in performing the monitoring of their health status, generating a predisposition to acute events and, consequently, more hospitalizations^(10,11).

In one study⁽¹²⁾ investigating how to give health promotion practices for adult men, it was identified that the adoption of preventive practices can be enhanced by support networks, favoring the socialization of men's needs, since men tend to slow seeking for care and only look for it when they cannot cope alone with their symptoms.

In this sense, entering the man in health actions at the level of primary care and implement interventions that aim to meet their specific needs becomes a challenge. However, it is necessary to these individuals be seen by health professionals as human beings with needs that must be included in these actions to promote health and/or disease prevention⁽¹³⁾.

Hospitalization characteristics

Table 2 refers to the characteristics of hospitalization, about its length, readmission to the hospital in 12 months and the interval between admissions.

The average permanence at the hospital was 21.33 \pm 19.05 days, and 33 (55%) patients remained eight to thirty days in hospital. Regarding the previous hospitalization in the 12 months preceding the interview, 42 (70%) of the patients reported hospital readmission. As the interval between the last two hospitalizations, the average was 135.83 \pm 85.12 days, with the lower range of 32 days and the longest of 287 days. Among the patients, 17 (40.48%) had hospital readmission of 31-90 days.

The presence of NCDs added to multiple comorbidities are related to increased hospital stay. Additionally, readmitted patients are those who remain hospitalized over time, and such readmission is associated with complications of the original disease. Studies in elderly hospitalized with NCDs showed average of 15.2 \pm 10.1 days and 19.9 \pm 18.8 days of hospitalization^(14,15).

Table 2. Distribution of hospitalized adults and elderly people, according to hospitalization characteristics, HUAP. Niterói (RJ), 2012.

VARIABLES	n	%	AVERAGE \pm SD
Permanence at the hospital (n=60)			21.33 \pm 19.05
1 \pm 7 days	16	26.70	
8 \pm 30 days	33	55.00	
\geq 31 days	11	18.30	
Readmission before 12 months (n = 60)			
Yes	42	70,00	
No	18	30,00	
Interval between the last two hospitalizations (n=42)			135.83 \pm 85.12
1 \pm 30 days	0	0	
31 \pm 90 days	17	40.48	
91 \pm 180 days	10	23.9	
181 \pm 270 days	10	23.9	
271 \pm 365 days	05	11.9	

Source: the authors (2012).

Characteristics of hospitalized patients with NCDs

Table 3 refers to the risk factors related to NCDs and being potential factors for a possible hospital readmission.

In this study, it was found that most individuals presented blood pressure (BP), cholesterol and triglycerides within normal parameters. This can be explained by the fact that hospitalized patients use medications to control these variables. Studies assessing the value of these variables during hospitalization were not found. However, blood pressure and dyslipidemia are cited in investigations that assess the population exposure profile of risk factors for NCDs^(16,17).

Obesity and overweight are important risk factors for the onset of chronic diseases such as hypertension, diabetes mellitus type 2, cardiovascular disease and some types of cancer⁽¹⁸⁾. In this study, most patients were classified as overweight according to body mass index (BMI). These results were also found in other studies that evaluated the risk factors related to NCDs^(16,17). Other research⁽⁵⁾ identified the relationship between the limits of the BP and its relationship with BMI, indicating that individuals with higher value of BP had the highest measures for BMI.

The association of sedentary with a greater intake of high calorie foods rich in saturated fats and sugars, are a major cause of obesity

and overweight⁽¹⁸⁾. This fact can be justified by the industrialization and urbanization process, where there is a greater supply of food and a decrease in energy expenditure, leading to changes in the behavioral patterns of society.

In this study, there were reports on the prevalence of alcohol consumption (50%) and among those who said they were ex-alcoholic (16.7%) they were justified by the state of health and the worsening of chronic disease.

With regard to alcohol consumption, studies indicate that its moderate use is a protective factor for mortality due to its effect in reducing cardiovascular disease. However, its abuse has negative consequences for the health and quality of life by increasing morbidities that cause death or functional limitations such as cirrhosis, certain types of cancer, cerebrovascular accident (stroke), mental disorders, among others^(17,19).

As for smoking, the results showed that 26.7% of people are smokers and 28.3% stopped smoking, being a risk factor related to increased morbidity and mortality from coronary heart disease, hypertension, stroke, bronchitis, emphysema and cancer. In addition, smoking along with physical inactivity are significant predictors for the high cost to the health system. In an investigation into the factors associated with risk for NCDs in Brazilian adults, it was identified that 20.8% of respondents said they consume cigarettes⁽¹⁷⁾.

Table 3. Risk factors of hospitalized adults and elderly people with NCDs. Niterói (RJ), 2012.

VARIABLES	N	%
Blood pressure (n= 60)		
Normal	31	51.60
Limiting	07	11.80
High	22	36.60
BMI (n= 60)		
Under weight (<18,5)	02	3.33
Normal weight (18,5-24,9)	15	25.00
Overweight (25-29,9)	40	66.70
Obesity (30-34,9)	03	5.00
Alcohol consumption (n= 60)		
Yes	30	50.00
No	20	33.30
Stopped	10	16.70
Smoking (n= 60)		
Yes	16	26.70
No	27	45.00
Stopped	17	28.30
Physical activity (n= 60)		
Yes	13	21.70
No	47	78.30
Cholesterol (n= 60)		
Normal (<200)	37	61.70
Out of range (≥ 200)	23	38.30
Triglycerides (n= 60)		
Normal (<150)	31	51.70
Out of range (≥ 150)	29	48.30

Source: the authors (2012).

