CHARACTERIZATION OF PATIENTS WITH RED RISK CLASSIFICATION IN A PHILANTHROPIC HOSPITAL UNIT

Caracterização de pacientes com classificação de risco vermelha em uma unidade hospitalar filantrópica

Caracterización de pacientes con clasificación de riesgo roja en una unidad hospitalaria filantrópica

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How to cite this article:

ABSTRACT

Objective: To characterize the epidemiological and clinical profile of patients with red risk classification (priority zero) in a philanthropic hospital. **Method:** A quantitative documentary study carried out in a philanthropic hospital with 109 charts of patients with red risk classification who entered the emergency room during eight months. The descriptive statistical analysis was performed. **Results:** It was verified that 33.9% of the sample was aged between 61 and 80 years; 67.7% were women; 61.4% did not smoke; 62.4% were non-alcoholic; 42.2% were hypertensive; 16.5% presented lowering of the sensorium. It was noticed that 37.6% of the medical records did not have the diagnostic hypothesis registered and that 56.9% were discharged from hospital. **Conclusion:** It was found that the majority of the patients with red risk classification were elderly, hypertensive, had a full second degree, did not smoke or were an alcoholic. The main complaint reported was lowering of the sensorium. The main diagnostic hypothesis was stroke. Most of the patients evolved to hospital discharge.
Descriptors: User Embracement; Nursing; Emergency Treatment.

RESUMO

Objetivo: Caracterizar o perfil epidemiológico e clínico dos pacientes com classificação de risco vermelha (prioridade zero) em um hospital filantrópico. **Método:** Estudo documental, quantitativo, realizado em um hospital filantrópico com 109 prontuários de pacientes com classificação de risco vermelha que adentraram a emergência ao longo de oito meses. Realizou-se a análise estatística descritiva. **Resultados:** Verificou-se que 33,9% da amostra tinha idade entre 61 e 80 anos; 67,7% eram mulheres; 61,4% não fumavam; 62,4% não eram etilistas; 42,2% eram hipertensos; 16,5% apresentou rebaixamento do sensório. Percebeu-se que 37,6% dos prontuários não tinham a hipótese diagnóstica registrada e que 56,9% tiveram alta hospitalar. **Conclusão:** Constatou-se que a maioria dos pacientes com classificação de risco vermelha era idosa, hipertensa, tinha 2º grau completo, não fumava ou era etilista. A principal queixa referida foi rebaixamento do sensório. A principal hipótese diagnóstica foi acidente vascular encefálico. A maioria dos pacientes evoluiu para alta hospitalar.
Descritores: Acolhimento; Enfermagem; Tratamento de Emergência.

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RESUMEN

Objetivo: Caracterizar el perfil epidemiológico y clínico de los pacientes con clasificación de riesgo rojo (prioridad cero) en un hospital filantrópico. **Método:** Estudio documental, cuantitativo, realizado en un hospital filantrópico con 109 prontuarios de pacientes con clasificación de riesgo roja que adentraron la emergencia a lo largo de ocho meses. Se realizó el análisis estad ístico descriptivo. **Resultados:** Se verificó que el 33,9% de la muestra tenía edad entre 61 y 80 años; El 67,7% eran mujeres; 61,4% no fumaban; El 62,4% no eran etilistas; El 42,2% eran hipertensos; El 16,5% presentó descenso del sensorio. Se percibió que el 37,6% de los prontuarios no tenían la hipótesis diagnóstica registrada y que el 56,9% tuvo alta hospitalaria. **Conclusión:** Se constató que la mayoría de los pacientes con clasificación de riesgo rojo era anciana, hipertensa, tenía 2º grado completo, no fumaba o era etilista. La principal queja referida fue descenso del sensorio. La principal hipótesis diagnóstica fue accidente vascular encefálico. La mayoría de los pacientes evolucionaron a alta hospitalaria. **Descriptores:** Acogimiento; Enfermería; Tratamiento de Urgencia.

INTRODUCTION

Health emergency care consists of a service that operates 24 hours a day and is sought by patients who need a quick solution to their health conditions. It receives a clientele that can present from health problems capable of being solved in an outpatient setting to severe cases, which put the individual's survival at risk.[1]

Considering this background, and also due to the increase in health emergency demand and overcrowding,[2] many users were not addressed in a resolutive manner, which could cause them irreversible harm.

