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CHARACTERIZATION OF DEMAND NOT RELEVANT TO SAMU PORTO ALEGRE: DESCRIPTIVE STUDY

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ABSTRACT

In 2009, the demand not pertinent (DNP) to the Mobile Emergency Care (SAMU) Service in Porto Alegre represented 36% (26,233) of calls directed to 192. This irrelevance is established when the case does not configure itself, to the medical regulator, as life-threatening situation, being unnecessary, therefore, sending ambulances to attend. Aimed to present the characterization the DNP by Managements (GER) of the Municipal Health Secretary, of the year mentioned before. The study was quantitative and analyzed variables were: age, sex, time span, weekday, month, type of rescue and relief subtype. In all eight GER, the frequent calls were female, aged 20-39 years and type of clinician distress. To characterize the DNP subsidizes the proposal that nurses act in first aid workshops to engage with the community about urgent health problems, a subject that has been treated as a domain of health professionals.



ORIGINAL ARTICLES

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INTRODUCTION

The mobile pre-hospital care (PHC) in Porto Alegre was structured around 1993⁽¹⁾, from the French model. The Central Medical Regulation (CR), a central element in the model mentioned⁽²⁾ is where all the calls for help (PS) of users get coming through the number 192, from radios of the Military Police and the Public Transport Movement Company (PTMC). In CR located in the Emergency Hospital (EH), the auxiliary telephonists of medical regulation (ATMR) perform the care of the PS, record the name and address of applicants and transfer calls to regulators doctors (MR). The role of MR is to sort the PS, sending resources to the service, according to the complexity of each case⁽³⁾.

Currently, the service has 11 basic support ambulances, three advanced support ambulances and one transport ambulance, 44 doctors, 21 nurses, 52 nursing technicians, 74 drivers, 26 ATMR and radio operators and five administrative assistants⁽¹⁾. The Teams are distributed in 12 bases: EH, Restinga, Emergency Services Cruzeiro do Sul, Lomba do Pinheiro, Centro Vida, Bom Jesus, Navegantes, Belém Novo, Cristo Redentor Hospital, Partenon, Cavallhada e Serraria⁽¹⁾.

The location of the base is defined by geography criterion, to allow a better response to the occurrences⁽¹⁾. Response time is the time elapsed between the moment the incident occurs until the arrival of PHC on the event⁽⁴⁾. The smaller the response time, the greater the possibility of avoiding or minimizing sequelae resulting from a disorder of health⁽⁴⁾.

The PS that, in the evaluation of the MR, correspond to situations where there is no risk of life are defined as not pertinent (NP) to the nature of the service and, therefore, are not served by the SAMU. This demand not pertinent (DNP) can have at least two important implications. Firstly, it may compromise the response time of service, due to a possible delay in the care of situations that actually endanger the life of a user. Beyond that, the definition of a PS as NP devalues the urgency of the user and the health problem that motivates the call to 192, leaving it unattended. In this case, regardless of the seriousness of the problem when the telephone calls, this can be aggravated due to the non attendance⁽⁵⁾.

Considering the above scenario, it is important to identify the characteristics of DNP. Such characterization may aid the planning of actions to reduce this demand, improving the response time of the SAMU and autonomy of users with urgent health problems.

METHODOLOGY

We analyzed all of the DNP to Porto Alegre`s SAMU, which originated in phone calls to 192 during the year 2009. Information was obtained from the database Prehospital Care System (PCS) of SAMU. The sample consisted of 26.233 calls, which accounted for 36% of the 79.078 calls that were evaluated by MR that year. The methodology was quantitative, descriptive statistics driven. Descriptive statistics covers all techniques used to organize, summarize, classify, describe and communicate data in tables, graphs or other visual resources, obtaining, thus, estimates of representing parameters these data⁽⁶⁾.

The frequency(s) (F) and the percentage of frequency(s) (PF) were obtained with the support of SPSS (Statistical Package for Social Sciences) and guidance of the Center for Statistical Support (NAE) of the Federal University of Rio Grande do Sul (UFRGS). The variables analyzed were: age (FE), sex, time span (FH), weekday (DS), month, type of relief (TS) and subtype relief (SS).

The results will be presented by management(s) (GER) of the Municipal Health Secretary of Porto Alegre (SMS), according to the belief that future investment in the reduction of DNP to the SAMU should be planned in conjunction with other health services designed to serve the population, which are listed under the coordination of GER.

