

## LIFE RISK AND NATURE OF SAMU: USERS' PERSPECTIVES AND IMPLICATIONS FOR NURSING

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### ABSTRACT

The article is part of a qualitative study analysis developed in 2009 aiming at investigating the demand of emergency calls to the Emergency Mobile Attendance Service/Porto Alegre (SAMU) that classifies it as non-pertinent. The information was gathered from 16 semi-structured interviews with the subjects of that demand, by utilizing as a methodological guideline the Grounded Theory. The article approaches the content of the sub-category "Entering into conflict with SAMU regulation in the evaluation of life-threatening", by focusing the divergences between the regulation and the users' perception about the operation of the service and the meaning of "life-threatening", factors implied in the construction of the non-pertinent demand. The importance of Nursing within this scenery is in its competence to perform education actions about first aid and to participate in projects among sectors which are able to intervene in situations that generate vulnerability.

**Descriptors:** Health services. Emergency Medical Services. Risk. Emergency nursing. Health promotion.

### RESUMO

O artigo faz um recorte na análise realizada em um estudo qualitativo, desenvolvido em 2009, cujo objetivo foi investigar a demanda de pedidos de socorro ao Serviço de Atendimento Móvel de Urgência/Porto Alegre (SAMU), por ele classificada como não pertinente. As informações foram obtidas em 16 entrevistas semiestruturadas, realizadas com os solicitantes desta demanda, utilizando-se, como orientação metodológica, a Teoria Fundamentada nos Dados. O artigo aborda o conteúdo da subcategoria "Entrando em conflito com a regulação do SAMU na avaliação do risco de vida", enfocando as divergências entre a regulação e a percepção dos usuários sobre o funcionamento do serviço e significado de "risco de vida", fatores implicados na construção da demanda não pertinente. A importância da Enfermagem, neste cenário, está na sua competência para realizar ações de educação em primeiros socorros e para participar de projetos intersetoriais capazes de intervir em situações geradoras de vulnerabilidade.

**Descritores:** Serviços de saúde. Serviços médicos de emergência. Risco. Enfermagem em emergência. Promoção da saúde.

**Título:** Risco de vida e natureza do SAMU: demanda não pertinente e implicações para a enfermagem.

### RESUMEN

El artículo hace un corte del análisis en un estudio cualitativo desarrollado en 2009 cuyo objetivo fue investigar la demanda de pedidos de socorro al Servicio de Atendimento Móvil de Urgencia/Porto Alegre (SAMU) que la clasificó como no pertinente. Las informaciones resultaron de 16 entrevistas semiestructuradas con los sujetos de esta demanda, utilizándose como orientación metodológica la Teoría Fundamentada. El artículo aborda el contenido de la subcategoría "Entrando en conflicto con la regulación del SAMU en la evaluación del riesgo de vida", enfocando las divergencias entre la regulación y la percepción de los usuarios acerca del funcionamiento del servicio y significado de "riesgo de vida", factores implicados en la construcción de la demanda no pertinente. La Enfermería se destaca en este escenario por su competencia en realizar acciones de educación sobre primeros socorros y participar de proyectos intersectoriales capaces de intervenir en situaciones generadoras de vulnerabilidad.

**Descriptores:** Servicios de salud. Servicios médicos de urgencia. Riesgo. Enfermería de urgencia. Promoción de la salud.

**Título:** Riesgo de vida y naturaleza del SAMU: perspectivas de los usuarios e implicaciones para la enfermería.

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## INTRODUCTION

The Emergency Mobile Attendance Service (SAMU - Serviço de Atendimento Móvel de Urgência) provides mobile emergency medical service by reaching the patient in the early moments of his/her health problem aggravation (of clinical, surgical, ob-gin, traumatic or psychiatric nature) which could cause suffering, after-effects, or death. Its mission is to serve and/or transport those patients to a Public Health Service Unit (SUS – Sistema Único de Saúde)<sup>(1)</sup>. Here are some examples of health problems pertinent to the nature of SAMU: cardio-respiratory arrests, severe respiratory difficulties, seizures, lesions resulting from traffic accidents and falls, burns, drowning, aggressions, electrical shocks, besides other situations involving imminent risk of death (RD).

The access to SAMU occurs by means of a free national emergency number: 192. Based on legislation criteria<sup>(1,3)</sup>, Emergency Medical Dispatchers (EMDs) sort the phone calls and decide whether they are going or not going to be served, after evaluating the severity of each case. When the severity is presumed within the RD parameters established as characteristic of cases served by this service, medical care resources are sent to the place of occurrence. In the case that the EMD thinks the dispatch of an ambulance is not necessary, she/he justifies her/his decision and tells the caller what to do regarding other measures to be adopted. These calls which do not correspond to the RD defining criteria adopted by SAMU are characterized by the service as non-pertinent (NP)<sup>(3)</sup>.

