



Emergency department visits for ambulatory care sensitive conditions*

Perfil dos atendimentos por condições sensíveis à Atenção Primária à Saúde em uma Unidade de Pronto Atendimento

Perfil de las atenciones por condiciones sensibles a la atención primaria de salud en una unidad de urgencias

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ABSTRACT

Objective: To describe emergency department visits for ambulatory care sensitive conditions. **Method:** Exploratory, descriptive, ecological, quantitative study. From January 2015 to December 2016, was accessed the database with information of visits performed in an emergency department located in the region of Campo Limpo, municipality of São Paulo. A 99% confidence interval was considered for the incidence of visits with identification of ambulatory care sensitive conditions, and a margin of error of 0.4%. The analyzes were performed with use of the statistical package SPSS. **Results:** We found 434,883 visits, of which 17.1% were due to ambulatory care sensitive conditions, mostly of women and children up to 4 years of age. The reason for most visits were ear, nose and throat infections (45.4%). There was a higher chance of visits for the indicator in chronic patients ($p < 0.001$). **Conclusion:** This study demonstrated the emergency department ambulatory care sensitive conditions visits that may indicate poor access to primary care.

DESCRIPTORS

Primary Care Nursing; Primary Health Care; Hospitalization; Unified Health System.

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INTRODUCTION

In the late 1980s, in the United States⁽¹⁾, was developed an indicator that indirectly analyzed the care provided in outpatient services through the analysis of hospital admissions. From the second half of the 1990s, hospitalizations for Ambulatory Care Sensitive Conditions (ACSC) have been used to analyze the quality of this care in countries with the health system focused on primary care, such as Spain, Australia, Canada and Brazil⁽²⁻⁷⁾. Therefore, the indicator is used “as a way to evaluate the access, coverage, quality and performance of Primary Health Care (PHC)”⁽⁸⁻¹¹⁾.

Hospitalizations for ACSC include a set of morbidities that can be treated opportunely and effectively by PHC, taking into consideration that in principle, there is no need for hospitalization. As resolutiveness of the first level of care is one of its essential attributes, and more than 85% of its population health problems are solved at this level, it is expected that the clinical worsening of health services users can be avoided and, consequently, their hospitalization⁽¹²⁾.

The coordination of care by PHC is also considered as one of its main attributes for the continuity of health care, and is expressed by the network organization⁽¹²⁾. In a systematic review on hospitalizations for ACSC, the continuity of care in PHC was associated with lower hospitalization rates in the United States and Canada⁽³⁾. The continuity of care and the presence of a multidisciplinary team are beneficial for other points of the care network, because these reduce the demands of hospitals and emergency and urgency services.

However, this does not seem to be the reality of Brazilian health services, where there are huge waiting queues and overcrowding. This is perceived mainly in emergency and urgency health services, where there is an expressive quantity of hospitalizations, much explained by the search of the population without access to the other levels of health care⁽¹³⁾. Monitoring the health problems of users, family and community is still a challenge in PHC, where there are issues such as the lack of financial investment, the high rate of population affiliation, insufficient number of family health teams, as well as poor working conditions and infrastructure. These problems make the provision of efficient and resolute care by PHC difficult, especially given the current epidemic of chronic diseases that require continuous health monitoring⁽¹⁴⁻¹⁵⁾.

The Emergency Department (Portuguese acronym: UPA; open 24h) is a health service of intermediate complexity located between PHC and the hospital network. Many of its services are not configured as emergency, but rather as ambulatory care with the possibility of a solution by PHC.

In a first search for studies that addressed hospitalizations for ACSC, were identified many publications with the hospital as a privileged research site for PHC analysis, and a scarce production on the discussion of intermediate care services. This fact justifies the present study. The aim of the present article is to describe Emergency Department visits for Ambulatory Care Sensitive Conditions.

METHOD

TYPE OF STUDY

Exploratory descriptive ecological study.

SCENARIO

Data were accessed from a digitized database with information on care provided at the Emergency Department (UPA) Campo Limpo from January 2015 to December 2016. The unit of analysis was the care provided. The health service belongs to the Municipal Health Department in shared management with the Sociedade Beneficente Israelita Brasileira Albert Einstein. The UPA operates from Monday to Monday, 24 hours, is located in the southern region of the municipality of São Paulo, and covers about 1.1 million inhabitants from M'boi Mirim and Campo Limpo neighborhoods.

