RESEARCH

SITUATIONAL DIAGNOSIS: SOCIODEMOGRAPHIC AND CLINICAL PROFILE OF PATIENTS ADMITTED TO A CLINICAL MEDICINE UNIT

DIAGNÓSTICO SITUACIONAL: PERFIL SOCIODEMOGRÁFICO E CLÍNICO DE PACIENTES INTERNADOS EM UNIDADE DE CLÍNICA MÉDICA

DIAGNÓSTICO SITUACIONAL: PERFIL SOCIODEMOGRÁFICO Y CLÍNICO DE PACIENTES INGRESADOS EN UNIDADES DE CLÍNICA MÉDICA

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ABSTRACT

The Situational Diagnosis of Nursing and Health (DSES) is a method for the identification and analysis of a reality and its needs. It istherefore useful to design organization/reorganization proposals. The characterization of the population served by a particular health service is one of the available ways of making a DSES. This is a quantitative, descriptive and cross-sectional study. We aimed to identify the characteristics of patients admitted to the functional unit of Clinical Medicine of a university hospital in Belo Horizonte, MG, Brazil. The study sample was composed of 442 adult patients, who were 18 years old or older, and had been admitted to one of the 67 beds of the functional units until 12 pm of the day before data collection. Data collection took place from May through November 2012. There was a predominance of females (N = 243), aged between 46 and 60 years (N = 140), of white ethnicity (N = 213), eutrophic (N = 179) and nonsmokers (N = 225). In this study, the most prescribed continuous-use drugs were anticoagulants (N = 261). As for baseline diseases, there was a predominance of neurological and mental diseases (N = 81). We also analyzed the incidence of PU, since it is an indicator of quality of care. The incidence of PUs was 5.66% and the sacral region (33.33%) was the most affected area. Identifying the characteristics of patients admitted to Clinical Medicine units is crucial for the provision of qualified care.

Keywords: Nursing; Clinical Medicine; Inpatients; Diagnosis of Health Situation.

RESUMO

O Diagnóstico Situacional de Enfermagem e de Saúde (DSES) é um método de identificação e análise de uma realidade, que visa à elaboração de propostas de organização. A caracterização da população atendida por determinado serviço de saúde consiste em uma das importantes etapas do DSES. Trata-se de estudo quantitativo, descritivo, transversal, que teve como objetivo caracterizar os pacientes internados em Unidades de Clínica Médica de um Hospital Universitário de Belo Horizonte, MG, Brasil. A amostra do estudo foi constituída de 442 pacientes com 18 anos ou mais, internados em um dos 67 leitos das Unidades de Clínica Médica até as 24h do dia anterior à coleta de dados, no período de maio a novembro de 2012. Verificou-se predomínio do sexo feminino (N = 243), com faixa etária entre 46 e 60 anos (N =140), a maioria de cor de pele branca (N = 213), de eutróficos (N = 179) e não fumantes (N = 225). Em relação aos medicamentos em uso contínuo pelos pacientes, a classe mais prescrita foi a dos anticoagulantes (N = 261). Em relação às doenças de base, houve predomínio das doenças neurológicas e mentais (N = 81). Além dessas variáveis, foi analisada a incidência de úlcera por pressão, visto que corresponde a um indicador da qualidade do cuidado. Essa incidência foi de 5,66%, sendo mais frequente na região sacral. Observa-se a importância de conhecer as características dos pacientes internados nas unidades, uma vez que a identificação destes é imprescindível para a realização do cuidado mais qualificado.

Palavras-chave: *Enfermagem; Medicina Clínica; Pacientes Internados; Diagnóstico da Situação de Saúde.*

RESUMEN

El Diagnostico Situacional de Enfermeria y de Salud (DSES) es un método de diagnostico de identificación y analisis de una realidad, que tiene como objetivo la elaboración de propuestas de organización. La caracterización de la población atendida por un servicio de salud en particular es una de las etapas importantes de los DSES. Se trata de un estudio cuantitativo, descriptivo, transversal, que tenía como objetivo caracterizar a los pacientes internados en Unidades de Clínica Médica del Hospital Universitario de Belo Horizonte, MG, Brasil. La muestra consistió en 442 pacientes de 18 años o más, ingresados en una de las 67 camas de dichas unidades hasta las 24 del día antes de la recogida de datos, entre mayo y noviembre de 2012. Predominó el sexo femenino (N = 243), con edad entre 46 y 60 años (N = 140), la mayoría blancos (N = 213), de eutróficos (N = 179) y no fumadores

