Analysis of the demand of patients with Chronic Non-Communicable Diseases in an Emergency Care Unit

ABSTRACT
This study aims to analyze and characterize the demand of patients with chronic non-communicable disease using the UPA, the most common DCNTs were selected among the population according to the Ministry of Health. This is a descriptive study, of a quantitative nature, carried out in a UPA, in the city of Piracicaba, in the months of May and June 2018. In the data collection, a total of 25,748 Outpatient Care Files were analyzed, of this total 582 files were selected that presented a complaint related to an DCNT. There was a predominance of females and the age group between 50 to 54 years old, the risk classification with more frequency was the green color. The main DCNTs presented were low back pain (46.2%; n=244) and asthma (21.6%; n=114) and the complaints present at the time of screening were low back pain (54.4%; n=287) and shortness of breath (20.1%; n=106), most patients at this UPA are discharged after medication or discharged with a prescription and the study shows that there is a recurrence of users in the unit, which can be from 1 to 5 times in the same month (90.9%; n=468). It is concluded that there was little quantity of care related to DCNTs, the most common complaints may be related to the climate of the year. However, some forms did not show agreement between their information and the recurrences indicate that the user did not seek primary care, which should be the main gateway to the health system.

DESCRIPTORS: Emergency Care Unit; Demand for Patients; Chronic Noncommunicable Disease.

RESUMEN
El objetivo de este estudio es analizar y caracterizar la demanda de pacientes con enfermedades crónicas no transmisibles utilizando la UPA, según el Ministerio de Salud, se seleccionaron las ENT más comunes entre la población. Se trata de un estudio descriptivo, de naturaleza cuantitativa, realizado en una UPA, en la ciudad de Piracicaba, en los meses de mayo y junio de 2018. En la recopilación de datos, se analizaron un total de 25,748 archivos de atención ambulatoria, de este total se seleccionaron 582 archivos que presentaron una queja relacionada con una ENT. Predominió el sexo femenino y el grupo de edad entre 50 y 54 años, la clasificación de riesgo con mayor frecuencia fue el color verde. Las principales ENT presentadas fueron dolor lumbar (46,2%; n=244) y asma (21,6%; n=114) y las quejas presentes en el momento del examen fueron dolor lumbar (54,4%; n=287) y dificultad para respirar (20,1%; n=106), la mayoría de los pacientes en este UPA son dados de alta después de la medicación o dados de alta con receta médica y el estudio muestra que hay una recurrencia de usuarios en la unidad, que puede ser de 1 a 5 veces en el mismo mes (90,9%; n=468). Se concluye que hubo poca cantidad de atención relacionada con las ENT, las quejas más comunes pueden estar relacionadas con el clima del año. Sin embargo, algunos formularios no mostraron acuerdo entre su información y las recurrencias indican que el usuario no buscó atención primaria, que debería ser la principal puerta de entrada al sistema de salud.

DESCRIPTORES: Unidad de Atención de Emergencia; Demanda de Pacientes; Enfermedad Crónica No Transmisible.

RESUMO
Este estudo tem como objetivo analisar e caracterizar a demanda de pacientes com doença crônica não transmissível que utilizam a UPA, foram selecionadas as DCNT mais comuns entre a população de acordo com o Ministério da Saúde. Trata-se de um estudo descritivo, de natureza quantitativa, realizado em uma UPA, no município de Piracicaba, nos meses de maio e junho de 2018. Na coleta de dados foram analisados um total de 25.748 Fichas de Atendimento Ambulatorial, deste total foram selecionadas 582 fichas que apresentavam uma queixa relacionada a uma DCNT. Observou-se uma predominância do sexo feminino e a faixa etária entre 50 a 54 anos, a classificação de risco com maior frequência foi a da cor verde. As principais DCNT apresentadas foram lombalgia (46,2%; n=244) e asma (21,6%; n=114) e as queixas presentes no momento da triagem foram dor lombar (54,4%; n=287) e falta de ar (20,1%; n=106), os pacientes desta UPA em sua maioria recebem alta após medicação ou alta com receita médica e o estudo evidencia que há uma recidiva de usuários na unidade, o qual pode ser de 1 a 5 vezes no mesmo mês (90,9%; n=468). Conclui-se que houve pouco quantitativo de atendimentos relacionados a DCNT, as queixas mais comuns podem estar relacionadas ao clima do ano. Porém, algumas fichas não apresentavam concordância entre suas informações e as recidivas indicam que o usuário não procurou a atenção básica, que deve ser a principal porta de entrada para o sistema de saúde.