DATA COLLECTION

The study population consisted of patients who visited the UPA Campo Limpo and presented the ICD-10 of hospitalization for ACSC of the Brazilian list⁽¹⁶⁾. In the present study, the term ‘visit’ for a sensitive condition was chosen because cases treated at the UPA are not characterized as ‘hospitalization’. The following variables were analyzed: sex, age group, classification according to the Manchester Triage System, identification of Ambulatory Care Sensitive Conditions (ACSC) by the ICD-10 and presence of chronic condition. The following noncommunicable chronic diseases were considered: systemic arterial hypertension, diabetes mellitus, asthma/bronchitis and mental disorder.

With regard to the Manchester Triage System, the patient is classified into one of the five priorities - immediate (red), very urgent (orange), urgent (yellow), standard (green) and non-urgent (blue) – and identified by number, name, color and target time for the initial medical observation⁽¹⁷⁾. In the internal flow of the UPA Campo Limpo, there is still a white color classification attributed to patients who are not urgent, do not present complaints and sought the unit to perform ambulatory procedures, such as dressings and catheter insertion.

ANALYSIS AND PROCESSING OF DATA

The analyzes were performed with use of the SPSS statistical package. Data were described by means of absolute and relative frequencies for categorical variables, and by means of standard deviation (SD), median and quantiles, minimum and maximum values for quantitative variables. In the analysis of results, was considered a 99% confidence interval for the incidence of visits with identification of hospitalization for ACSC, and a margin of error of 0.4%.

ETHICAL ASPECTS

The study was approved by the Research Ethics Committees of the School of Nursing (USP), the Municipal Health Department of São Paulo and the Hospital Israelita Albert Einstein (CAAE: 63883617.9.0000.5392) in 2017.

RESULTS

In the two years (2015 and 2016), were recorded 434,883 visits to the UPA Campo Limpo. Of these, 74,248 were identified as ACSC (17.1%).

The percentage of women classified as ACSC was higher, the highest concentrations were in the age groups between 1 and 4 years (23.34%) and 20 and 39 years (23%). In relation to diagnoses classified as ACSC, the main highlight was for visits because of ear, nose and throat infections (Table 1).

Table 1 – Number of visits for ACSC according to sex, age group and diagnosis at the UPA Campo Limpo – São Paulo, SP, Brazil, 2017.

Variable	Hospitalization for ACSC	
	N= 74,248	%
Sex		
Female	38,819	52.28
Male	35,429	47.72
Age group		
Up to 1	6,764	9.11
1 to 4	17,327	23.34
5 to 9	8,282	11.15
10 to 14	4,316	5.81
15 to 19	4,744	6.39
20 to 39	17,078	23.00
40 to 49	4,725	6.36
50 to 59	4,019	5.41
≥ 60	6,993	9.42
Ambulatory care sensitive conditions		
Anemia	104	0.14
Angina	249	0.34
Asthma, bronchitis and acute bronchitis	12,855	17.31
Nutritional deficiencies	47	0.06
Diabetes	1,073	1.45
Female pelvis inflammatory disease	410	0.55
Cerebrovascular diseases	941	1.27
Immunization preventable diseases	1,648	2.22
Diseases related to prenatal/delivery	21	0.03
Chronic obstructive pulmonary disease	1,308	1.76
Epilepsies	629	0.85
Rheumatic fever	6	0.01
Infectious Gastroenteritis/complications	11,132	14.99
Hypertension	2,905	3.91
Infection of skin and subcutaneous tissue	3,808	5.13
Kidney and urinary tract infection	1,560	2.1
Ear, nose, and throat infections	33,743	45.45
Cardiac insufficiency	1,130	1.52
Parasitosis	12	0.02
Bacterial pneumonias	623	0.84
Gastrointestinal ulcer	44	0.06

The predominant classification according to the Manchester Triage System was the green (56.3%), which is considered as standard (Table 2).