(N = 225). En cuanto a los medicamentos de uso continuo, los más prescritos fueron anticoagulantes (N = 261). De las enfermedades subyacentes predominaron las neurológicas y mentales (N = 81). Esa incidencia fue del 5,66%, siendo más frecuente en la región sacra. Se observa la importancia de conocer las características de los pacientes ingresados en las unidades porque su identificación es esencial para brindar atención más especializada.
***Palabras clave**: Enfermería; Medicina Clínica; Pacientes Internados; Diagnóstico de la Situación de Salud.*

INTRODUCTION

The Situational Diagnosis of Nursing and Health (DSES) is a method for the identification and analysis of a reality and its needs. It istherefore useful to design organization/reorganization proposals and it is used in the first phase of the planning process.[1] The characterization of the population served by a particular health service is one of the available ways of making a DSES. The DSES make it possible to analyze the data, set priorities and perform strategic planning.[1]

This procedure is essential in order to provide a more qualified care. The identification of the patient's profile enables the planning and implementation of health actions to meet the needs of a specific population.[2]

Previous studies on the profile of inpatients of functional units of intensive therapy showed that the characterization of this population allowed the planning and creation of assessment tools and the development of a nursing care methodology. Moreover, it assists with decisions about unit admissions and discharges, contributes to a more rational use of beds and to the avoidance of exposure of patients to unnecessary risks.[2,3] Therefore, a patient´s length of stay in the hospital is an important data, because the quality of the care provided may be hampered by long hospitalization periods. Prolonged hospitalization is associated with nosocomial infection, malnutrition, development of pressure ulcers and many other factors that affect patient health outcomes.[4,5]

Characterizing the user population of a particular health service is relevant in order to set intervention priorities and organize the provision of care for these patients. However, recent studies describing the characteristics of patients admitted to specific services (such as Clinical Medicine units) are scarce.

Clinical medicine is a medical specialty that is particularly concerned with the assessment, diagnoses, and proposal of treatments for diseases of the various systems of the body that do not require surgical intervention. In these hospitalization units, clinicians perform clinical and physical examinations, as well as laboratory and special tests, in order to make a diagnosis and prescribe a specific treatment.[6,7]

According to research by Rufino *et al.*[5] the average length of stay of 48 adult patients in clinical units of a university hospital in João Pessoa-PB was 20.9 days. These authors found an association between longer hospital stays and increased age, low education and perception of worsening pain.

In this context, it is important to characterize the population served by these services, since this is one of the steps in making a situational diagnosis. Establishing the profile of the unit and of the assisted population makes it possible to identify priorities and optimize time management. This increases efficiency and effectiveness of actions and improves therefore the quality of care.

This study aimed at identifying the characteristics of patients admitted to the functional unit of Clinical Medicine of a public, general university hospital.

METHODS

This study was conducted at a public, general university hospital in the city of Belo Horizonte, MG, Brazil. The hospital has a capacity of 511 beds and provides care, teaching, research and extension activities. It is integrated into the Unified Health System (SUS) and supplies services exclusively to the population covered by this system. About 40% of the population served by the hospital are from the upstate.[6]

In this university hospital, the provision of care is carried out by means of functional units. The Functional Unit of Clinical Medicine (UFCM) is divided into four sectors, namely: the seventh floor, north and east wards; the third floor, south ward; and the Intensive Care Unit. Two of these sectors, where the research was conducted, have a total of 67 beds for adult patients in either a critical or semi-critical state.

The study population consisted of all adult patients admitted to the 67 beds of the functional unit - east ward and south ward. The convenience sample was composed of all adult patients who had been hospitalized until 12 pm of the day before data collection, from May to November 2012. This is an open cohort study. The variables analyzed were: sex, age, skin color, body mass index (BMI), smoking habit, duration of hospitalization, length of stay in the UFCM, baseline disease and drugs in continuous-use drugs.

The age variable was divided into the following age groups: 18-30 years; 31-45 years; 46-60 years; 61-75 years; 76-90 years; over 90 years.[7,8] Regarding skin color, we used the classification recommended by the Brazilian Geography and Statistics Institute (IBGE), namely: white; black; brown; yellow; and red (native/indigenous).[9] Perceived skin color was self-reported. According to recommendations of the World Health Or-

ganization (WHO), the BMI was calculated by dividing weight in kilograms (kg) by the square of height in meters (m). These data were used to evaluate the anthropometric and nutritional profile of hospitalized patients[10] With regard to smoking habits, patients were classified as smokers, ex-smokers or nonsmokers. The length of stay in the hospital and in the UFCM were classified into types: less than five days; five to 10 days; and more than 10 days.[8] Baseline diseases were classified into 14 categories, according to the systems.[8] Continuous-use drugs were categorized according to their classes. Drugs less often prescribed, such as laxatives and vitamins, were grouped under "others".