DESCRIPTORES: Unidade de Pronto Atendimento; Demanda de Pacientes; Doença Crônica Não Transmissível.

ABSTRACT
This study aims to analyze and characterize the demand of patients with chronic non-communicable disease using the UPA, the most common DCNTs were selected among the population according to the Ministry of Health. This is a descriptive study, of a quantitative nature, carried out in a UPA, in the city of Piracicaba, in the months of May and June 2018. In the data collection, a total of 25,748 Outpatient Care Files were analyzed, of this total 582 files were selected that presented a complaint related to an DCNT. There was a predominance of females and the age group between 50 to 54 years old, the risk classification with more frequency was the green color. The main DCNTs presented were low back pain (46.2%; n=244) and asthma (21.6%; n=114) and the complaints present at the time of screening were low back pain (54.4%; n=287) and shortness of breath (20.1%; n=106), most patients at this UPA are discharged after medication or discharged with a prescription and the study shows that there is a recurrence of users in the unit, which can be from 1 to 5 times in the same month (90.9%; n=468). It is concluded that there was little quantity of care related to DCNTs, the most common complaints may be related to the climate of the year. However, some forms did not show agreement between their information and the recurrences indicate that the user did not seek primary care, which should be the main gateway to the health system.

DESCRIPTORS: Emergency Care Unit; Demand for Patients; Chronic Noncommunicable Disease.
INTRODUCTION

Health care networks (RAS) are organizational arrangements for health actions and services, integrated through technical, logistical and management support systems, in which we have several interconnected services for better health care(1).

The first contact of the individual in health services must be through primary care (AB), which is considered the main gateway and communication center of the RAS (2).

Due to the structuring of urgency care units (UPA), such as 24-hour operation, service every day of the week and diverse types of assistance, it is clear that the population enters the health system through it (3).

Studies (4,5) show that the demands for care in the UPAs are made by the user in search of a solution to their health problem, regardless of severity. This is understood by the difficulty of access to AB services and ease in emergency care, so it is necessary that several services work together to qualify the assistance.

Users use emergency services indiscriminately, presenting non-urgent complaints and with care focused on the current problem, believe that immediate care with doctors and resources of hard technologies, such as laboratory and radiological exams, in addition to nursing procedures, can solve the case (6).

In England, a risk assessment was created in 1997, known as Manchester, which serves to classify the health risks of the individual, considering the severity of the complaint and determining the time needed to attend. This system was implemented in Brazil in 2002, when the Ministry of Health filed Ordinance No. 2,048 for all hospitals to use a risk rating for any care provided in emergency care units (7).

The subdivision of this classification corresponds to red or level 1 (emergent), where the service must be immediate; orange or level 2 (very urgent), when the wait can be up to 10 minutes; yellow or level 3 (urgent), up to 60 minutes; green or level 4 (not very urgent), with up to 120 minutes; and blue or level 5 (not urgent), which can reach 240 minutes of waiting (8).

There is a need for interaction between primary care with urgent and emergency units so that basic health units (UBS) and family health units (USF) carry out strategies to welcome users who present cases of acute or chronic conditions and are compatible with their operating limitations (9).

These cases are mostly related to chronic diseases, which may have a gradual onset with long and indefinite duration. Over time, some chronic cases may change, with periods of worsening of symptoms, which may be associated with population aging and the patient’s lifestyle (3).