In recent years, it's been observed a significant demand of NP help requests to SAMU /Porto Alegre. In 2006, for instance, 38% of the dispatching was thus characterized. The existence of a significant NP demand (NPD) is a problem, both to the service management and to the population. There are at least two reasons for NPD to be seen as a problem: (1) it spends time of dispatching that could be used to serve to pertinent calls and, therefore, more severe cases and (2) it results in an amount of users that without the help of SAMU will have to find on their own another gateway to the system, which is not often considered an easy task. Besides that, there is the stress caused when the situation concerned is characterized as RD by the caller<sup>(4)</sup>.

Considering the issue described above, it is relevant to understand the NPD construction process. The study of such phenomenon provides subsidies to the service management in the context of SUS and, specially, to SAMU management and to Nursing and it contributes to the planning of actions related to the focus on the emergencies.

Nursing has an important role in SAMU acting in its operation and also in activities that extrapolate user assistance. Besides that, the category takes part in the service instructions and in the guidance to the emergency care, across sectors such as: City Guard, Traffic Controllers, and School Teachers among others.

This paper arises from a research entitled "Risk of Death under the Perspective of SAMU Users Characterized as NP – Subsidies to the Service Management"<sup>(4)</sup>. This study gave rise to other three categories: "Crying for help in SAMU", "Outcomes of the situations related to non-served help requests" and "Vulnerabilities causing risk of death". It is a clipping of the research results focusing on the user's perception regarding both the service functioning and the meaning of "risk of death", results which were highlighted in the analysis of subcategory "Getting in conflict with SAMU dispatching in the evaluation of risk of death", linked to the first category.

## METHODOLOGICAL PROCEDURES

The research was performed in the city of Porto Alegre, in 2009<sup>(4)</sup>. It was a mixed sequential type of study. Two methods were used in sequence; therefore, the research had two stages<sup>(4)</sup>. In the first one, we performed a descriptive analysis of SAMU data base in order to know the calls distribution to 192 which corresponded to help requests considered as non-pertinent to the service nature. Descriptive results will not be approached in the paper, but it is important to mention that they made possible the selection of a residential estate for the interviews with the NP subjects.

The criteria used in the choice of the residential estate was its location in one of the three areas in the city with more NPDs and that, among the residential estates of those areas, it was the one with more NPDs. Once Carvalhada residential estate (located in the Central-South area) was selected, the second stage of the study started.

In the second stage, 16 semi-structured interviews were performed. They were all recorded and transcribed by one of the paper authors. Five of those interviews happened in 2008 and they were used as pilot studies to the improvement of the interview script<sup>(4)</sup>. The script items were: 1) Describe the situation that made you call SAMU; 2) Have you called another health service before calling SAMU?; 3) Talk about the situations you consider as RD; Was the case that motivated you to call SAMU a situation of RD?; 4) Can't you do anything besides calling SAMU? Why?; 5) Why did you think SAMU would help you?; 6) What does SAMU represents in your opinion? How does it work?; 7) Have you already attended any first-aid course? Where?; 10) How is your neighborhood (leisure, health, education, sanitation, safety)? With this final script, the other 11 interviews, objects of analysis, were performed between March and October 2009. The subjects who participated in the interviews were invited through their phone numbers registered at SAMU's data base. Some of the interviews could not be performed in person and users were interviewed by phone due to the difficulty in reaching them in their residences during the day and to the lack of safety to the researchers in some residential estate areas<sup>(5)</sup>.

The criteria used to select subjects were their acceptance to participate in the study and the fact that they were able to remember the details of their calls to SAMU. Around 100 subjects were excluded from the study.

Interviews were analyzed according to the Grounded Theory (GT) which calls for concomitance between fieldwork and data analysis<sup>(6)</sup>. Unlike other qualitative methodologies that present pre-defined categories, in GT, the analysis occurs starting from the encoding of the contents detected by the researcher in the data being collected<sup>(6)</sup>. In the analysis, three different types of encoding were performed: the open one, the selective one and the axial one. For the first encoding, the interviews transcription lines were checked and the analysis units were clipped. In the second one, those units of empirical data were grouped in categories<sup>(4)</sup>. When it was necessary to further develop some category, other interviews were performed starting the so called theoretical sampling of the study<sup>(4)</sup>.

