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Use of urgency and emergency services for acute hypertension and / or diabetes complications

Utilização de serviços de urgência e emergência por complicações agudas da hipertensão e/ou diabetes

Uso de servicios de urgencia y emergencia para complicaciones agudas de hipertensión a y / o diabetes

Patrícia Chatalov Ferreira[1] (iD)
Elen Ferraz Teston[2] (iD)
Verônica Francisqueti Marquete[1] (iD)
Rubia Mariana de Souza Santos[1] (iD)
Robson Marcelo Rossi[1] (iD)
Sonia Silva Marcon[1] (iD)

1. Universidade Estadual de Maringá. Maringá, PR, Brasil.

2. Universidade Federal de Mato Grosso do Sul. Campo Grande, MS, Brasil.

ABSTRACT

Objective: to analyze the use of urgency and emergency services by individuals with acute complications of Hypertension and/or Diabetes *Mellitus*. **Method:** a retrospective study conducted in three public emergency care services in a city in southern Brazil. Data was collected by consulting the electronic medical records of people who attended two or more times during the period from January 2018 to February 2020. Logistic Regression and geo-referencing of residential addresses were used in the analysis. **Results:** of the 1,125 people, 72.7% sought the services for hypertension; 18.1% for diabetes; and 7.3% for both conditions. Most did not have the chronic condition registered in Primary Care and lived near the emergency services. Users who sought the Emergency Care Units of the University Hospital and the municipal ones concomitantly, for both conditions, with less education, and without a partner had a greater chance of three or more attendances. **Conclusion and implications for practice:** information on the use of urgency and emergency services and of people who seek them for acute complications of Hypertension and/or Diabetes can subsidize the formulation of public policies and the proposition of more effective strategies in the identification, follow-up and active search for people with chronic conditions.

Keywords: Hypertension; Diabetes Mellitus; Emergency Medical Services; Primary Health Care; Health Evaluation.

RESUMO

Objetivo: analisar a utilização de serviços de urgência e emergência por indivíduos com complicações agudas de Hipertensão Arterial e/ou Diabetes *Mellitus*. **Método:** estudo retrospectivo realizado nos três serviços públicos de pronto-atendimento em município do Sul do Brasil. Os dados foram coletados mediante consulta aos prontuários eletrônicos das pessoas que compareceram duas ou mais vezes no período de janeiro de 2018 a fevereiro de 2020. Na análise foi utilizado Regressão Logística e georreferenciamento dos endereços residenciais. **Resultados:** das 1.125 pessoas, 72,7% procuraram os serviços por Hipertensão; 18,1% por Diabetes; e 7,3%, por ambas as condições. A maioria não possuía a condição crônica registrada na Atenção Primária e residia próximo aos serviços de pronto-atendimento. Tiveram mais chances de três ou mais comparecimentos os usuários que procuraram concomitantemente as Unidades de Pronto atendimento do Hospital Universitário e as municipais, por ambas as condições, com menor escolaridade e sem companheiro. **Conclusão e implicações para a prática:** informações sobre a utilização dos serviços de urgência e emergência e das pessoas que os procuram por complicações agudas da Hipertensão e/ou Diabetes podem subsidiar a formulação de políticas públicas e a proposição de estratégias mais efetivas na identificação, acompanhamento e busca ativa de pessoas com condições crônicas.

Palavras-chave: Hipertensão; Diabetes Mellitus; Serviços Médicos de Emergência; Atenção Primária à Saúde; Avaliação em Saúde.