Data collection was carried out during five months by three of the authors, with the participation of a nurse (a collaborator who worked in the institution). Thus, it was also possible to calculate the incidence of pressure ulcers (PU) in hospitalized patients.

All researchers received in situ training on the data collection instrument. We used a structured questionnaire containing questions related to the study variables. All the required information was collected from the patients' medical records and obtained from their physical examination, which was performed by the researchers.

The data were processed and analyzed using the STATA Statistical Software, version 12.0 (Stata Corp., Texas, USA). Mean and standard deviation were calculated for continuous variables with normal distributions. Distribution of proportions was calculated for discrete variables. The incidence of pressure ulcers was calculated by dividing the number of new events occurring in the analyzed period by the cohort size. Pressure ulcers were defined as localized injuries to the skin or underlying tissue, usually occurring over a bony prominence, as a result of pressure, or pressure in combination with shear and/or friction.[11]

The study project was approved by the Ethics Committee of the Federal University of Minas Gerais (Opinion No. 46116/2012). All patients or their legal guardians were informed about the objectives of the study and invited to participate in its realization. After agreeing to volunteer, the participants or their legal guardians signed an Informed Consent Form (ICF).

RESULTS

Characterization of patients in the study sample was based on the following variables: sex, age, skin color, body mass index, smoking habit, total length of hospitalization and total length of stay in the UFCM (days). Data are presented in Table 1. Moreover, we analyzed: continuous-use drugs, baseline diseases and incidence of pressure ulcers. We must, however, stress that the total number of patients may not be the same for all studied variables due to different response rates.

Of the 442 patients in the sample, 54.98% were female. Regarding the age groups: 11.54% were 18-30 years; 19.00% were 31-45 years; the majority, 31.67% were 46-60 years; 24.89% were 61-75 years; 11.54% were 76-90; and 1.36% were over 90 years. Mean age of participants was 55 years (SD = 17.78); minimum age was 18 years and maximum age was 97 years. The predominant skin color was white (48.85%). 27.29%, 23.62% and 0.23% of patients were self-reported as brown, black, and red, respectively. No patients were self-reported as having yellow skin color. Of the 365 patients whose BMI was calculated, 12.05% were underweight; 49.04% had normal weight; 25.48% were overweight; and 13.42% were obese. Mean BMI was 24.30 kg/m² (SD = 5.29). With regard to smoking habits, 51.96% of patients reported having never smoked; 35.33% were former smokers, and 12.70% were smokers.

Table 1 - Characterization of the patients of the sample Belo Horizonte, 2012

Variables	n	%	Mean	SD
Sex				
Male	199	45,02		
Female	243	54,98		
Total	**442**	**100,00**		
Age group (years)				
18 – 30	51	11,54		
31 – 45	84	19,00		
46 – 60	140	31,67		
61 – 75	110	24,89		
76 – 90	51	11,54		
> 90	6	1,36		
Total	**442**	**100,00**	**55,00**	**17,78**
Skin color				
White	213	48,85		
Brown	119	27,29		
Black	103	23,62		
Red	1	0,23		
Yellow	–	–		
Total	**436**	**100,00**		
BMI (kg/m²)				
< 18.5	44	12,05		
18.5 – 24.9	179	49,04		
25.0 – 29.9	93	25,48		
> 30.0	49	13,42		
Total	**365**	**100,00**	**24,30**	**5,29**
Smoking habit				
No	225	51,96		
Yes	55	12,70		
Ex-smokers	153	35,33		
Total	**433**	**100,00**		

Continues...

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Table 1 - Characterization of the patients of the sample Belo Horizonte, 2012

Variables	n	%	Mean	SD
Total hospitalization time (days)				
> 5	5	1,15		
5 – 10	86	19,72		
> 10	345	79,13		
Total	436	100,00	25,74	21,83
Total hospitalization time (days)				
> 5	50	11,47		
5 – 10	138	31,65		
> 10	248	56,88		
Total	436	100,00	16,77	13,98

Legend: n – sample size, SD – standard deviation.

On the total duration of hospitalization, 1.2% of patients were hospitalized for less than five days; 19.7% between five and 10 days; and 79.1% were hospitalized for more than 10 days. Mean hospital stay was 25.74 days (SD = 21.83), with a minimum length of stay of three days and a maximum of 148 days. As for the length of stay in the UFCM, 11.5% stayed for less than five days; 31.6% between five and 10 days; and 56.9% for more than 10 days. The mean length of stay in the UFCM was 16.77 days (SD = 13.98), with a minimum length of two days and a maximum of 86 days.