Given this framework, the risk classification emerged as a strategy capable of organizing the queues of users and guaranteeing quick and humanized assistance, since the order of medical care is determined by the severity of the patient's clinical condition. Therefore, individuals with imminent risk of death are treated as a priority, reducing the death rates and sequelae resulting from the disease presented.[3]

This tool consists of at least four colors, namely: red, yellow, green, and blue. Users are categorized according to the degree of risk of death, and those who receive a red bracelet need immediate care (high-priority, in other words, before the others); yellow bracelet needs to be assisted as soon as possible; green bracelets have non-urgent priority and blue bracelets have low priority to attendance.[4]

Due to its importance in the agility of the service and the prognosis of users, the risk classification must be made by a professional with a higher level and who has been previously trained. This professional, who is most often the nurse, must be quick in his decision making and in the appropriate definition of the risk classification color for each patient, which must be based on his clinical judgment, on the complaints referred by the user and in the protocol pre-established by the institution.[5]

It is believed that to provide holistic care capable of meeting the individuals' needs, the multiprofessional team must know and outline their profile according their daily habits, comorbidities, complaints, diagnostic hypotheses, and possible behaviors.

Bearing in mind the aforesaid, this study meant to characterize the epidemiological and clinical profile of patients belonging to red risk classification (high-priority) at a philanthropic hospital.

METHODS

It is a documentary and retrospective study with a quantitative approach, which was performed at a philanthropic hospital over the period from August to September 2015 in the *Fortaleza* city, *Ceará* State.

The study included users seen in the clinical emergency who had undergone the User embracement and Risk Classification and whose risk classification was red. Exclusion criteria were adopted, as follows: patients seen in the obstetric emergency and/or incomplete information in medical records.

Over eight months (between January and August 2015) 109 patients were treated who had a red risk rating (high-priority) and who met the established selection criteria. Thus, the sample for this study was composed of all those medical records (n=109).

It should be noted that the analysis of these eight months was chosen because it was the period between the implementation of the risk classification in this service and the actual collection of data.

Data collection took place through a structured form, which was composed of data referring to the user's sociodemographic profile, as well as information about the color of the risk classification, signs and symptoms that the patient presented during the service. Data were tabulated and analyzed using the Software Package for the Social Sciences program (Version 20.0), using descriptive statistics.

This study respected the formal requirements contained in national and international regulatory standards for research involving human beings. The research was approved by the Research Ethics Committee from the *Universidade da Integração Internacional da Lusofonia Afro-Brasileira (UNILAB)*, according to the legal opinion 1.140.097.

RESULTS

Concerning the sample characterization, it was observed that 37 (33.9%) of the study participants were aged between 61 and 80 years old with an average of 65.5 years old (standard deviation= ±20.7); 74 (67.9%) were female; 43 (39.4) were married and that in 68 (62.4%) the education item had not been registered.

Table 1 shows that 67 (61.4%) users were not smokers, 68 (62.4%) were not alcohol drinkers, 46 (42.2%) were hypertensive, 37 (34.0%) did not have diabetes mellitus, 60 (55.0%) did not have any cancer or cardiovascular disease.

Table 1 - Patients' characterization regarding their daily habits and comorbidities. *Fortaleza* city, *Ceará* State, Brazil, 2015.

Comorbidities	n(%)
Smoker	
Yes	4(3.7)
No	67(61.4)
Not Informed	38(34.9)
Alcohol drinker	
Yes	3(2.7)
No	68(62.4)
Not Informed	38(34.9)
Systemic arterial hypertension	
Yes	46(42.2)
No	28(25.7)
Not Informed	35(32.1)
Diabetes mellitus	
Yes	36(33.0)
No	37(34.0)
Not Informed	36(33.0)
Cancer	
Yes	10(9.2)
No	60(55.0)
Not Informed	39(35.8)
Cardiovascular disease	
Yes	12(11.0)
No	60(55.0)
Not Informed	37(34.0)

According to **Table 2**, it was clear that the main complaints presented by users were, as follows: lower levels of consciousness 18 (16.0%), dyspnea 15 (13.8%), and paralysis/paresthesia 12 (13.8%). Nevertheless, in 17 (15.6%) medical records there was no record of the diagnostic hypothesis, however, among those filled out, stroke was the main pathology under suspicion (15.6%).

Table 2 – Distribution of the main complaints and diagnostic hypotheses. *Fortaleza* city, *Ceará* State, Brazil, 2015.

