Social and Economic Needs of the Not Pertinent Demand by the Mobile Emergency Service in Porto Alegre, RS, Brazil

Author
Andréa Márian Veronese, nurse, PhD
Samu Porto Alegre, RS, Brazil
Email: andreamv@terra.com.br

Abstract
The purpose of the article is to present a part of the demand study to the Porto Alegre, Brazil Mobile Emergency Service (SAMU) considered not pertinent (NPD) by the service. This not pertinence is established when the case is not configured, by the regulator physician, as death risk situation, being unnecessary, therefore, sending ambulances to attend.

The research occurred in two stages. At first, was accomplish an analysis of telephone calls at SAMU in 2009. These data were analyzed using the Statistical Package for the Social Sciences. In second stage, 31 applicants from de NPD were interviewed following the premises of Grounded Theory.

Among the results, it is highlighted that, in 2009, the NPD to SAMU of Porto Alegre represented 33,2% (26.233) of calls directed to 192. In qualitative analysis, factors were described that influenced people to request ambulances.

The results pointed out that the demand is the result of a complex process of interaction between those who ask for help and the resources they have / use to solve their problems. In other words, a call for ambulance is not just a health problem. The call for help involves social needs, economic need, divergences with health professionals in the meanings of what is risk of death, lack of notion of first aid and access problems for the treatment of health problems.

Therefore, service regulation needs to be careful when listening for help. The patients often have needs that go beyond the focus of the service. The ambulance nursing, in turn, needs to be prepared to meet this NPD.

The study showed that urgent health problems are not exclusive to the health sector. The complexity of health emergencies also has implications for the sectors of education, health promotion, social assistance, security, construction and infrastructure, transport, among others. Such findings reinforce the need for user-centered assistance, thus reducing the difficulties in coping with their health problems and justifying inter-sectoral actions that may be proposed based on this research.

The study was approved by the ethic and research committee of the Municipal Health Department of the city hall of Porto Alegre.

1. Introduction

Porto Alegre is a municipality located in the south of Brazil, has 1,409,351 inhabitants and is the capital of the state of Rio Grande do Sul.

The city has a public service, pre-hospital care, a pioneer in the country since 1995: SAMU\(^1,2\).

SAMU is a component of the National Emergency Care Policy, responsible for pre-hospital care, in the Brazilian Unified Health System (SUS)\(^3,4\).

SAMU\(^2\) attends urgent cases when people need care at the place where they occurred (because of trauma, clinical, psychiatric, obstetric problems) or who need transportation to a health service.

The Service, in Porto Alegre, has 3 advanced support ambulances (USA) and 14 basic support support ambulances (USB)\(^2\).

USA is equipped with intensive care equipment (cardioverter, ventilators, infusion pump, immobilization equipment and medications). The USA crew is composed of a nurse, a doctor and a driver\(^1\).

The USB is equipped with automatic defibrillator, materials for immobilization and medications. The USB crew consists of a nursing technician and a driver\(^1\).

People, to receive care by the SAMU, need to call a number, which is national: 192\(^1\).

Aid calls to 192 arrive at a Regulation Center. Telephone operators, radio operators and physicians regulators work at the regulation center\(^1\).

Telephone operators answer 192, collect the name and address of those who need assistance and forward the call to a regulatory physician\(^1\).

The regulatory physician, through service protocols, decides whether to send a USA or a USB for assistance\(^1\).

The USAs are in areas to strategically to attend the entire city: one at SAMU Headquarters (central area), one in the south and one in the north. The USBs are also strategically located throughout the city, according to the demand for service of the neighborhoods.

At the request of the regulating physician, a radio operator forwards the ambulance closest to the requestor's address.

It may also happen that the doctor does not send an ambulance. In this case, it guides what the citizen must do to resolve his urgency.

There are nursing technicians and nurses working in all areas of the SAMU (management, central regulation, responsible technician – physician and nurse, permanent education, assistance, transport service, material processing service, laundry and material stock). The nursing staff and other SAMU employees receive training in the permanent education center and are public servants.

2. Methodology

The research start after being approved by the ethic and research committee of the Municipal Health Department of the city hall of Porto Alegre under number 346\(^1\).

The study was carried out in two stages: one quantitative and the other qualitative. The decision to use qualitative and quantitative methods in the same research was due to the complexity of the social phenomenon to be studied and the possibility that the use of complementary methods offers to better explore such complexity\(^5\). Such methodological characteristic is the mixed sequential method\(^6\).