The research project was approved by the Research Ethics Committee of the Municipal Depart-

ment of Health in the city of Porto Alegre under the number 121. The interviewees signed a consent form or recorded their acceptance in participating in the research.

## RESULTS AND DISCUSSION

Results particularly show the existence of divergences between SAMU callers' viewpoint on RD and the criteria used by service dispatchers on the demand of ambulances. Such divergences, discussed bellow, contribute to the NPD construction.

### Getting in conflict with SAMU dispatching in the evaluation of risk of death

Severity of a risk of death is the main criterion used by SAMU to evaluate the need of dispatching an ambulance for medical attention. In the context of the sorting performed by the service regulation, the EMD evaluates the situation based on the specific protocols semiology starting from the information provided by the callers<sup>(1,3)</sup>.

The analysis of collected information reveals conflicts between users and EMDs, especially regarding the definition of risk of death and, consequently, regarding the service functioning and nature. As the interviews evolved and users referred to their perception on how SAMU functions, their conception of risk of death emerged in their statements. Analysis suggests that these are factors involved in NPD construction.

### What do users know about SAMU?

Based on their experiences, interviewees informed, almost always appropriately, the purpose of SAMU, when it must be called, its structure and its work process. The following lines illustrate the adequacy of these users knowledge on the kind of service provided by SAMU:

*SAMU is an ambulance for emergencies, for rescue, for saving lives (E1).*

*I think that, in the case of an emergency, it's them you have to call (E2).*

Although the lines above did not mention that the emergency situations to be served must represent imminent RD, which is indicated as the

service mission<sup>(2)</sup>, the term “saving lives” suggests a certain proximity to the pertinent demand defining criteria. The identification of SAMU as “an ambulance” indicates, furthermore, the knowledge about the mobility characteristic of the service, which is specified in its own name. The information collected in the research indicates that such knowledge on SAMU is understood in the daily life.

*My relatives have already used it (E9).*

*Because I've seen several cases here where I live and SAMU has come (E5).*

*Here, every now and again, there is someone fainting and SAMU comes quickly (E6).*

There is a study on accessibility to medical care through SUS that corroborates with the current research results<sup>(7)</sup>. Its author concluded that the decision-making process on which service to be called takes into account an evaluation of the available services starting from personal experiences and also from situations experienced by other users<sup>(7)</sup>. In both cases, daily life experiences create knowledge about the service.

Regarding the service structure, data analysis suggests that the presence of doctors and the availability of resources to medical care such as the prompt access to medicines are knowledge about SAMU that influences the users' choice of this service. “Service structure” is understood as a set of technological resources and the techno-scientific capability of the professionals working on it<sup>(8)</sup>. Interviewees' knowledge on the available resources and on the SAMU staff's agility was outlined in some of their justifications for calling the service.

*SAMU comes when we call because they have doctors. I know they are competent doctors. (E5).*

*If SAMU had come and a doctor had examined him... (E6).*

*Because SAMU has medicines inside the ambulance (E7).*

The idea that the presence of a competent doctor and the ready availability of care resources are the terms for a health care efficiency suggests that the decision-making about which service should be called, in the case of a situation perceived as urgent, is influenced by the social medicalization

process which is notable on the contemporary society<sup>(9)</sup>. Medicalization has repercussions on the generation of users' dependence on biomedical care, on pharmacological treatments and on laboratory examinations<sup>(9)</sup>, reducing its autonomy to serve aggravated death risks.

The overvaluation of biomedicine promptness and efficiency in health care services is not a characteristic only of the public understanding about who should meet the needs of urgency. Produced and reproduced in the culture, the emphasis on the use of biomedical knowledge in health aggravation handling passes by situations demanding intervention. This situation is also observed regarding the prevention of health problems aggravation and recovery.

On the other hand, such overvaluation has not been equally followed by investments on the promotion of people's autonomy regarding the care of their physical health, especially the first-aid. Nowadays, the tendency is to prioritize the first-aid education for health professionals and students<sup>(10)</sup>. It is indeed possible that if such knowledge was made available to the population in general, as a nurses' investment on health promotion, users dependence on emergency services would be reduced.

Starting from this thought, the argument that production and socialization of first-aid knowledge could reduce NPD, thus reducing population vulnerability, emerges<sup>(10)</sup>.

If, in the one hand, in general, users demonstrated a satisfactory knowledge about the service functioning, on the other hand, in some situations they showed inadequate perceptions, such as the one that ambulances are means of transportation.