Regarding the continuous-use drugs, the most prescribed drug classes were: anticoagulants (59.05%); antihypertensives (54.98%) and gastric mucosa protectors (54.07%). These data are shown in Figure 1. Other drugs mentioned were laxatives and cathartics, prokinetics and antiemetics, vitamins and hormones, corresponding to 57.01%.

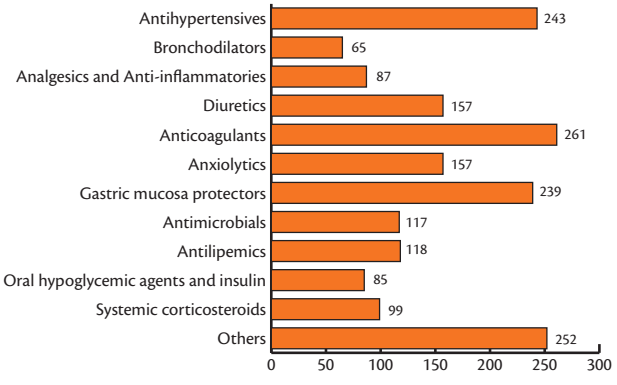

Figure 1 - Continuous-use drugs identified among inpatients of the UFCM. Belo Horizonte, 2012.

As for the baseline diseases, they were categorized into 14 distinct classes, namely: infectious; renal and urinary; neurological and mental; hematologic; gastrointestinal; cardiac; musculoskeletal; reproductive tract; vascular; pulmonary; rheumatological; endocrinological; otolaryngological and ophthalmological; and dermatological (Figure 2).

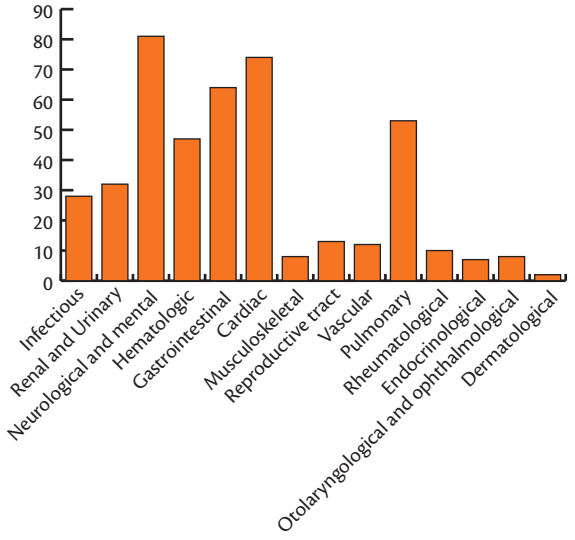

Figure 2 - Baseline disease of inpatients of the UFCM. Belo Horizonte, 2012.

There was a predominance of neurological and mental (18.41%), cardiac (16.82%) and gastrointestinal (14.55%) diseases. 44.44% of baseline diseases categorized as neurological and mental diseases were strokes.

We found a 5.66% incidence of PU in hospitalized adult patients in the study period. The sacral region was the most affected area (33.33% of cases), followed by the posterior trunk (22.22%), as shown in Table 2.

Table 2 - Distribution of PU in patients who developed them during hospitalization. Belo Horizonte, 2012

Distribution of PU	N	%
Calcaneus	N	%
Lateral and medial condyle of the fibula	1	3,70
Buttocks	1	3,70
Knee	2	7,40
Lateral malleolus	2	7,40
Medial malleolus	1	3,70
Occipital	1	3,70
Sacral	9	33,33
Middle third of the lateral leg	1	3,70
Posterior trunk	6	22,22
Total	27	100,00

DISCUSSION AND RESULTS

54.9% of the 442 patients admitted and assessed during this period were females. These data are corroborated by other studies on the profile of adult inpatients of a medical clinic. The authors of these studies found similar results, i.e., a predominance of females (72.00%).[2,3] Two other studies, however, found a predominance of male patients (58.00% and 59.10%).[5,12] A study has shown that women seek health services more often. However, unlike our study, despite the little difference, demand for hospital care is higher among men than among women (20.0 and 19.5%, respectively).[13]

Regarding the age of participants, most patients were 46-60 years old. Mean age was 55 years. These data are in agreement with those found in other studies, which reported ages of 50 and 55 years, respectively. The increasing age of the population is reflected in the profile of hospitalized patients.[14,15] Technological advances of recent times help extend life and contribute to this trend.[16]