RESUMEN

Objetivo: analizar el uso de los servicios de urgencia y emergencia por personas con complicaciones agudas de Hipertensión Arterial y / o Diabetes Mellitus. **Método:** estudio retrospectivo realizado en los tres servicios públicos de emergencia de un municipio del sur de Brasil. Los datos se recogieron consultando las historias clínicas electrónicas de las personas que acudieron dos o más veces entre enero de 2018 y febrero de 2020. En el análisis se utilizó la Regresión Logística y la georreferenciación de domicilios. **Resultados:** de las 1125 personas, el 72,7% buscó servicios por hipertensión, el 18,1% por diabetes mellitus y el 7,3% por ambas condiciones. La mayoría no tenía la enfermedad crónica registrada en Atención Primaria y vivía cerca de los servicios de emergencia. Los usuarios que acudieron de forma concurrente a las Unidades Hospitalarias de Urgencias del Hospital Universitario y las municipales, por ambas condiciones, con menor escolaridad y sin pareja tenían más probabilidades de tener tres o más apariciones. **Conclusión e implicaciones para la práctica:** las informaciones sobre el uso de los servicios de urgencia y emergencia y las personas que los buscan por complicaciones agudas de Hipertensión Arterial y / o Diabetes Mellitus pueden apoyar la formulación de políticas públicas y la propuesta de estrategias más efectivas en la identificación, seguimiento y búsqueda activa de personas con enfermedades crónicas.

Palabras clave: Hipertensión; Diabetes Mellitus; Servicios Médicos de Urgencia; Atención Primaria de Salud; Evaluación en Salud.

Corresponding author:
Patrícia Chatalov Ferreira
E-mail: pattychatalovf@gmail.com.

INTRODUCTION

Systemic Arterial Hypertension (SAH) and Diabetes Mellitus (DM) are the leading causes of death and disability worldwide[1,2]. It is estimated that by 2050 six middle-income countries, including Brazil, will experience important demographic changes, with a considerable increase in the number of adults requiring treatment for chronic diseases[3]. In Brazil, the estimated prevalence of SAH corrected by self-reported data from the National Health Survey in 2013 was 14.5%[4].

Report that estimated the burden of chronic diseases, in 195 countries and territories, from 1990 to 2016, found that for DM there was a 117.9% increase in the number of years lived with disability[5]. In 2018 there were 1,829,779 hospitalizations for causes associated with SAH, DM and obesity in the Brazilian Unified Health System (UHS), which corresponds to approximately 16% of total hospital admissions and a total cost of R$3.84 billion, with SAH alone accounting for 59% of this cost (more than R$2 billion per year), and diabetes for 30%[1].

Still in Brazil, 28% of all deaths occur due to cardiovascular diseases, leading to a significant increase of 17% in costs, which in 2015 alone was R$37.1 billion (US$9.6 billion), including the estimated expenses due to premature death, direct costs with hospitalizations and productivity losses related to these conditions[6].

Thus, the high prevalence of SAH and DM in the population, also associated with the high frequency of their acute and chronic complications, makes these conditions an important collective health problem in Brazil[7,8]. The complications resulting from the lack of control of these diseases generate negative impacts both on the quality of life of the affected individuals and on the healthcare system[9]. However, the implementation of prevention measures and adequate treatment of these conditions represent a great challenge for health care professionals and managers[7].

Although characterization of frequent users in Urgent Care and Emergency Services provides valuable insights for both researchers and policy makers[10], there is a lack of national studies that address the demand for these services by users with acute complications of SAH and/or DM. This fact points to the relevance of the topic and the need for discussion about measures and strategies aimed at the control of chronic conditions in the different points of the care network, including the Emergency Care Units (EC).

Considering that the knowledge about the profile of the entries in urgency and emergency services for these causes and of the people who seek them, besides indicating gaps in the Care Network (CN), may also contribute to the development and improvement of strategies and public policies of assistance aimed at these users, the objective of this study was to analyze the use of urgency and emergency services by individuals with acute complications of Hypertension and/or Diabetes *Mellitus*.

METHOD

A retrospective study that used as a source of data the electronic medical records of the Municipal Health Secretariat (MHS) and the University Hospital of a city in the South of Brazil, located in the Northwest of the state of Paraná, with an estimated population of 423,666 inhabitants and 70.9% coverage by the Family Health Strategy. The healthcare network consists of 34 Basic Health Units (BHU), two municipal Emergency Care Units (ECU), Polyclinic, Outpatient Clinics, Intermunicipal Public Health Consortium (CISAMUSEP), University Hospital (UH), Municipal Hospital and private institutions accredited to UHS.