Table 2 – Number of visits for ACSC according to the Manchester Triage System performed at the UPA Campo Limpo – São Paulo, SP, Brazil, 2017.

Risk classification	ACSC	
	N	%
White	752	1.0
Blue	962	1.3
Green	41,838	56.3
Yellow	15,801	21.3
Orange	14,367	19.4
Red	143	0.2
No information	385	0.5
Total	74,248	100.0

For the analyzes of association between the types of visit (ACSC or non-ACSC) and the characteristics of patients attended at the UPA Campo Limpo during the study period, were selected 323,158 visits. For these analyzes, were excluded the visits without information about ACSC or non-ACSC.

By correlating the presence or absence of ACSC with variables of sex, age group and noncommunicable chronic disease (Table 3), there was an association between patients' sex and visits for ACSC ($p < 0.001$). Women had a chance of visits for ACSC estimated at 1.05 times greater than men. Patients aged 1 to 4 years had a higher chance (1.13 times) of visits for ACSC compared to patients below 1 year of age ($p < 0.001$). Children younger than 1 year of age presented higher chances of visits for ACSC than patients from other age groups. Furthermore, the results showed there was a higher chance of visits for ACSC (estimated around four times) in chronic patients ($p < 0.001$) compared to non-chronic patients.

Table 3 – Percentage of visits based on the presence or absence of ACSC correlated to sex, age group and presence of chronic noncommunicable disease at the UPA Campo Limpo – São Paulo, SP, Brazil, 2017.

Variable	ACSC			
	No %	Yes %	OR* (95% CI)	P value**
Sex				
Male	77.4	22.6	1	
Female	76.6	23.4	1.051	<0.001
			(1.034; 1.069)	
Age group				
<1	62.0	38	1	
1 to 4	59.1	40.9	1.128	<0.001
			(1.088; 1.169)	

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Variable	ACSC			
	No %	Yes %	OR* (95% CI)	P value**
5 to 9	63.7	36.3	0.929 (0.892; 0.968)	<0.001
10 to 14	75.7	24.3	0.522 (0.499; 0.547)	<0.001
15 to 19	80	20	0.408 (0.391; 0.426)	<0.001
20 to 39	83.5	16.5	0.323 (0.312; 0.334)	<0.001
40 to 49	86.2	13.8	0.261 (0.250; 0.272)	<0.001
50 to 59	84.5	15.5	0.298 (0.284; 0.311)	<0.001
≥ 60	80.2	19.8	0.402 (0.387; 0.419)	<0.001
Presence of chronic disease				
No	78.9	21.1	1	
Yes	48.4	51.6	3.988 (3.874; 4.106)	<0.001

*OR: odds ratio; **P value: obtained by multinomial logistic models.

DISCUSSION

The first point of discussion highlighted is the high rate of visits to the UPA. This demonstrates how the population seeks this urgency service to solve the most diverse health problems, and the average rate is of 600 visits/day. Some of these consultations could be solved in PHC, a phenomenon corroborated by the literature⁽¹⁸⁾.

The prevalence of 17.1% of visits for ACSC at the UPA was similar to a study conducted in São Paulo, in which the rate was 15.9% of visits for ACSC⁽¹⁹⁾, and significantly lower than another Brazilian study with 28.5% of visits for ACSC⁽²⁾. In Brazil, there has been a substantial reduction in hospitalizations for ACSC in recent years⁽¹⁹⁾. This trend is not exclusive of the country, since in others, as in Singapore, there was a drop of 9.1% from 1991 to 1998⁽²⁰⁾, and in Canada, there was 22% decrease between the years 2001–2002 and 2006–2007⁽²¹⁾.

National and international studies indicate that “lower rates of hospitalization for ACSC are associated with greater availability of general practitioners per inhabitant in PHC, better service evaluation by the user^(8,11), continuity of care with the same family doctor and greater number of preventive consultations and regions with health centers^(3,11). “Regardless of disease burden and availability of doctors, better access to primary care is associated with fewer hospitalizations for ACSC^(6,11). A trend of reducing ACSC rates has been related to the adoption of the Family Health Strategy⁽¹⁹⁾. In the municipality of São Paulo, the number of family health teams has increased since 2000, from a coverage of 27% in 2005 to 45.1% in 2012, which corresponds to

a team expansion of 76.8%⁽²²⁾. A reflection of this expansion may explain the low prevalence of ACSC in the UPA of the Southern region.