In the quantitative stage of the study, it was a question of describing the phenomenon of NPD in numbers\(^1\). The
The study population was the total population that asked for help from SAMU during 2009: 531,981 users. The sample analyzed corresponded to 26,233 help calls classified by regulators as NPD.

The variables analyzed were as follows: a) neighborhood in the municipality of Porto Alegre that was included in the SAPH as the source of the telephone call; b) management: area that corresponds to the management of the Municipal Health Department of Porto Alegre for the purposes of planning and executing health actions; c) age group: age range of users; d) sex: male and female; e) day of the week on which the help call was made; f) time band: interval of hours in which the help call occurred; g) month in which the help request occurred: classification and type of assistance that was in the SAPH; h) type of assistance: classification of the type of assistance contained in the SAPH and i) relief subtype: corresponds to the classification of the relief subtype contained in the SAPH.

The results were analyzed with support from the Federal University of RS Statistical Advisory Center and the SPSS software for organizing the data, which facilitated their descriptive analysis.

In the qualitative stage, the part of the data that cannot be quantified was analyzed, because it refers to the universe of meanings, motives, aspirations, beliefs, values and attitudes. This moment corresponded to the requestors' report on their requests for assistance to SAMU, which were classified as not relevant by the service.

The inclusion criteria were: being a SAMU requester, coming from three neighborhoods with the highest concentration of connections to 192, classified as not relevant and that were part of the same region and the same management, except the Center (since the requests in this place proceed generally, from people who seek care for subjects who transit through banks and local businesses and would not know how to provide information for the intended interview), remember the request made to SAMU, read or listen to the Free and Consent Term by telephone and accept to participate in the study.

The type of interview chosen for data collection was semi-structured, due to the assumption that this would make it possible, based on certain initial basic questions of interest to the research, to formulate more questions as the answers of the informant were received. In this way, the interviewed applicant would spontaneously follow his line of thought in reporting his experiences on the focus of the research. The total number of interviews was 31.

The data collection ended when the theoretical saturation was verified, that is, when no new properties or dimensions of the data or new data emerged in the analysis. This means that the development of the theory is already dense and the relationships between the well-established and validated sectors.
The grouping of units of analysis generated categories, in a process called open coding\(^9\): a) health problems; b) health problems; c) biological needs; d) social needs; e) economic needs; f) conflicts in the meaning of urgency; g) first aid and h) access problems in dealing with health problems.

Concomitant with open coding, other codifications were carried out: selective or theoretical coding (which corresponds to the most abstract mode of analysis, which originates theoretical codes)\(^9\).

At that point in the analysis, several authors who had theorized the constitution of societies had already been studied, as they felt the need to seek in a social theory the assumptions that corroborated the results of the analysis of the study data. This was necessary so that the arguments about the theoretical evidence could be exposed with greater foundation. As the analysis of the construction of the NPD indicated that it was, at the same time, produced by the subjects' agencies and also a product of the structure to attend to health problems, the Structural Theory was chosen. This theory addresses agency and structure as parts of the same duality\(^5\).

Theoretical coding was carried out, axial coding was carried out, in which the categories mentioned in the open coding and those identified in the selective coding were integrated.

The objective was to gather data by elaborating connections between the categories, while trying to find out how to explain the NPD construction process, taking into account the actors' point of view and how they dealt with the problem, comparing themselves to the light of the new data that was arriving and trying to identify the most significant categories. This process reduced the number of categories to two: a) requesting help from SAMU: the user agency and b) using the structure in situations of health problems\(^1\).

It is important to note that the final result of the study was a process called Producing NPD: the duality of the structure (Figure 1.\(^1\)).

**Figure 1: Producing NPD: the duality of the structure**

It is important to note that this article refers only to one part of the quantitative analysis: social and economic needs.

3. Social construction of demand to SAMU

The perception of the problems that involve the SAMU demand has been following my daily work as a nurse in an advanced support ambulance. I experienced situations in which two situations are visible: the difficulty for users to obtain care for health problems and failure to self-care for their health.

The reasons and circumstances in which the demand for the service has been built corroborate the recognition of the importance of this phenomenon for SUS users. The impact of a call not answered by SAMU may generate, perhaps, complex demands for the system.