In 2014, the municipality began implementing an evaluation process to grant recognition titles to the teams based on the proposals of the Primary Health Care Qualification Program (APSUS) and the National Program for Improving Access and Quality of Primary Care (PMAQ-AB). Currently, two BHU have the Gold seal; one has the Silver seal; 12 have the Bronze seal; and 19 BHU have not yet been evaluated. All certified BHUs have started to implement the Model for Chronic Conditions Care (MCCC) with stratification of chronic users, referral and follow-up for specialized care.

The study population was composed of the records of individuals admitted to the three public emergency care services of the city (ECU Zona Sul, ECU Zona Norte, and Hospital Universitário) during a period of 26 months: january 2018 to february 2020. Data was collected from december 2019 to march 2020, by consulting the systems of each service, with the application of sequential filters: year and ICD-10, noting that in the ECU Zona Norte, the electronic medical record was implemented in 2019.

The inclusion criteria established were: living in the city and having two or more entries motivated by causes related to SAH and/or DM in the study period, considering that a single entry could be an isolated event, motivated by emotional issues and that would not constitute uncontrolled condition. The exclusion criteria were: death, incomplete data, and age under 18 years old.

The ICDs related to SAH were: I10, I11, I11.0, I11.9, I12, I12.0, I12.9, I13, I13.0, I13.1, I13.2, I13.9, G45, G45.8, I64, I21, I21.0, I21.1, I21.2, I21.3, I21.4, and I21.9, O11, I20, I20.8, I20.9. 9. In turn, the ICDs referring to Diabetes *Mellitus* were: E10 to E10.9, E11 to E11.9, E13 to E13.9, E14 to E14.9, N08.3, O24.0 to O24.3, E16.0 to E16.2, G59.0, G63.2, H28.0, H36.0, M14.2, and R73.9.

The entries were organized in a Microsoft Office Excel 2020® spreadsheet containing: medical record number, user's name, health service sought, date and time of service, and the respective ICD. The people with two or more entries were identified and, subsequently, the medical records of the (MHS) were accessed to collect registration data: date of birth, Basic Health Unit of reference, home address, family situation, education, skin color, marital status, religion and record of the condition "SAH" and/or "DM" registered in the electronic medical records of the (MHS), by using the filter "registered referred condition".

It was found that 7,632 people were responsible for a total of 10,649 admissions in the Urgency and Emergency Services for SAH and/or DM. Of these, 1,316 had two or more admissions,

and 191 were excluded (134 did not live in the city, 48 died, four were under 18 years of age, and five had incomplete data), being eligible for the study 1,125 people.

The R[11] program was used to analyze the data using the Multiple Logistic Regression Model[12-14], employing the Forward-Backward Stepwise method, in which the explanatory variables are inserted or extracted from the model according to the order of their significance value, allowing the best fit to be determined through Akaike's criterion (AIC).

The outcome variable was the number of entries: two and three or more. The explanatory variables were: gender, skin color, age, education, marital status, health status recorded in the electronic medical record, service sought, reason for admission, and certified BHU of reference.

The measure of association between outcome and explanatory variables was the OddsRatio (OR), and respective 95% confidence intervals, considering as outcome the random variable with binomial distribution, Y: number of entries {0: up to 2 and 1: 3 or more}. To verify the quality of the final adjusted regression model, the Hosmer and Lemeshow (H-L) test[14] was used, in addition to obtaining the area under the ROC curve (AUC)[15] and graphically verifying the behavior of the residuals via the binomial simulated envelope[16].

Regarding the spatial distribution, the coordinates (latitude and longitude) were identified through Google Maps of the addresses of 1,125 people, using the cartographic base available on the website of the municipality and of the Brazilian Institute of Geography and Statistics (*IBGE*). The compilation of the results and the cartographic production were carried out with the aid of the programs BatchgeoPro, ArcGis 10.4.1 and CorelDraw X8. The first was used for geocoding the database (addresses). The second is a GIS (Geographic Information System) tool that allows the visualization of the density of the points. And the last one, performed the final layout of the map. The density of points allows us to evaluate the dispersion pattern of a variable over a given surface[17]. By using this tool, the program generates a matrix data that presents the density estimate of the points that were identified by the point density.