There was the possibility of defining the GER at the addresses typed by ATMR of 25.884 phone calls. The others showed registry errors. Managements are eight, namely: 1) Centro, 2) Northwest/Humaitá/Navegantes/Ilhas; 3) North/Eixo Baltazar; 4) East/Northeast; 5) Glória/Cruzeiro/Cristal; 6) South/South Central; 7) Partenon/Lomba do Pinheiro; and 8) Restinga/Far South.

The study was approved by the Ethics Committee and Research in the record of the SMS 346, on June 3, 2009.

RESULTS

The demand not pertinent in the Managements of SMS in Porto Alegre

TABLE 1. DNP GER by the SMS. Porto Alegre, 2009

GER	N	(%)
1	4993	(19)
2	3247	(12,4)
3	3719	(14,2)
4	2161	(8,2)
5	2302	(8,8)
6	3681	(14)
7	3790	(14,4)
8	1991	(7,6)
18*	349	(1,3)
Total	26233	(100)

* GER 18 are asked to GER ignored.

As shown in Table 1, for the GER, the greater F of DNP to SAMU of POA occurred in a GER 1, followed by GER 7, 3 and 6.

Age demand not pertinent

TABLE 2. DNP, age for GER by SMS. Porto Alegre, 2009

GER	FE										Total	
	< 10		10 a 19		20 a 39		40 a 59		60 or more			
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
1	939	(23)	298	(13)	1299	(18)	989	(20)	1058	(18)	4583	(18)
2	488	(12)	245	(11)	834	(11)	695	(15)	834	(12)	3086	(12)
3	483	(12)	296	(13)	1041	(14)	942	(16)	863	(15)	3625	(15)
4	308	(8)	217	(10)	623	(9)	497	(8)	450	(8)	2095	(8)
5	333	(8)	225	(10)	709	(10)	564	(8)	412	(9)	2243	(9)
6	596	(15)	338	(15)	1066	(15)	825	(14)	770	(15)	3595	(15)
7	586	(14)	387	(17)	1110	(15)	896	(13)	712	(15)	3691	(15)
8	314	(8)	237	(11)	594	(8)	451	(6)	344	(8)	1940	(8)
Total	4047	(100)	2243	(100)	7276	(100)	5859	(100)	5443	(100)	24858*	(100)

* The total is different from that presented in Table 1 due to the absence of records in Database analyzed.

Regarding the age variable, the analysis of Table 2 allows rate, among other findings, that requests for help to 192 occurred more F in the FE from 20 to 29 years in all GER. It is observed that in the GER 2

was the same F in this FE and in the FE 60 years or more, that is among the elderly. The second FE with largest F is of 40 to 59 years in GER 2-8. In GER 1, the second FE of largest F is 60 years or more.

Sex not pertinent Demand

TABLE 3. DNP, sex for GER of SMS. Porto Alegre, 2009

GER	Sex	Total	
		n	(%)
1	F	2285	(50)
	M	2298	(50)
2	F	1667	(54)
	M	1429	(46)
3	F	1994	(55)
	M	1631	(45)
4	F	1091	(52)
	M	1004	(48)
5	F	1246	(56)
	M	997	(44)
6	F	1974	(55)
	M	1621	(45)
7	F	1991	(54)
	M	1700	(46)
8	F	1092	(56)
	M	848	(44)
Total		24868*	-

* The total is different from that presented in Table 1 due to the absence of records in Database analyzed.

DNP had a PF of 53% from the female and 47% from the male. In Table 3 we can see that the incidence of females was higher in all the GER except the GER 1, where the percentage between the genders was the same.

Type of emergency of the not pertinent demand

TABLE 4. DNP, type of emergency Management for the SMS. Porto Alegre, 2009.

GER	Clinical		Obstetrical		psychiatric		Traumatic		Orientation		Transport		Total	
	N	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
1	2076	45	45	1	714	16	554	12	1138	25	61	1	4588	100
2	1497	48	97	3	367	12	328	11	8786	25	27	1	3102	100
3	1783	49	109	3	521	14	272	8	919	25	27	1	3631	100
4	1008	48	76	3	269	13	206	10	522	25	21	1	2102	100
5	963	43	92	4	345	15	220	10	597	27	27	1	2244	100
6	1516	42	142	4	482	13	415	12	1013	28	26	1	3594	100
7	1746	47	150	4	471	13	329	9	952	26	42	1	3690	100
8	851	44	128	6	211	11	182	9	540	28	32	2	1944	100

In Table 4, it was found that, in all GER, the clinical TE was greater F. The orientation TE is where MR classifies those PS that the user telephoned 192 requesting advice on how to proceed before a health as, for example, what to do in cases of fever in children. This TE took second place of PF in all GER. The third highest PF at all GER was TE traumatic and the fourth was Psychiatric, in all GER. To exception of GER 1, where TE obstetrical and the TE transport have the same PF, in all other GER, these TE occupied the fifth and sixth respectively.