Figure 2: Access to some residences in Porto Alegre (night)


Trying to solve a health problem due to difficulties in accessing a health service or having learned to solve problems with the available resources at a given moment can increase the problem, as is the case of someone sick who lives in a difficult to access place (For example , Figure 2 and Figure 3.). Living in places far from the emergency room, having no way to get around, are difficulty for the sick people who activate SAMU.

If the SAMU does not attend, your illness may get worse. This is an example of the importance of pre-hospital care in Porto Alegre. Ordinance nº 104 of January 25, 2011 defined terminologies to be used in national legislation that may contribute to an attempt to conceptualize the health problem that is the object of attention in pre-hospital care.
According to this ordinance, health grievance means any damage to the physical, mental and social integrity of individuals, caused by harmful circumstances, such as accidents, intoxications, drug abuse and hetero-inflicted injuries. This same ordinance defines disease and event. The first is an illness or a medical condition, regardless of the origin or source, which represents or may represent significant damage to humans. Event is the manifestation of an unknown disease; or event of exacerbation of a known disease.

Considering the definitions of ordinance, you could say that, within the scope of the SAMU, the condition to be treated can then assume at least two meanings: an event that occurs in an individual without a previously known disease, or an already known disease.

On the part of those who suffer an injury, there is a need for it or the person accompanying it to make a decision on what to do. Such a decision will therefore be guided by social culture and accessibility conditions.

Although the National Emergency Care Policy be explicit in the determination that the attendance of a health problem must occur at any level of the system, is the user who decides where to seek care. Normally, for those who have difficulties in accessing health centers, the search for help is usually at SAMU. At SAMU, users know that they will find, in addition to trained professionals, transportation.

Although they are commonly used no difference, in this manuscript, health grievance and health problems are understood as distinct concepts. Health grievance refers only to a biological event. Health problems have a broader meaning, because, in addition to the health problem, it includes the set of elements that define the social position of an individual in society involved in the event of urgency, such as socioeconomic needs. Social position, in addition to interfering with the meanings of health problems, also influences the choice of which interventions are best to solve them. Other authors contribute to a better understanding of this conception of a health problem. The first mentions that, in a more comprehensive perspective, the notion of a health problem includes, in addition to illness, modes of transmission and risk factors, the needs and/or determinants of ways of life and work. Thus, the problems are not identified only by the clinical and epidemiological approaches, but above all by the social approach. The second author states that establishing health interventions based on the identification of health problems as given objects, which passively offer themselves to observation, just being correctly identified by appropriate techniques is an idyllic image of perfect adjustment. Therefore, it is also against the simplifying perspective of a health problem and proposes, on the contrary, a nuanced conception. He emphasizes that a health problem is related to a complex negotiation process between several actors, whose results are contingent and unstable over time.

Considering the aforementioned authors, it can be argued that, in the scenario of the user who is requesting help from the SAMU, circumstances that are characteristic of the context coexist that are not directly implicated in the health problem, but in the decision making on how to interfere. This is the case of users who request an SAMU ambulance because they do not have their own resources to travel to a health service. In such a scenario, not having a car or other mean of transporting the patient is a health problem (Figure 2 and Figure 3).

This is an example that the health problems that embody the demands of the
SAMU have a social origin and, therefore, to understand the construction of the phenomenon, it is necessary to consider the global context of the individual's life\(^1\).

According to the legislation, the Health System should be able to meet users and their health demands\(^18\). Specifically, in the case of SAMU, its function in the system is to assist the user early in the place where the injury occurred, performing interventions and providing access to the health system in the service that would continue the care started there\(^3\).

This does not mean that SAMU must attend to all health problems, as this is a mission of the health system as a whole. According to the Constitution\(^4\), access to the health system is a user's right and refers to the duty that the state has to offer, in a universal and equal way, actions for the promotion, recovery and protection of their health\(^8\).

At SAMU, access to care is provided through a free telephone call to a number that is national: 192\(^2\). When the call arrives at the regulatory physician, the latter, based on some criteria established by law, decides whether the call will be or not attended by the service\(^19\).

The demand for a health service originates from an intervention request stated by the user\(^16\). In the case of SAMU, the demand for the service originates from a help request requested by people\(^1\).

**Figure 3:** Access to some residences in Porto Alegre (5 am)

![Image](image_url)

Due to not being able to meet the entire demand and to optimize its mission, SAMU performs a triage, prioritizing the most serious cases, that is, situations that doctors deem to be at greater risk of suffering, of sequelae or death.  