The study was developed in accordance with National Health Council Resolutions 466/2012 and 510/2016, and the project was approved by the Ethics Committee for Research with Human Beings of the signatory institution (CAAE 26346019.1.0000.0104).

RESULTS

The 1,125 people included in the study were responsible for 3,061 entries in emergency services, of which 818 (72.7%) had as diagnosis recorded in the attendance form SAH and/or complications; 204 (18.1%), DM and/or complications; and 103 (7.3%), both conditions. Table 1 shows characteristics

Table 1. Profile of primary care admissions and coverage of people who sought emergency and urgency services due to hypertension and/or diabetes and/or its complications in a city in the South of Brazil.

| Variables | Number of entries: | | | | | |
| | Two entries | | ≥ Three entries | | TOTAL | |
	N	%	N	%	N	%
Entry by						
SAH and/or complications	534	47.5	284	25.2	818	72.7
DM and/or complications	131	11.6	73	6.5	204	18.1
SAH and DM and/or complications	47	4.2	56	5.0	103	9.2
Service you searched for						
ECU	690	61.3	337	30.0	1027	91.3
Hospital Emergency Care	6	0.5	10	0.9	16	1.4
Both services	16	1.4	66	5.9	82	7.3
Referred condition registered						
None	402	35.7	220	19.6	622	55.3
Hipertension	162	14.4	99	8.8	261	23.2
Diabetes	37	3.3	21	1.9	58	5.2
Hipertension and Diabetes	111	9.9	73	6.5	184	16.4
Certified BHU						
Yes	320	28.4	194	17.2	514	45.7
No	392	34.8	219	19.5	611	54.3

related to the care and coverage of these people in Primary Care. It draws attention to the fact that more than half (55.3%) of these people had no condition recorded in the electronic medical record of the reference BHU, although almost half of them belonged to the coverage area of the BHU certified by *APSUS* (45.7%).

The sociodemographic characteristics of the people in this study are shown in Table 2, demonstrating that almost half of the individuals who sought emergency care services were under 60 years old (47.7%), and most had low education (71.4%).

In turn, Table 3 presents the variables associated with the highest number of admissions. It can be seen that greater chances of three or more admissions were observed in people who sought only the emergency care at the University Hospital (EC-UH) or the latter in conjunction with one of the two ECU, motivated by complaints related to complications of both conditions (SAH and DM), including the information that they had no partner and had low education.

Figure 1, below, presents the spatial distribution of the residence addresses of the people who sought urgency and emergency services.

It can be observed that of the Urgency and Emergency services - represented by the letter "H" - the ECU Zona Sul (in the lower right corner) is located in the region with the highest population density, followed by ECU Zona Norte (upper right corner) and EC-UH (upper left corner).

There is also similarity in the distribution of addresses in the three maps: regardless of the condition that motivated the demand, greater use occurs by people who live near these services. However, the first map shows that people with SAH and/or complications who sought these services came from all regions of the city, including rural areas. Furthermore, it shows that there is no difference whether or not the individual lives in the area covered by a certified BHU.

However, it draws attention to the fact that, in the three maps, few people living in the coverage area of a certified BHU in Bronze, located in the north-northwest region, sought urgency and emergency services in the study period.

Table 2. Sociodemographic characteristics of people who sought urgency and emergency services due to hypertension and/or diabetes and/or its complications in a city in the South of Brazil.

Variables	Number of entries:					
	Two entries		≥ Three entries		TOTAL	
	n	%	N	%	N	%
Sex (n=1125)						
Male	308	27.4	179	15.9	487	43.3
Female	404	35.9	234	20.8	638	56.7
Skin color (n=1110)						
White	484	43.6	295	26.6	779	70.2
Non White	219	19.7	112	10.1	331	29.8
Age (n=1125)						
18├─┤39	83	7.4	41	3.6	124	11.0
40├─┤59	275	24.4	138	12.3	413	36.7
60├	354	31.5	234	20.8	588	52.3
Education (n=1063)						
Without formal education	28	2.6	27	2.5	55	5.2
1 - 9 years	433	40.7	271	25.5	704	66.2
≥ 10 years	213	20.0	91	8.6	304	28.6
Family situation (n=1103)						
Lives with someone	658	59.7	390	35.4	1048	95.0
Lives alone	38	3.4	17	1.5	55	5.0
Marital status (n=1058)						
With partner	441	41.7	243	23.0	684	64.7
Without a partner	222	21.0	152	14.4	374	35.3

Table 3. Logistic regression between the outcome variable (number of admissions) and the explanatory variables for people who sought emergency services for SAH and/or DM and/or complications in a city in Southern Brazil, 2020.