Despite the paucity of researches in the literature that take the study of ACSC in secondary health care services, a comparative study between “a general hospital and an emergency department was conducted in Divinópolis (MG), where about one third of hospitalizations occurred in the UPA in which were received more than half of the visits for ACSC investigated^(11,23). In this reality, many ACSC have been identified in secondary care services to the detriment of continuity of care in primary health care, which is a silent event, since no admission form is issued, hence there is no record of these occurrences in official statistics^(11,23). Thus, a large quantity of visits for ACSC end up being ignored by the system for health services and for the population’s health needs.

Another point of discussion is the outstanding presence of women in the number of visits for ACSC ($p < 0.001$). Evidence of association between the sex of patients and visits for ACSC showed that women have a chance of receiving care for ACSC estimated at 1.05 times higher than the chance of men. This finding is confirmed in the literature⁽¹⁹⁾. One of the explanations is that women are more present in health services in general because health care is a female practice⁽²⁴⁾.

Regarding the age group, the majority of visits were observed in the population aged between 1 and 4 years. The estimated chance of visits for ACSC in this age group is 1.13 times higher than that of patients below 1 year of age ($p < 0.001$). This suggests that these children with acute complaints characteristic of PHC have difficult access to Primary Care Centers of their territory, either by the organization model of appointments (scheduling) or operating hours. A Brazilian study also identified a higher probability of visits for ACSC “in children under 5 years of age with lower educational level, history of emergency consultation in the previous month and hospitalization in the previous year⁽¹⁰⁻¹¹⁾. However, it is good to remember that patients at extremes of age are those with a higher prevalence of visits for ACSC, such as the elderly over 60 years^(19,25).

A study conducted in the city of Divinópolis (MG) found a higher prevalence of ACSC “in an emergency department, in the female sex and in age groups under 13 years and over 40 years old^(11,23). Hospitalizations at this UPA had a 2.64 (95% CI: 2.36 to 2.95) times greater chance of being due to ACSC^(11,23). In addition, women and patients younger than 13 years and older than 40 years ($p < 0.01$) were more likely to have ACSC⁽²³⁾. Such information suggests that Emergency Departments cover a large number of visits for ACSC, which demonstrates, once again, the population’s preference for this type of service and the importance of intervening at this point of health care.

When analyzing the Manchester Triage System performed at the UPA, most visits were classified as standard. This trend has already been demonstrated in other national studies⁽²⁵⁻²⁶⁾, which shows a greater demand for urgency services for low complexity care.

Regarding the profile of ACSC found in this study, most visits were for ear, nose and throat infections, followed by

infectious gastroenteritis and complications. However, in another research conducted in São Paulo⁽¹⁹⁾ were observed higher rates of bacterial pneumonia (17.4%), which leads us to believe there is no absolute linearity in the literature.

The data found point to the importance of discussing ACSC in the context of the UPA as a reflection of the organization model of service provision in PHC. This generates an opportunity for the reflection and reorganization of the access in order to attend the common complaints of the population, including acute affections such as those evidenced in the study, besides activities of health promotion and disease prevention.

When analyzing the association between ACSC and patients' characteristics, there was evidence of a greater chance of visits for ACSC in chronic patients ($p < 0.001$), around four times greater compared to non-chronic patients. This information suggests the fragility of the access and link of these patients to PHC by considering that patients' search for care and the scheduling are often conditioned only to 'routine consultation' and not to continuity of care that has included the worsening of their condition. Recurrent visits in this population suggest that these patients present clinical worsening and a greater chance of clinical observation at the UPA or hospital transfer to a tertiary hospital.

Studies indicate that "chronic conditions require a system of care that responds in a proactive, continuous and integrated way, through political commitment to PHC, the implementation of qualified embracement and innovative practices in the field of politics and care". However, in PHC as a care coordinator "several challenges are still faced mainly due to the fragility of implementing a network that allows integration between different levels of care,

as well as support and logistics systems for the support of communication flows and processes for social production of health"⁽²⁷⁾.