Weekday not pertinent demand

In relation to the variable day of the week, the PF were similar in all WD and 15.2% were also higher on Fridays and Sundays. In the other WS, the percentages were as follows: on Thursdays 14.6%, 14.3% on Saturdays, Mondays at 13.9%, on Tuesdays 13.5% and on Wednesday 13,3%. Among the GER, highlight the following results.

On Sundays when there was the greatest PF in GER 3, 4, 6, 7 and 8, Fridays at GER 1 and 2, and Tuesdays in the GER 3. Among the TE for WD, it was found that the TE Psychiatric showed the pattern of PF for the others TE. In all GER, except in GER 3, TE Psychiatric occurred on weekends.

Time span not pertinent demand

In general, one can identify from the data on the DNP, which in 2009, 12.6% of DNP occurred between 1h and 5h59min (1st FH), 24.7% between 6am and 12:59 (2nd FH), 29.8% between 13 pm and 18:59 (3rd FH) and 32.8% between 19 pm and 0h59min (4th FH). Considering the possibility that the DNP have different characteristics, according to the location where the phone calls proceeded, it was examined the TE and FH for each GER.

In GER 1, the results found from the data analysis were that the TE clinical, obstetrical, psychiatric and transportation were the largest PF in the 3rd FH (33.1%, 36%, 30.7%, 36.8% and 46%) and TE orientation had higher PF in the 4th FH (31.1%). At GER, the PS occurred more PF in the 3rd FH (32.3%). In GER 2, the TE clinical, obstetrical, psychiatric and orientation showed the highest PF in the 4th FH (31.5%, 34%, 33.4% and 35.3%), the traumatic presented largest PF at the 3rd FH (38%) and transportation showed higher PF in the 2nd FH (44.4%). At GER, the PS had happened more PF in the 4th FH (32.5%).

In GER 3, the TE clinical, obstetrical, psychiatric and orientation showed the highest PF in the 4th FH (32.3%, 31.5%, 32.8% and 39.1%). The TE traumatic and transportation were more PF in the 3rd FH (34.3% and 48.1%). At GER, the PS had happened more PF in the 4th FH (33.9%).

In GER 4, the TE clinical, obstetrical, psychiatric and orientation showed the highest PF in the 4th FH (31.7%, 32.5%, 39.9% and 41.8%), the traumatic had higher PF in the 3rd FH (33.6%) and transportation showed higher PF in the 2nd FH (61.9%). At GER, the PS occurred more PF in the 4th FH (35.3%).

In GER 5, the TE clinical, obstetrical, the psychiatric, the traumatic and orientation had higher PF in the 4th FH, and transportation had the highest PF with the same value in the 2nd and 3rd FH (35.7%). At GER, the PS occurred more PF in the 4th FH (34.1%).

In GER 6, the TE clinical, obstetrical, the psychiatric, the traumatic and orientation were more PF in the 4th FH (31.1%, 36.9%, 40.5%, 35.8% and 39%), and transport was greater PF in the 2nd FH (42.3%). At GER, most PF of PS occurred in the 4th FH (35.3%).

In GER 7, the TE clinical, obstetrical, psychiatric and orientation showed the highest PF in the 4th FH (31.4%, 42.2%, 33.5% and 40.9%), the traumatic and transport had higher PF the 3rd FH (33% and 42.9%). At GER, the PS had higher PF in the 4th FH (34.5%).

Finally, in the GER 8, TE clinical, psychiatric and orientation showed the highest PF in the 4th FH (32.5%, 39.3% and 38.4%). Since the TE traumatic and transport were more in the PF in the 3rd FH (37.8% and 37.5%) and obstetrical at the 2nd FH (32.8%). At GER, the PS occurred more PF in the 4th FH (33.9%).