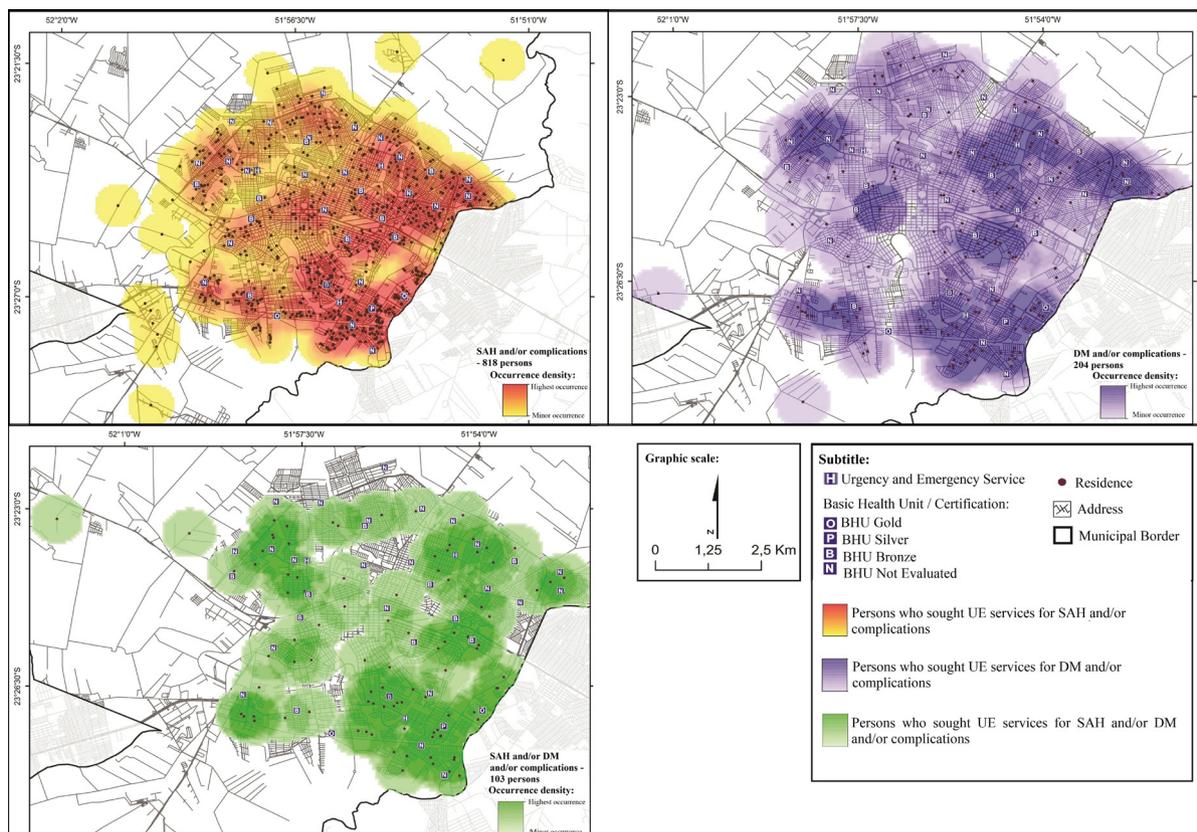| Variables	OR (95%CI)	value-p
Service that was entered		
ECU	*Baseline*	-
EC-UH	3.8 (1.3-12.7)	0.017
Both services	11.0 (6.0-21.9)	<0.001
Reason for Entry		
Entry due to SAH / complications	*Baseline*	-
Entry due to DM/complications	-	0.275[ns]
Entry due to both conditions	2.4 (1.6-3.8)	<0.001
Family Situation	-	0.158[ns]
Marital status	1.4 (1.0-1.8)	0.035
Education		
Did not go to school	2.0 (1.1-3.9)	0.029
1 to 9 years of education	1.4 (0.6-1.1)	0.048
10 or more years of education	*baseline*	-
Skin color	-	0.117[ns]

H-L: p=0.76; AUC=0.67 Ns: Not significant.