To combat the increase and worsening of DCNT cases, the Strategic Action Plan for Confronting Chronic Non-Communicable Diseases in Brazil (2011-2022) was created. It highlights indicators, goals, programs, projects and activities that reduce the worsening of these diseases. In this plan, the Ministry of Health highlights four groups of DCNTs, which are: circulatory diseases, cancer, chronic respiratory diseases and diabetes. Among these groups are diseases that have a higher incidence in the population such as systemic
arterial hypertension (HAS), stroke (stroke), cancer, asthma, chronic obstructive pulmonary disease (DPOC), diabetes mellitus I and II(12).

The age groups that most present DCNTs are adult and/or elderly, being more prevalent in women than in men(10).

Low back pain is not listed in the Strategic Action Plan for Coping with DCNTs by the Ministry of Health, but it is a chronic disease with great prevalence in the population. Low back pain can be characterized by pain in the lower back, lumbar-sacral or sacroiliac spine. The cause of the pain may be related to musculoskeletal changes caused by poor posture, overweight, physical inactivity, among others, and usually affects individuals in the age group of 45 years(11).

Therefore, this study aims to analyze the demand for care of patients with DCNT who seek the emergency care unit. The objective was to analyze the service provided to users with DCNT's in an Emergency Care Unit. As specific objectives: to characterize which DCNT is more frequent in the unit; identify the number of patients with DCNT who seek the unit; analyze the demand for sex and age group; identify the number of patients with more than one DCNT and characterize the outcome of the care provided.

**METHODOLOGY**

This is a descriptive, quantitative study, which is objective, centered on raw data and values, using mathematics to describe its results(12). Quantitative research is based on logical and deductive reasoning that has measurable data with numerical validation of a given hypothesis, using structured and statistical data(13,14).

It was carried out in an Emergency Care Unit in the city of Piracicaba-SP. The subjects of the research were care records of users who sought the emergency care unit with a report of chronic non-communicable diseases, such as: diabetes mellitus, systemic arterial hypertension, stroke, asthma, DCNT and low back pain. The survey was conducted during the months of May and June 2018.

The inclusion criteria established were care records of users who fit the established age range of 18 years old or older (adult and elderly), who had complaints of DCNTs and who were not in a state at the time of service heightened. The exclusion criteria were forms that did not demonstrate that the user had a DCNT, that were outside the recommended age range and that demonstrated that the situation is aggravated. Cancer was excluded from the collection, since it is performed in specialized units.

Data collection was carried out through the evaluation of the Outpatient Care Forms (FAA) generated at the UPA, which identified reports of DCNTs and which were within the inclusion standards already mentioned.

The survey was carried out using a spreadsheet prepared in Microsoft Excel with relevant information for analyzing the complaints presented, such as: number of visits within 30 days, age, sex, municipality, history of the complaint, medications in use, vital signs, main complaint and outcome of care.

After collecting the data at the FAAs, the information was transcribed in a spreadsheet made in Microsoft Excel, and the simple frequency, average and percentage were calculated. The data were presented in the form of graphs and tables, related to the current literature on the topic presented.

Ethical aspects were respected in line with Resolution of the National Health Council No. 466, of 2012, which regulates the conduct of research in human beings. The research protocol was subjected to ethical review and monitoring by the Research Ethics Committee (CEP) of the Methodist University of Piracicaba (UNIMEP) obtained approval through protocol No. 237.5290 and the institution's authorization was requested, in which the data were collected. Only after approval by the Committee and authorization from the institution, the researcher started collecting data.

Collections were made through patient care records, so there was no contact with them in person or by other means, such as telephone or digital. The work kept the identification of the subject in research anonymous and absolute secrecy, without containing personal data. At work, there was no identification of the unit where the information was collected.