This study presented results for local management support in the organization of services in the studied region. However, some limitations stand out, such as the fact of using secondary data related to database records that depend on information registered by the unit professionals, which may interfere with its quality. The study and its results are important tools for the evaluation of this point of care in the studied territory. Based on these results, a communication flow was proposed between the Primary Care Centers of PHC and the UPA, which will be discussed in the future with local managers.

CONCLUSION

This study enabled to describe the profile of visits for ACSC in the municipality of São Paulo and to check that data found were significant from the point of view of statistics and the study site. This study demonstrated the emergency department ambulatory care sensitive conditions visits that may indicate poor access to Primary Care.

The importance of problematization of access for acute care in Primary Care Centers through analysis of ACSC in the UPA must be highlighted, as well as the need for joint interventions and the incorporation of continuous analyzes of ACSC in order to improve the care provision in the region.

The present research is expected to stimulate the study of ACSC in secondary health care services, given the scarcity observed in the literature and the importance of this point of health care for the population.

RESUMO

Objetivo: Descrever os atendimentos por condições sensíveis à Atenção Primária à Saúde em uma unidade de pronto atendimento. **Método:** Estudo descritivo, exploratório e ecológico, com abordagem quantitativa. Acessou-se um banco de dados com informações dos atendimentos realizados, de janeiro de 2015 a dezembro de 2016, em uma Unidade de Pronto Atendimento localizada na região do Campo Limpo, município de São Paulo. Considerou-se intervalo de confiança de 99% para a incidência de atendimentos com identificação de condição sensível à Atenção Primária à Saúde, com margem de erro de 0,4%. As análises foram realizadas com o auxílio do pacote estatístico SPSS. **Resultados:** Foram realizados 434.883 atendimentos, 17,1% deles por condições sensíveis à Atenção Primária à Saúde, constituídos majoritariamente pelo sexo feminino e por crianças com até 4 anos de idade. Grande parte dos atendimentos ocorreu em razão de infecções de ouvido, nariz e garganta (45,4%). Houve aumento da chance de atendimento pelo indicador em pacientes crônicos ($p < 0,001$). **Conclusão:** Os achados deste estudo apontam a presença de um perfil de pacientes de uma Unidade de Pronto Atendimento que poderiam ser atendidos por Unidades Básicas de Saúde ressaltando as fragilidades do acesso e do cuidado continuado na Atenção Primária à Saúde.

DESCRIPTORES

Enfermagem de Atenção Primária; Atenção Primária à Saúde; Hospitalização; Sistema Único de Saúde.

RESUMEN

Objetivo: Describir las atenciones por condiciones sensibles a la Atención Primaria de Salud en una unidad de urgencias. **Método:** Estudio descriptivo, exploratorio y ecológico, con abordaje cuantitativo. Se accedió a un banco de datos con informaciones de las atenciones realizadas, de enero de 2015 a diciembre de 2016, en una Unidad de Urgencias ubicada en la región de Campo Limpo, municipio de São Paulo. Se consideró intervalo de confianza del 99% para la incidencia de atenciones con identificación de condición sensible a la Atención Primaria de Salud, con margen de error del 0,4%. Los análisis se llevaron a cabo con la ayuda del paquete estadístico SPSS. **Resultados:** Fueron realizadas 434.883 atenciones, el 17,1% de ellas por condiciones sensibles a la Atención Primaria de Salud, constituidas mayoritariamente en el sexo femenino y niños de hasta cuatro años de edad. Gran parte de las atenciones ocurrió en virtud de infecciones de oído, nariz y garganta (45,4%). Hubo incremento de la probabilidad de atención por el indicador en pacientes crónicos ($p < 0,001$). **Conclusión:** Se observó prevalencia relativamente baja de atenciones por condiciones sensibles a la Atención Primaria de Salud en la unidad de urgencias, lo que puede sugerir mejor acceso, cobertura y calidad de la Atención Primaria.

DESCRIPTORES

Enfermería de Atención Primaria; Atención Primaria en Salud; Hospitalización; Sistema Único de Salud.

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