Figure 1. Geo-referencing of the residential addresses of people who sought urgent and emergency services as a result of Hypertension and/or Diabetes and/or its complications in the period from January 2018 to February 2020, in a city in the Northwest of Paraná State, 2020. Source: Research data (2020).

DISCUSSION

The number of people who sought emergency care services two or more times due to acute complications of SAH and/or DM is considered high, since these diseases are part of the list of Conditions Sensitive to Primary Care (CSPC), considering that 80% of the cases can be prevented and treated at this level of care[18]. Other studies also say that people with hypertensive crisis, lack of glycemic control and acute complications are frequently present in urgency and emergency units[2,19-21].

Therefore, some characteristics of these services, for example, an open door 24 hours a day, the possibility of medical care and exams without the need for prior scheduling and good resoluteness for acute conditions, contribute to make them more attractive, accessible and widely used by the population. This demand is also influenced, in part, by the hegemony of the biomedical model in health services and the non-adoption of preventive actions/behaviors by users in general[22].

A study conducted in a city in the state of Minas Gerais, for example, found that participants with SAH and DM, when they presented uncontrolled symptoms, did not seek health services, but self-medicated until they achieved the stabilization of the condition[7]. Thus, the search for emergency services may signal a difficulty in achieving disease control. Therefore, people who seek emergency services for these causes must always be guided and referred to appropriate monitoring in Primary Health Care (PHC), in order to limit disease progression and the emergence of (new) complications, contributing to a better prognosis and survival.

The fact that people who sought the UH EC or both services were more likely to seek emergency services three or more times may be due to two factors: awareness of the worsening of the condition and fear of the consequences of not treating the disease[7]; the greater perception of its resoluteness, probably due to the existence of greater diagnostic resources and a greater diversity of specialists working in the service.

The perception of a faster and more complete assistance, motivated by the offer of diagnostic tests, was also pointed out by users of the emergency service of a large hospital in Rio Grande do Sul. Other reasons mentioned for seeking the service were: exacerbation of chronic diseases, ease of access, perception of greater resoluteness, supply of diagnostic technology, bond with professionals and scheduled returns[19].

In addition to these issues, it was evidenced that a significant number of individuals who sought emergency services for uncontrolled blood glucose or blood pressure levels had no diagnosis of hypertension and/or diabetes mellitus recorded in the medical record of the BHU. This may characterize a lack of previous diagnosis and, consequently, of management of its management, which may have an influence on the recurrent search for these services due to acute complications/manifestations.

In a population-based study, in which the authors evaluated the factors associated with the follow-up of adults with AH and/or DM by the Family Health teams in a city in the north of Paraná, it was found that 40.3% of the participants had no record of the condition in the basic units. In addition, the follow-up by the teams did not meet the standard of care established for the groups, since even the people stratified as high cardiovascular risk did not receive the number of home visits, nursing consultations, and medical appointments proposed by the Ministry of Health[23].

The absence or failure in recording the diagnosis of SAH and/or DM in the electronic medical records of the municipality's Care Network does not necessarily mean that these people are not being assisted in PHC. However, it can affect essential PHC tributes, such as care coordination and effective monitoring of the condition[24], besides making it impossible for managers to identify the real magnitude of the problem, impacting the development of public policies and distribution of resources and services consistent with the existing context.

The results of the present study, therefore, show, to some extent, that chronic conditions continue to be faced according to the same logic as acute conditions, that is, based on spontaneous demand, with a curative focus and the use of technologies designed to respond to moments of aggravation, resulting in the demand for assistance in urgency and emergency services[25]. Thus, without continuous and adequate monitoring in the health care network, acute events become more frequent and, in a cyclical process, the use of urgency and emergency services also increases[19].