**RESULTS**

The municipality of Piracicaba has services subdivided into several units, which encompass different levels of health care, such as: Family Health Programs, Basic Health Units, Reference Center for Primary Care and Street Clinic. It also has specialized clinics, such as: Center for Adolescent Health Care, Center for Infectious Diseases, Dental Specialties Center, Specialized Center for Women’s Health, Reference Center for Occupational Health, Clinic for the Attention of Metabolic Diseases, Health Clinic Eyes, Polyclinic and Psychosocial Care Center for people with mental illness, drug users and children and adolescents. It also has four Emergency Care Units and an Orthopedics and Traumatology Center, in addition to the Mobile Emergency Care Service(15).

The present study was carried out in a UPA in the municipality of Piracicaba, from May to June 2018, and presented a total of 25,748 atten-
dance files. In Chart 1, we see that in May there were 13,069 calls and in June 12,679 calls. Of this total, only 2% (n = 528) were related to a chronic disease complaint, with 0.9% (n = 243) in May and 1.1% (n = 285) in June.

In Table 2, we can identify that the largest number of visits was from patients aged 50 to 54 years, 10.4% (n = 55) and the ages with the lowest demand was 90 to 94 years with 0.7% (n = 4).

When the user arrives at the UPA, he goes through a screening process that classifies his risk. In view of this, we can observe the predominance of the green classification with 89.20% (n = 471), as shown in Chart 2. It should be noted that the blue and red color do not apply to the survey of data performed, since the blue classification is not used in the UPA and red, the patient usually enters the emergency room.

The DCNTs described in the study were divided into two subgroups, those with only one pathology and those with two or more associated pathologies. The highest rate, as shown in Table 3, was of people who had low back pain without other underlying pathology with 46.2% (n = 244). Low back pain is not classified by the Ministry of Health as a DCNT, however, the demand for care related to this cause is significant, moreover according to Lizier and collaborators (16) 15% to 20% of adults have this complaint.

Chart 3 shows a higher incidence of low back pain complaints, with 54.4% (n = 287) and shortness of breath with 20.1% (n = 106), which is related to asthma, justified by the period in which the study was carried out, being the cold season of the year, which contributes to the onset of this disease.

Table 4 shows the relationship between complaints, vital signs (SSVV) and the prescribed medications, iden-
tifying which ones agree between the complaints and the course of care. It is noticed that the complaints presented are, in fact, the reason for the attendance with 69.9% (n = 369), and the unanswered complaints reach 15% (n = 81). In addition, there is a difference between medication and complaint, which is equivalent to 1.9% (n = 10).

The highest prevalence of care outcomes is discharge after medication with 83.1 (n = 399) - Chart 4.

In Table 5, we can observe the recurrence of users in the unit within 30 days, whether due to different complaints or the same symptoms. In this case, there was a predominance of repetitions of calls from 1 to 5 times in the month, which represents 90.9% (n = 468) of the calls. In the month of May, 13 forms did not present this information since they were made manually, the unit was without a system in this period, so they were not used in this analysis.

With the results, we can see that the values of the care provided at the unit are high, however, the data from DCNTs are not significant as expected at the beginning of the work. There was a predominance of females, aged between 50 and 54 years and, mostly, with a basic pathology. Most of the consultations obtained the green classification, which could have been sent to primary care, after medical care.

Regarding the care provided on site at times, there is a disagreement between the complaints and the care provided. Most patients are discharged without referral to other services, which may be the cause of a new search for UPA.

**DISCUSSION**

In the research carried out, there was more assistance to female people (57%), this data is similar to other studies, such as by Tomberg and collaborators with 50.7%, this had the objective of analyzing the demand for care according to the complaint e, Ribeiro and collaborators, with 53.6%, which aimed to demarcate the de-
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The demand for care according to the age group. The authors associate this demand with a greater concern of women with the health-disease process.

This data is confirmed with the data collected by the National Health Survey (PNS), which was carried out in 2013 and is repeated every five years, in which we can observe that there is a predominance of women in the search for medical care at any level of care, 77% of those interviewed at PNS would have had at least one medical appointment within twelve months (3).