Variable	n(%)
Main complaint	
Lower levels of consciousness	18(16.5)
Dyspnea	15(13.8)
Paralysis/paresthesia	12(11.0)
Fever	10(9.2)
Speech disorders	10(9.2)
Motor deficit	9(8.3)
Thoracic pain	9(8.3)
Discomfort	9(8.3)
Loss of consciousness	9(8.3)
Fall	8(7.3)
Medicine intake	7(7.3)
Cough	7(7.3)
Convulsion	6(5.5)
Headache	5(4.6)

Variable	n(%)
Diagnostic hypothesis	
Not filled in	41(37.6)
Others	22(20.2)
Stroke	17(15.6)
Pneumonia	7(6.4)
Acute myocardial infarction	6(5.5)
Exogenous intoxication	6(5.5)
Hypertensive emergency	6(5.5)
Cardiorespiratory arrest	4(3.7)

In regard to the therapeutic approaches, it was noticed that the main approaches adopted by the multiprofessional team while providing health services were as follows: venous hydration 61 (56.0%), use of analgesic 42 (38.5%), non-invasive oxygen therapy 38 (34.0%), antihypertensive drugs 30 (27.5%), insulin 'nine' (8.3%), delayed bladder catheter 'eight' (7.4%), orotracheal intubation 'seven' (6.4%), sedation 'seven' (6.4 %), anticonvulsants 'six' (5.5%), nasogastric tube 'six' (5.5%) and mechanical ventilation 'five' (4.6%).

It is noteworthy that both concerning the symptomology variable and therapeutic approaches, the same patient could present more than one record in these two assessed items, so that in both the sum exceeds the sample size in its totality.

As shown in **Table 3**, most medical records had a record of the patients' vital signs, with the main measured vital sign being blood pressure 87 (79.8%), while temperature was the least frequently measured parameter 59 (54 ,1%).

Table 3 - Distribution of the records on the vital signs' medical records and oxygen saturation at the time of risk classification. *Fortaleza* city, *Ceará* State, Brazil, 2015.

Vital signs	n(%)
Blood pressure	
Yes	87(79.8)
No	22(20.2)
Respiratory frequency	
Yes	69(6.3)
No	40(36.7)
Heart rate	
Yes	79(72.4)
No	30(27.6)
Temperature	
Yes	59(54.1)
No	50(45.9)
Oxygen saturation	
Yes	30(27.5)
No	70(72.5)

Concerning the destination and progress of patients with a red risk rating, it was possible to notice that 62 (56.9%) patients were able to be discharged from the hospital, while 25 (22.9%) were admitted to the hospital ward, 11 (10.1%) were admitted to the intensive care unit, seven (6.4%) were transferred to another hospital, three (2.8%) died and one (0.9%) fled from the hospital.

DISCUSSION

Age is an important factor during medical care, since it can determine the most appropriate therapeutic approaches, since older ages are at greater risk of severity. It is possible to note that the life expectancy of the population has been increasing over the years. Nonetheless, this fact may be related to the increase in the number of elderly people seen in emergency units.[6]

A national study showed that the most prevalent age group in an emergency room was 60 to 70 years old, corroborating the present study. However, in a hospital that serves trauma victims, the largest portion of the sample was within the age group from 36 to 65 years old.[1] This fact shows that this determinant may change according to the type of emergency presented by the individual.

Most of the participants in this study were women, 67.9% corroborating a descriptive study that characterized the care provided by users of an emergency department in the *Paraná* State, according to the Risk Rating User Embracement Guidelines,[7] which showed that 275 (55.0%) of the users who sought care at an emergency service were female. Nevertheless, research that sought to outline the profile of users of patients seen in the red room of a University Hospital showed that 66.0% of the assisted patients were male.[8] This divergence may be related to the type of care performed with greater prevalence in each institution, since the first receives mainly patients with clinical pathologies, while the second serves trauma victims.

Due to inadequate knowledge, it is difficult to understand and perform activities that prevent pathologies and promote adherence to treatments.[9] Therefore, the level of education is an important predictor during the provision of health care to users, as this directs and supports the development of health education strategies aimed at guiding and solving patients' doubts about the health-disease process.

Nonetheless, it was evident that most of the medical records did not contain this information. However, it is believed that this finding may be related to the degree of severity of the individual's clinic when he arrives at the emergency so that professionals prioritize filling in essential data or because they are taken to the health unit by people who are unaware of this information, since the patient himself is often unable to answer.