Ideally, if the acute chronic condition is treated, continuity of care should be guaranteed in PHC and, when necessary, in specialized and tertiary care[25]. The adequate follow-up of the user in the PHC and specialized health services can reduce the number of cases of uncontrolled blood pressure and/or blood glucose levels, not only in the urgency and emergency services, but also in other points of the assistance network[21].

These issues point to the importance of active search and a referral and counter-referral system that allows continuity of care and access to actions to prevent complications offered in health units. It is likely that the systematic use of a screening program favors the identification of people who seek emergency services for acute complications of SAH and/or DM and who are unaware of their health condition or are not adequately followed-up in PHC[2].

People who sought the EC with complaints related to both conditions (SAH and DM) were 43% more likely to have three or more emergency room visits, which reaffirms that the association of both tends to aggravate the health condition and, consequently, trigger more episodes of aggravation.

For the effective control of the health condition, it is essential that the affected person understands the importance of adequate management and of the daily adoption of self-care actions[7] and that there are improvements in the services offered in Primary Care, after unsatisfactory control of SAH and DM have been found at this level of care[23,26]. In this sense, a research conducted in the Southwest of Bahia, with 352 users with DM, found that most respondents had uncontrolled glycemic and failure in blood pressure and metabolic control, which was associated with receiving fewer visits from community agents and not having other comorbidities[27].

Regarding the BHU of reference, contrary to what was observed, it was expected that people living in the coverage

areas of those certified would seek less urgency and emergency services due to decompensation of blood pressure and glycemic levels, because the qualification and certification programs of PHC assess many indicators, including some related to the monitoring and control of SAH and DM. A research that analyzed the production of the Family Health Strategy teams before and after the implementation of *PMAQ-AB* in Florianópolis, Santa Catarina, also showed no difference in the results obtained by adherent and non-adherent teams[24].

Regarding the characteristics of the participants, it draws attention to the fact that almost half of them are under 60 years old, which may be related to the difficulty of access to the BHU, due to the coincidence of the working hours of these units and the work[19,28-30] and to the characteristics of Urgency and Emergency services - open door 24 hours a day, and diagnostic resources available on the same day of service, with no need to miss work[19]. Moreover, it may also be an indication that the acute complications of SAH and DM are emerging at an increasingly earlier stage of life.

People without a partner had a 38% chance of having three or more entries when compared to those with a partner, which allows us to infer that they are a source of support to face these conditions on a daily basis. This deduction is reinforced by a study that points out the importance of the woman's role in the family nucleus, which, in addition to acting as a caregiver, favoring greater control of the disease, also encourages the spouse to seek health services when intercurrences occur[22].

Other people in the immediate family can also support self-care and help in the management of the chronic condition. Thus, it is essential that the health team is trained to perform educational activities focused on health promotion and prevention of diseases, and that these actions are directed to people with chronic conditions and their families, which favor the exchange of knowledge and value the creation of bonding, the uniqueness of each individual and their sociocultural context[30].

People with less education were more likely to seek emergency care services three or more times, which, in a way, corroborates findings that low education is related to deficiency in the adoption of self-care actions[27] and greater demand for health services in general[22,31]. In the same direction, studies show that low education is associated with lower Health Literacy, which, in turn, affects the understanding of the health/disease condition, resulting in greater difficulty in adhering to self-care actions, both preventive and curative[32,33].

The geo-referencing showed that most of the people who sought emergency services live nearby, showing that users living in the Northeast, Southeast, Southwest and Northwest regions have greater accessibility to emergency services in the city. Even in some regions, there was no demand from residents for the emergency services under study, which allows us to infer that, in those regions, there are no people affected by these conditions or, if they are, they manage to keep control or use private health services.

In Salvador, Bahia, a study with users of a hospital emergency service also identified an association of its use with geographic proximity[20]. However, in China, authors have found that the greater demand for these services does not occur only because of proximity, but because users rely more on these services than on clinics or BHU and this, in addition to overloading these services, generates inefficiency throughout the Network[29]. In view of this, there is a need for actions that result in the strengthening of territorialization and active search, because the knowledge of the enrolled individuals enables them to be linked to the health services and, consequently, a better and longitudinal follow-up of their health-disease conditions.