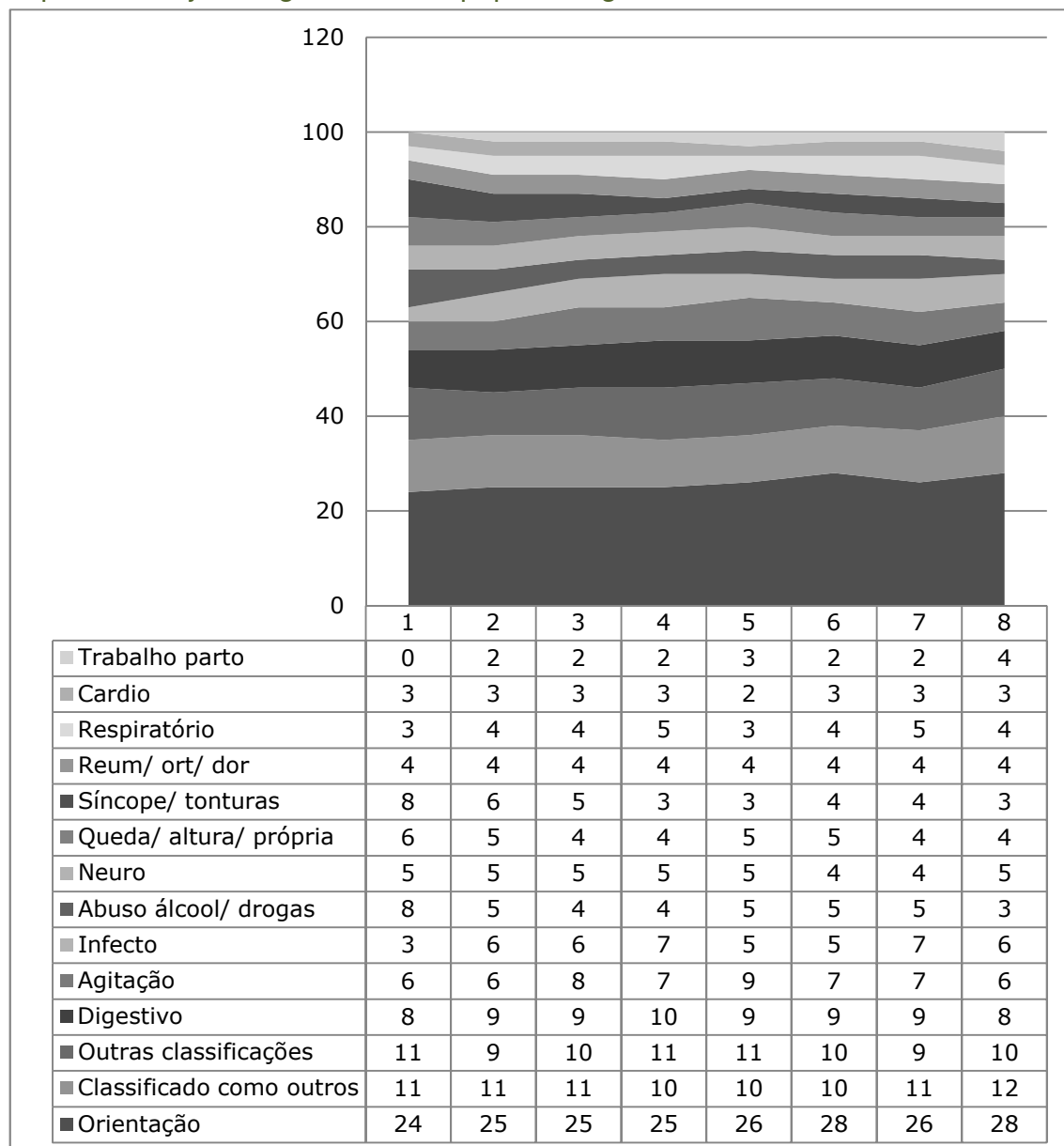
Seasonality of not pertinent demand

The analysis indicated that the DNP shows a seasonally characteristic only in TE clinical and orientation. As the data analyzed, in the winter months (especially July and August) there was an increase of DNP with respect to TE clinical and orientation in all managements. For the rest TE there was not a standard compared to the months in which there⁽⁵⁾.

The subtype of rescue demand irrelevant

After being selected the TE, the PCS allows the MR rate the OS as the SS. The analysis results of the SS Management showed that some SS are more common in all GER, as illustrated in Figure 1. The SS more F were: requests for orientation, the problems classified as other (and all other classifications problems), digestive problems, problems of agitation, the abuse of alcohol and drug, problems of infection, falls from high or itself high, neurological problems, respiratory problems, orthopedic problems (rheumatology, orthopedics, pain), syncope or dizziness, cardiac problems and labors.

FIGURE 1. DNP to the SAMU, percentages of SS by GER of SMS. Porto Alegre, 2009.