Life habits are another determinant capable of directly influencing the health of individuals, since behaviors such as smoking, alcoholism, physical inactivity can predispose the development of chronic non-communicable diseases.[10]

Nevertheless, it was noticed that only 3.7% and 2.7% of the sample in this study reported being a smoker or alcohol drinker, respectively. These data are shown to be inferior to that found by an investigation carried out at a hospital from the *Sergipe* State, in which 5.0% of the participants reported having a smoking habit, while 12.5% stated that they consume alcoholic drinks daily.[11]

Chronic non-communicable diseases are among the main responsible for causing the death of people in the world. Among the pathologies that make up this category are diseases that affect the cardiovascular system, systemic arterial hypertension, diabetes mellitus, cancer and chronic respiratory diseases.[12]

Herein, it was noticed that the pathologies that most affected the participants in this study were systemic arterial hypertension 46 (42.2%) and diabetes mellitus 36 (33.0%). A study proves that the main clinical causes of care in the Mobile Emergency Care Service in the elderly were hyperglycemia and hypertensive spike,[13] both clinical conditions caused by the previously mentioned pathologies.

The main complaints presented by the studied sample consisted of lower levels of consciousness, dyspnea, paralysis/paresthesia, differing from research carried out in the emergency of a regional hospital, which investigated the main reasons that led the users to seek the emergency service and revealed that the most prevalent symptoms among users were: trauma and injuries 111 (21.1%); cardiorespiratory alterations 92 (17.4%) and gastrointestinal alterations 86 (16.3%). It should be noted that the aforementioned study covered patients who had a severe and non-urgent clinical status.[14]

Stroke was the most recurrent diagnostic hypothesis in the medical records, which consists of a change in the vascular scope that causes the interruption of cerebral blood flow, which may occur due to ischemia or hemorrhage and cause the death of the individual if not treated in time.[15]

In addition to the risk of death, stroke can cause psychological, physical, motor, cognitive sequelae to surviving patients and their families. Research shows that, among the symptoms presented by people diagnosed with this pathology, the following stand out: cognitive impairment, hemiparesis, dyslalia, and aphonia,[15] similar to the complaints presented by the participants of the present study.

Nonetheless, research carried out with elderly people in the emergency department of a general hospital showed that the main diagnoses were cardiovascular disease, chronic renal failure and changes in the digestive system.[16]

The most common therapeutic approach in the present study was venous hydration. On the other hand, a study of adult users treated at a non-hospital emergency unit revealed that the main medical procedures were intravenous medication (22.4%), infusion therapy with 0.9% saline solution (12.8%) and oral medication (10.1%).[17]

Measuring vital signs is a primordial and relevant practice, especially in patients classified as red (high-priority), since they provide important and crucial information addressing the individual's clinical condition, functioning of the circulatory, respiratory, neuronal and endocrine systems.[18]

Considering the above-mentioned, the relevance of this measurement for the early detection of changes that may put the lives of patients seen at health services in general and the need to raise awareness of professionals on this topic becomes relevant. However, it was noticed in the present study that sometimes this information was not included in the patients' medical records or even incomplete.

Corroborating this finding, research carried out in an emergency room at a University Hospital showed that the failure to measure vital signs, as well as the incorrect or

incomplete recording of this data, consisted of the main incidents addressed on the complication recording book of the institution.[19]

It was noticed that even though it was classified as a high-priority (red), most patients were discharged 62 (56.0%), followed by those who were hospitalized 36 (33.0%) and 3 (2.8%) who died. Corroborating this finding, a research carried out in the clinical emergency of a teaching hospital found that 5,444 (55.8%) of the assisted users were discharged while the minority 7 (0.7%) progressed to death.[20]

Such results showed that even though the patients belonged to the severe risk classification, most of them had their health issues resolved immediately without the need for hospitalization or without a morbid outcome.

The study presented as a limitation the underreporting of information about the sociodemographic and clinical profile of patients in the medical records, which made data collection difficult.

Bearing in mind the aforementioned, it is essential to prepare the professionals responsible for opening the medical record, risk classification, and medical care regarding the relevance of filling in the necessary data for the characterization, assessment of the patient's clinical condition progress, as well as promoting holistic, humanized, and individualized care.

Through this study, it was possible to identify the profile of care for critically ill patients in the emergency room and the deficiencies that are still present when registering information about such patients. Hence, this research can contribute to the improvement of the care performed by health professionals at this level of care, to the development of new care and attention techniques, and to encourage the planning of studies addressing specific actions aiming to enhance the care provided to such patients.

CONCLUSIONS

Herein, it was found that most patients belonging to red risk classification (high-priority) were elderly people, had completed high school, had no habit of either drinking or smoking, and were hypertensive. With regard to the healthcare service, it was noticed that the main complaint addressed was the lower levels of consciousness. Stroke was the most prevalent diagnostic hypothesis. Most patients progressed to hospital discharge.

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Disclosure: The authors claim to have no conflict of interest.