Therefore, it is necessary during hospitalization nurses perform interventions aimed at hospital discharge planning, health education and guidance aimed at self-care and care of individuals in hospitals, since the choices of each person can trigger factors risk for the disease process and consequently to hospitalization.

The Ministry of Health⁽⁷⁾ proposes that health interventions extend their results, taking as object the problems and health needs, besides the determinants so that the organization of care and care involved at the same time, the actions and services operating on the effects of illness and those aimed beyond the walls of the health unit, focus on the living conditions and promote the expansion of healthier life choices by individuals.

Interventions by nurses are directed to hospitalized patients and family who actively

participates in the health-disease process. Thus,, it is essential that nurses develop strategies to changes in lifestyle and behavior, skills for self-care and care, education for family members and staff, leading health education and promoting quality of life to individuals with NCDs and people involved in caring for them.

CONCLUSION

This study aimed to describe the profile of adult and elderly patients hospitalized for worsening of NCDs. Therefore, the identified non-modifiable risk factors, such as gender, age, and the ones modifiable, which are amenable to intervention or control, such as overweight by BMI, physical inactivity, inadequate dietary pattern, cholesterol levels and high triglycerides, smoking and drinking, and the BP.

Concerning the risk factors of patients with NCD, it was found that the BP, cholesterol levels and triglyceride levels were within the normal parameters. However, it was evidenced overweight patients, sedentary and alcohol use.

The presence of risk factors related to NCDs can make these individuals more vulnerable to illnesses and prone to hospitalization interfering with functional capacity, autonomy and independence.

Therefore, it becomes necessary the development of a chronic management program at the institution to identify the target population

through appropriate epidemiological parameters, as well as providing strategies that contribute to the accession of these individuals to the program through actions health education both for patients and for their families.

It is noteworthy that this issue be widely discussed and debated in academic and professional training, which included investments in continuing education programs to update and improve the training of professionals dealing with patients with NCDs in the daily life of health institutions.

FATORES ASSOCIADOS À INTERNAÇÃO HOSPITALAR EM CLIENTES COM DOENÇAS CRÔNICAS

RESUMO

Objetivou-se descrever o perfil de clientes adultos e idosos hospitalizados por agravamento de uma DCNT. Estudo descritivo e transversal, com abordagem quantitativa, realizado nos meses de janeiro e março de 2012 com 60 adultos e idosos nas enfermarias de clínica médica feminina e masculina de um Hospital Universitário, no Estado do Rio de Janeiro. Para a coleta de dados, foram utilizados dois instrumentos: um para as variáveis sociodemográficas e outro para avaliar os hábitos de vida considerados inadequados para as DCNT. Os dados foram organizados em tabelas com distribuição de frequências absolutas e relativas. A maioria dos participantes era do sexo masculino (58,33%). A faixa etária predominante era de 61 a 70 anos (25%). Quanto ao perfil antropométrico e os hábitos de vida considerados inadequados, 66,7% estavam com sobrepeso, 50% eram etilistas, 26,7% tabagistas e 78,3% sedentários. A hospitalização constitui um momento importante para o enfermeiro fornecer informações sobre o controle da doença crônica, pois elas apresentam etiologia multifatorial.

Palavras-chave: Hospitalização. Doença Crônica. Enfermagem. Educação em Saúde. Fatores de Risco.

FACTORES ASOCIADOS A LA HOSPITALIZACIÓN POR CLIENTES COM ENFERMEDADES CRÓNICAS

RESUMEN

El objetivo es describir el perfil de clientes adultos y ancianos hospitalizados por empeoramiento de una ECNT. Estudio descriptivo transversal, con abordaje cuantitativo, realizado en los meses de enero y marzo de 2012 con 60 adultos y ancianos en las enfermerías de la clínica médica de mujeres y hombres de un hospital universitario en el estado de Río de Janeiro. Para recoger los datos se utilizaron dos instrumentos: Una de las variables sociodemográficas y otra para evaluar los hábitos de vida considerado inadecuado para la ECNT. Los datos fueron organizados en tablas con la distribución de frecuencias absoluta y relativa. La mayoría de los participantes eran masculina (58,33%). El grupo de edad predominante en 61-70 (25%). Como para el perfil antropométrico y hábitos de vida considerado inadecuado, 66.7% tenían sobrepeso, 50% bebían, 78.3% fumadores y 26.7% sedentarios. La hospitalización es un importante para las enfermeras que proporcionan información sobre la gestión del tiempo de una enfermedad crónica debido a que presentan una etiología multifactorial y hábitos de vida incorrectos estarán sujetos a modificación.

Palabras clave: Hospitalización. Enfermedad Crónica. Enfermería. Educación en Salud. Factores de Riesgo.

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