DISCUSSION

Among the GER, was observed that in the GER center was the highest PF (19%) of DNP, followed by GER Partenon/Lomba do Pinheiro (14.4%), North/Eixo Baltazar (14.2%) and South/Central South (14%).

The GER Center encompasses neighborhoods with intense popular shopping and banking. People who find themselves alone in this region and have a health problem are rescued for passers-by and workers of the locality. The common activation of SAMU in the region of this GER by NP situations the nature of

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the service suggests users that circulating or residing in the downtown area turn to SAMU or by difficulty in accessing to other health services or because people who attend such situations unknow first aid.

When analyzing the variables FE, sex, FH, month, TE and SS of the PS of DNP to SAMU by GER of SMS, was found similarities and differences between the results of each GER. Among the similarities, there is the result that in all the GER the TE clinical was more frequent among the other TE, in both gender. The differences, it was found that, among all eight GER, was GER 1 that occurred lower F of TE obstetrical. This low frequency of obstetrical TE as a generator of DNP may be related to the fact that GER understand the area of the city where is located the majority of services for SUS referral to obstetric care - Hospital (H) Fêmeina, H de Clínicas and H President Vargas.

In relation to the variable weekday, it is arguable that DNP does not follow a pattern for TE clinical, obstetrical, traumatic, transport and orientation. In relation to the variable TE psychiatric and the variable WD, unlike the previous situation, it attended a pattern, with higher F on weekends in all GER and lower F on other days. One hypothesis is that this finding could be related to the fact that the weekends, when the coexistence of leisure is higher among people, problems and conflicts may emerge influenced by alcohol and drugs and emotional disorders existing, more strongly that on weekdays.

Regarding the variables FH and TE in all GER, occurred a higher F of DNP in the 4th FH, except for GER 1, whose PS showed higher F in the 3rd FH, corresponding to a time when the movement of people in this region of city is still big, in terms of understanding the business hours.

Regarding the variables month and TE, it was compared the percentages of TE occurred per month, for management. The TE clinical and TE orientation had higher PF in the winter months in all GER. This demonstrates that the DNP is seasonal, with higher F in winter, suggesting that address special actions at this time of year.

Regarding the SS, the guidelines had higher F in all GER, which suggests that the subjects of DNP, among other situations, unknown first aid procedures.

FINAL CONSIDERATIONS

Veronese A.de-Oliveira D.Nast K. Characterization of demand not relevant to SAMU Porto Alegre: descriptive study **Online Brazilian Journal of Nursing** [serial on the Internet]. 2012 April 30; [Cited 2012 May 14]; 11(1):[about ## p.]. Available from: <http://www.objnursing.uff.br/index.php/nursing/article/view/3568>.

The fact that SAMU be a privileged observatory of the Health System^(3;7) allows the health professional who acts in it can analyze, beyond the PS are served, those who do not receive care, which correspond to the DNP.

To analyze the DNP is not usually a PHC routine service. The PHC attention is for those users who need emergency care due to signs of imminent risk of life to MR⁽⁵⁾. Studies with a focus on DNP started in 2006⁽⁵⁾ and, in spite of them produced significant results, there are still gaps in knowledge about the subject. Such gaps are being studied in the continuation of this research and refer to the actions of users with urgent health problems before their PS denied by the SAMU.

One of the results of this study was the finding that PS of the pertinent DNP occurs primarily due to the SS orientation, which shows that users, when facing a health problem, seek the SAMU doctors for guidance on first aid. The fact that access to a medical advice⁽³⁾ is facilitated through the phone 192 make the people to use this feature. The ease of access to medical advice is positive when the individual acquires from the advice, some competence to act independently in relation to their health problem.

It is suggested that guidance first aid procedures are carried out continuously, so that subject gain connotation popular^(5;8). The script issues to be addressed in these guidelines can be grounded in this study. Promoting a theme that has popular connotation means investing in the incorporation of the same everyday of the people, so it is not, in the case of first aid, a subject discussed only in courses for professionals health⁽⁵⁾. This can be achieved through a continuous work of nurses⁽⁵⁾ with the population and community leaders from locations where the DNP is significant to the SAMU.

In this sense, it is believed that a continuous work, that promote the competence of the population to act with autonomy in the face of an urgent problem of health, can result in the decrease of the DNP to SAMU. Moreover, as suggested in another study, provide guidance on the proper use of the SAMU could also contribute to the reduction of DNP to the service⁽⁹⁾. Another important recommendation that emerged from this work is that the database of SAMU is better filled by ATMR and the MR, so that research can have more precise information on the characteristics of the service demand.

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