Several studies show that the prevalent age group of users of the emergency room, mostly, is people aged 20 to 29 years, which differs from this research. In the study by Feijó and collaborators (19), the prevalent age range was 29 to 59 years and, according to data by Guedes and collaborators (20), the average age is 44 years old and corroborates the data collected. Authors point out that care for the 40 to 49 age group has an inadequate demand for care in these units (21, 22).

Regarding the risk classification, the cards had a prevalence of green color (89.2%). This classification can be compared to another article that presents a demand for color care equivalent to the study, as shown by Diniz and collaborators (23), which was 61% (n = 222).

The complaint with the highest record is not classified by the Ministry of Health as a DCNT, but low back pain is one of the most frequent causes of absence from work due to inability to perform daily activities. In the study, she presented more than half of the consultations analyzed (54.3%). The Divinópolis survey, which aimed to identify the clinical demand of patients in an emergency care unit, presented 27.1% (n = 98) of the cases of low back pain and highlights that these complaints could be treated in primary health care, it being necessary to refer patients to these services and inform users about the functioning of the services (16, 23).

The demand for visits per day in the emergency units is high and can cause carelessness in the screening of patients, leading to erroneous notes on the care

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Table 4. Analysis of the course of care. Piracicaba, SP, Brazil, 2018.
record. In order for this situation to be improved, it is important to train the team and appoint qualified people for this role(19).

In the analysis of the data that relate the complaint, the SSVV and the medications, 69.9% of the consultations are adequate and interconnected between the three stages, however it is possible to observe that some FAAs presented disagreements during the consultations provided. The sample highlights that complaints at the beginning of care are not equivalent to the SSVV nor to the prescribed medications (1.9%), which may be related to the lack of information on the form, the professionals’ misinterpretation or disagreement in the patient’s report. Another interesting fact is the complaints equivalent to the SSVV collected in the screening and different from the medications prescribed after medical care (0.4%).

At the end of the service, it is possible to observe that there was a predominance of discharge in the service, with the user being medicated in the unit (75.6%) or released with a prescription (18.9%), these data add up to 94% of the services. Articles(19,22) who had the objective of characterizing the demand for care confirmed a situation equivalent to that of the survey, presenting, respectively, 72.7% and 86.8%, which represents the majority of care. Most of the patients included in these data were classified as green.

It was observed that most of the visits were made by adults of working age, who had complaints that may affect their daily activities and that should be treated in the long term by primary care, other situations of care may be related to the season of the year the study was carried out.

**CONCLUSION**

In the study, we observed that the number of visits made at the UPA related to a DCNT is low in relation to other services provided.

There was a predominance of females, aged 50 to 54 years old, presenting a complaint related to the most common chro-
chronic diseases in the cold, this being assessed that the collection was carried out in winter. The diseases that had the highest incidence in the research were low back pain, asthma and HAS, which were related to complaints of low back pain, shortness of breath and symptoms of high blood pressure, which were mostly classified as green and had no health problems in the patient’s picture.

It is important to note that some forms did not show agreement between complaint, SSVV and medications. These data show that the information in the forms may be incomplete or that users express different complaints to each health professional, which may lead to ineffective care for the existing problem.

Most care outcomes were discharged after medication or with a prescription. In addition, it was observed that patients return to the emergency department within 30 days and this may be related to the lack of resolution of their complaints or to the situation presented in the previous paragraph. Another way to disseminate this demand of patients who return to care is to refer them to referral units in their neighborhood to start or continue the treatment of their DCNTs.

The study shows that there is no referral to basic user reference units, which may be the cause of the return to the emergency unit. Therefore, it is necessary to talk with the team about the orientation of these users regarding the search for health units in the neighborhoods and reinforce with the professionals the importance of referring these patients, when necessary. In addition, the research shows high rates of low back pain in patients of productive age and should be an alert to future problems, such as possible surgeries, generating a higher cost to health services.

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