The results of this study elucidate the importance of using tools such as local information systems for the situational diagnosis of conditions that prevalently affect the health of the population. It is worth mentioning that the data obtained offer subsidies for the planning of interventions directed to the organization of services located at different points of the Health Care Network.

It is noteworthy that the spatial distribution of users' residence addresses and their characteristics contribute to the formulation of hypotheses that explain the magnitude of the surveyed phenomenon, for example, the factors associated with recurrent episodes of pressure and glycemic decompensation. The point pattern analysis (PPA) has been widely used to investigate the patterns of global or local spatial distribution of point aggravations[17], in addition to contributing to equity, optimization and appropriate allocation of health resources, in order to mitigate disparities in the services offered[29].

Accurate and reliable statistical information is essential for UHS management, because it allows the real situation of each territory to be known and evaluated, contributing to the development of more effective strategies, better coverage of the population, and equity in the services provided[34]. Therefore, knowing the predominant characteristics of people who seek urgent and emergency services for sensitive PHC conditions - such as SAH and/or DM - and being aware of whether these conditions are registered and whether or not they are recognized at this level of care is essential, as it points out gaps to be explored and considered by management, considering that this group may be unattended.

The results found corroborate the recommendation made by the Tanzanian study, which pointed out the importance of recognizing that urgent and emergency services are opportune places not only for the timely treatment of acute complications, but also to identify chronic conditions and perform educational actions/interventions, allowing a more comprehensive and effective control of health status and, consequently, of acute events and complications[2]. In the United States, more than half of the people who sought emergency services were interested in receiving information about SAH and DM from the kiosks available at these locations[35]. In the Brazilian context, it is believed to be feasible to provide information while the person waits in the waiting room, with the offer of instructional videos and printed material, emphasizing the importance of self-care and monitoring in PHC.

Finally, it is recommended that studies be conducted to investigate the impact of changes in the regular monitoring of people with chronic conditions such as SAH and DM, due to the measures of social isolation and distancing by the Covid-19 Pandemic. It is likely that the interruption of this monitoring and limited access to primary care services have potentiated the recurrence of uncontrolled blood pressure and blood glucose levels and the emergence of complications.

CONCLUSIONS AND IMPLICATIONS FOR PRACTICE

The results of this study allowed us to reach the following conclusions: most people who sought urgent and emergency services two or more times for acute complications of SAH and/or DM were female, white skin color, elderly, with a maximum of nine years of schooling, had a partner or lived with someone, did not have their health condition recorded in the PHC medical records, lived in the coverage area of the BHU not yet evaluated for certification, but near the emergency care services. Furthermore, users with less education, without a partner, who sought only hospital emergency care or hospital emergency care associated with one of the municipal ECU and for both conditions (SAH and DM) were more likely to seek these services three or more times.

It is believed that knowing the profile of users who attend urgency and emergency services and identifying those with acute complications of SAH and/or DM and who are unaware of their health condition, or who are not adequately monitored in PHC, can subsidize local management in the organization of the assistance network and in the formulation of public policies and the proposition of more effective strategies for identification, monitoring and active search for people with chronic conditions. In this sense, the systematic use of a screening program and/or a single medical record for the entire municipal network is considered essential. And also that health professionals can take advantage of the demand for urgent and emergency services to provide guidance and raise awareness among users about the importance and advantages of their linkage to a BHU and the regular monitoring of their health condition at this level of care.

The limitations of the study are related to the use of secondary data subject to flaws in the records, absence of information and outdated registers; also to the under-identification of people who sought these services for at least twice, because, the electronic medical record in one of the ECU was only implemented in 2019.

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Writing and critical revision of the manuscript. Patrícia Chatalov Ferreira. Elen Ferraz Teston. Rubia Mariana de Souza Santos. Verônica Francisqueti Marquete. Robson Marcelo Rossi. Sonia Silva Marcon.

Approval of the final version of the article. Patrícia Chatalov Ferreira. Elen Ferraz Teston. Rubia Mariana de Souza Santos. Verônica Francisqueti Marquete. Robson Marcelo Rossi. Sonia Silva Marcon.

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