As for the BMI variable, the sample description was hampered due to the absence of this information in the medical records and because of the difficulty to perform the measurement in bedridden patients. Thus, we could measure the BMI of 365 patients. Of these, 49.04% were eutrophic. Although there was a predominance of eutrophic patients, we should mention that 44 patients (12.05%) were undernourished and 49 (13.42%) were obese. 38.90% of patients were overweight. Patients' nutritional status influences their clinical outcome. A study has found a prevalence estimate of undernourished patients between 20 and 50%[5], which is much higher than the one recorded in this study. Some authors have been recently alerting about the increase in obesity in the general population. A study conducted at a university hospital in Porto Alegre-RS with a sample of 460 patients found that 47.00% of subjects were overweight, while the others were eutrophic (33.00%) or undernourished (20.00%).[17] Other studies conducted at hospitals in Porto Alegre and Campinas-SP found a prevalence of of overweight/obesity of 62.50 and 47.80%, respectively.[18,19]

The evaluation of the anthropometric profile of patients can be used to identify the nutritional status of hospitalized patients. It also makes it possible to implement an adequate nutritional therapy, which results in the reduction of complications and, consequently, shorter hospitalization times.[18,19]

In this study, the mean length of stay of patients in the university hospital was 25.74 ± 21.83 days, and 16.77 ± 13.98 days in the UFCM. Other studies have also shown an increasing number of patients with prolonged hospitalization. The length of stay was shorter among patients with higher income and more education. A study has shown that the quality of health care is hampered by longer lengths of hospital stay and is associated with the patient's characteristics and provenance.[5] Prolonged hospital stays are also a risk factor for the development of other comorbidities, such as pressure ulcers. Another study found a significant association between the occurrence of PUs and increased hospital stays.[4]

Among the patients evaluated in the study period, the incidence of PUs was 5.66%. The sacral region (33.33%) and the posterior trunk (22.22%) were the most affected areas. The incidence of PU varies with the geographic location where the study is conducted. Rogenski (2011) found a 19.40% rate of occurrence of PU in inpatients of a medical unit of a university hospital in São Paulo. In this aforementioned study, the most frequent locations of PUs were the calcaneal (39.5%) and sacral (27.0%) regions.[8]

With regard to smoking, there was a predominance of non-smokers (51.96%). This finding is similar to the data found in a study conducted with 235 patients admitted to a university hospital in Southern Brazil. The authors found a higher prevalence of persons who had never smoked (48.50%).[20]A study conducted in the Hospital das Clínicas in Botucatu revealed that, 43% of the186 patients interviewed reported never having smoked.[21] Even though there was a predominance of non-smokers in our study, we must highlight that 12.70 % of participants reported beind smokers. Some authors consider hospitalization as an "window of opportunity" to address and initiate the treatment of smoking, which is a risk factor for various diseases, such as coronary heart disease.[2,20,21]

A study found that the most used classes of drugs among inpatients of a clinical medicine unit were analgesics, proton pump inhibitors and antihypertensives.[5] In this study, the most prescribed classes were anticoagulants, antihypertensives and protectors of the gastric mucosa. Most patients were making continuous use of more than one drug. This is part of the Brazilian reality. Another study showed that the most frequently used therapeutic classes of drugs were: digestive tract and metabolism (45.3%), followed by the nervous system (22.5%) and cardiovascular (16.6%). Most patients were also making use of more than one drug.[22]

In this study, we observed a higher prevalence of neurological/mental diseases. We also found a significant prevalence of diseases of cardiac and gastrointestinal origin. According to the Ministry of Health (2010), there is a higher proportion of hospitalizations associated with diseases of the circulatory tract, followed by respiratory and digestive tract diseases.[16,23] A study found a prevalence of diseases related to the circulatory system (25,6%), neoplasms (22.2%), and diseases of the blood and blood-forming organs and certain immune disorders (16.7%).[22]

Finally, we recognize as a limitation of this study the fact that the study population was not representative of the country's population. This may limit the validity of results. The data found in this study are representative when comparing the same sector in other hospitals or when comparing this hospital sector with other sectors of the same hospital. However, this is one

of a few recent studies that characterize patients hospitalized in Clinical Medicine units of a developing country. Thus, it certainly represents an advance towards a better understanding of the national profile of patients admitted to this particular service.

FINAL CONSIDERATIONS

The identification of the characteristics of patients admitted to Clinical Medicine units may contribute to the implementation of programs that meet users' needs, and assist in the training and adequacy of the available human resources and in the planning of health care service delivery.

This paper may therefore assist in the adequacy of human and material resources, as well as in the elaboration of a Situational Diagnosis of Clinical Medicine units .

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