For the other situations, assessed as less serious, ambulances are not sent, which corresponded to 33.2% of the total requests for help to SAMU in the study carried out in 2009.  

Even not considering health problems as urgent, in the sense of representing a risk to life, it is possible that some users seek access to SAMU due to its potential for resolving problems within the system, due to its purpose of attending urgencies. This condition has a positive impact on expanding and facilitating users' access to the health system. Arriving by ambulance at a health service gives the situation priority status, which, in a health system where it is still not possible to meet all demands, can mean guarantee of care. Faced with their health problems, users end up accessing the system wherever possible, which, contrary to any rationalization used by health sector technicians in determining the appropriate gateway.

In the process of defining which help requests to attend to, two problems are evidenced for the user, who sometimes does not have their help requested (typical urgencies in the biomedical sense) and for SAMU, a demand for requests which, at times extrapolates the resources for answering calls. Thus, it is possible that such issues significantly delay medical measures and, equally, cause an impact on people's lives, since considering that the survivors may have sequelae of the injuries. For those who are denied their request for assistance, it remains to try to access another type of health service, which is often difficult, because it depends on the availability of a means of transport.

The alternative is to give up seeking care and, in some cases, wait for the health problem that originated the demand to improve.  

The perception of the phenomena that involve the SAMU demand is related to two issues. The first is with the difficulties of access to urgent care, which demonstrates one of the contradictions of the Brazilian health system. Such a contradiction is revealing of the difficulties of SUS in implementing health actions in line with the principle of universality. In addition, it is related to the issue that, today, the execution of first aid is a matter considered by specialists, such as SAMU. Such a contradiction is revealing of the difficulties of SUS in implementing health actions in line with the principle of universality. In addition, it is related to the issue that, today, the execution of first aid is a matter considered by specialists, such as SAMU workers. In this sense, different urgency assessments can be related to different definitions of what is an urgency. In the divergence between the medical evaluation and the evaluation of the user who experiences the health problem, it seems to be implicated the personal involvement of the applicant in the situation that gave rise to the request for help, in addition to the knowledge learned in previous experiences.

Listening to SAMU users who played a role in situations where they needed SAMU provides support for a better understanding of the construction of this demand.  

The study of the experiences of users who triggered SAMU and who were not attended by the service showed the circumstances in which the health emergencies perceived by these users are produced and the health problems involved in this context, in addition to the functioning of health as a whole. In the study, among others, the social and
economic needs that influenced the request for help to SAMU\(^1\) were mentioned.

### 3.1 Social and economic needs

Social needs are part of the list of conditions for the existence of a demand to SAMU that is considered not pertinent\(^1\). Social needs, just like economic needs (being broke) can enhance biological needs that result in the SAMU’s call for help.

By social necessity we mean those conditions whose absence can reduce the promotion, protection and recovery of the health of people who make a request for help to SAMU.

Such needs are directly linked to the singular way in which individuals perceive and act in the world, in a certain time and space, and which can, therefore, modify this mode all the time\(^2\).

The position occupied by the individual in society can be understood through reflection on social networks as a concept of junction\(^19\). Based on this consideration, it is understood that social networks will play a mediating role between knowledge, in this case, between an applicant and a regulatory doctor, which will be decisive in the decision to request assistance from SAMU.

It is important to mention that there are two types of social networks\(^2\). Primary networks concern the meaningful relationships in which one or more people establish daily throughout their lives (relationships of familiarity, kinship, neighborhood, friendship, etc.) and which correspond to the socialization process of individuals. Secondary networks are formed by the collective action of groups, institutions and movements that defend common interests.

Primary social networks are present in the narratives of people who requested o SAMU\(^1\). Family, friends and neighbors were mentioned at this level. No examples of secondary protection networks were found in these people’s statements. The military police, the school and the taxi drivers were mentioned as examples of a level other than the primary level; although they are not articulated with the purpose of a social network for the benefit of a health problem, they were cited prominently in situations that were considered a demand not pertinent to SAMU\(^1\).

The family, in general, is considered the basic and universal foundation of societies, as it is found in all human groups, although structures and functioning vary\(^24\). It is the first social bond that the individual establishes, and it is usually the family members who provide assistance at the time of a health problem or who is sought to try to resolve a health problem of one of its members\(^1\):

*My mother started to feel bad, we measured her pressure and her pressure was 19 for 10, we laid her down and called SAMU. (P5)*

The school can be seen as an option for those whose family support is complicated in situations of health problems.

In labor in primiparous pregnant women, without family support and who seek support at school, it remains for teachers to request SAMU services to attend to, which will be considered a not pertinent demand. This can lead to the deviation of the function of the Military Police, because, in the refusal of SAMU, the teacher asked the police to transport the pregnant woman.

In the absence of family, friends, neighbors and even former teachers play a special support role in the face of a health problem:
The girl came here crying. It was a former student saying she was in a lot of pain. I think it was a normal labor colic. She lived with her grandmother alone, grandma couldn't take her. Then we called the Police. (C8)

In addition to the fact that he has no money, the fact that he needs some company to go to the hospital, due to the symptoms of the health problem, is a common reason for requests for help from SAMU. In this perspective, living alone and having a chronic health problem are important problems and social nature that have contributed to the demand for SAMU:

I always go to the hospital alone. I was vomiting, my feet were very swollen, I was hemorrhaging. In addition to the bleeding, I had high diabetes and high blood pressure. I didn't have a person to accompany me, so I thought about SAMU to drop me off at Conceição [hospital]. Then there was a retired nurse who loaned me 20 reais and I got a seat and went to a place and took the bus. (RB1)

Although in many places in the city they do not travel by taxi (or application drivers), they are mentioned as an option for transportation, in the event of an injury. Taxi drivers (or application drivers) have a relevant role within the social network of several of the applicants considered NPD. In the interviews, they were mentioned as responsible for the destination of 25% of the users interviewed, as shown in the example below:

They could have come and at least taken me, because I could neither walk nor get up, they even dragged me out of the building. Imagine, I almost passed out in the taxi, the taxi driver freaked out and arrived in Clínicas [hospital] in 15 minutes. (C7)

The use of taxi (or application drivers) by people with health problems is an indication that these professionals need attention from the health sector. The dread of a taxi driver in the face of a health problem may imply an increase in speed to reach a health service and generate a new problem: a traffic accident. Usually, first aid courses are mandatory for drivers, when they take the National Driver's License. A suggestion to minimize the taxi drivers' fear of a health problem, demonstrated by the reported speeding, would be training to deal with the practical situations that arise in the daily life of the category, such as the example above.

The motivation of the applicants who seek help in the SAMU for themselves or for someone, and whose search results in a non-pertinent demand, is related to four aspects that may or may not be interconnected1. The first is the breaking of the daily routine, with the sudden experience of an acute health problem, whether or not it originated in a chronic condition. The second aspect refers to a set of economic and social needs, reinforced in the cases of uses with chronic diseases, in which the injuries can be more frequent and, therefore, need more financial resources and more social support1.

The third aspect that constitutes this motivation has to do with the potentiating effect of the concomitance of biological, economic and social needs in the perception of the urgency of a health problem. Finally, it is possible to conclude the importance of a social network in a request for help from SAMU and its direct influence on the promotion, protection and recovery of individuals1,22,26,27.

As the survey indicated, the non-
pertinent demand involves aspects of a social nature. As it encompasses a set of people (patients, solicitors, telephone operators, physicians regulators, etc.) and situations (lack of guidance on first aid, transport difficulties, etc.) that are interrelated, the demand is not pertinent to SAMU as the result of a social construction process\textsuperscript{1,27-30}.

4. Conclusion

The demand for SAMU is socially constructed\textsuperscript{1}. Therefore, a possible service needs to be considered broadly.

In this article, part of the research carried out on DNP was addressed.

It was found that social and economic needs are reasons to trigger SAMU, in the case of a health problem.

It is not only the health problem in a biological sense that needs to be predicted.

SAMU’s nursing care professionals are prepared to assist patients based on biomedical protocols, especially trauma and cardiological ones.

At SAMU, the permanent education center also maintains citizen orientation projects. In these projects, nurses go to schools and teach citizens what SAMU is, how to call ambulances and how individuals can do first aid.

The Permanent Education Sector needs to be aware that a request for help is part of a socially constructed demand to guide citizens and prepare nursing technicians and nurses who work at SAMU.

Research to know the demand situations of each service and the needs of its users is always necessary for planning and evaluating actions\textsuperscript{1,31}.
5. References