*Why do they have those things [ambulances], if they can't carry the patients? (E8).*

*SAMU has to come when people have no conditions to take a taxi and go to the first-aid post (E9).*

Pre-hospital care includes procedures ranging from immobilization to CPR in order to finally properly transport the patient to another health care service<sup>(2)</sup>, i.e., situations in which it is necessary to provide medical care before getting to the hospital. Under this perspective, transporting people with health problem aggravation that do not represent RD and/or that do not have means of transportation is not SAMU's task.

Although SAMU service specificities are primarily focused on clinical-biological situations the population's demand to the service is not only tied to these situations. The interest in the service is also raised by social problems, such as: lack of money, uncertainty about what to do in the case of health problem aggravation, lack of a support network nearby, among others<sup>(7)</sup>. In this respect, the study suggests that there are divergences between priority criteria established by EMDs and people's motivation to seek for help, resulting in a NPD<sup>(4)</sup>. Data analysis also suggests that the population do not always know the way EMDs perform sorting and risk evaluation regarding the situations communicated by phone. The analysis is corroborated by results from another study that concluded that SAMU users do not know service organization<sup>(11)</sup>. The following lines illustrate such argument:

*Look it [SAMU] is a salvation, it's a pity that it takes so long, we have to be examined by a nurse, and then we are examined by the doctor (E3).*

*They asked many questions, they had many doubts [...] they thought we were lying [...] (E4).*

In the same way it happens in all emergency services where there is a great demand for help, in SAMU, as it was previously mentioned, there is also a sorting of the cases in order to characterize the risks of the situation<sup>(11)</sup>. The fact that users do not understand the importance of this sorting process can create doubts about the seriousness and purpose of the questioning that are usually made by the EMD. Besides that, some users expressed confusion on who is the sorting professional when nurses were involved in the process. It is important for the population to understand the process given that it expedites the service since it is the gateway to the system<sup>(7)</sup>.

In general, SAMU callers have a satisfactory knowledge about the service however, in certain moments, some inadequacies become evident, such as the idea that SAMU only serves to transport patients to hospitals regardless the severity of the situation to be attended. The following analysis will approach, with a stronger focus, this matter which involves conflicts between the meaning of RD to users and to service regulations professionals.

## The meanings of risk of death: divergences between users and SAMU

RD potential involved in the situation is the criterion used by SAMU to define service priority level<sup>(1)</sup>. Information collected reveal divergences between users and EMDs regarding defining parameters of a RD situation. For instance, in the narrative of a situation that led to a help request to SAMU, user questions the RD evaluation:

*An elderly person with the problem that he has [diabetes, foot infection] and with the fever he got, so weak for not eating anything because he wasn't hungry, I think this is a RD, for me and for everyone else, but for them [SAMU regulators] it is not (E10).*

In user's evaluation, the individual co-morbidity, the advanced age and weakness are indications of RD, however, as the line above suggests, this diagnosis was not confirmed by the EMD. Data indicate that the user's definition of RD results from objective experiences on suffering influenced by the environment and by social conditions<sup>(12)</sup>. This way of giving meaning to RD gets in conflict with EMDs evaluation process making evident that, such as in other researches, perceptions of risk are heterogeneous and context-time dependent<sup>(7)</sup>.

In data analysis, the answers to the question "Was the case that motivated you to call SAMU a situation of RD?" were characterized as: "cases of imminent risk of death (severe cases)"; "cases in which the caller did not know if there was a RD and/or did not know whether this risk could occur if service was denied (undetermined severity)" and "cases with no RD (low severity)". In order to compare RD evaluation conducted both by users and SAMU professionals, the same analysis was carried out on the Data Base records made by EMDs at the moment they evaluated interviewees' requests for help. In most of the cases (82%), interviewed callers asked SAMU for help because they evaluated their situations as severe cases, i.e., with imminent risk of death. Only one of the cases was evaluated by the caller as low severity and, all the same, only one case was evaluated as undetermined severity. In an inversely proportional way, in the service regulation, most of the cases (70%) were evaluated as low severity, followed by the cases of mean severity (20%) and by those of undetermined severity (10%)<sup>(4)</sup>.

Percentages reinforce the previously presented argument that the definition of RD occurs from the differences between parameters or from perspectives used in such evaluation. To EMDs, the definition of a RD situation presents a predominantly biological content based on epidemiological evidences. Conversely, to callers, the definition of RD embraces less technical contents, although not less objective (or plus subjective) than the biomedical definitions<sup>(4)</sup>. The following lines are the answers obtained from the previously mentioned question:

*[...] he [husband] felt a strong burn in the stomach and I thought it was weird, because he had never felt that way before. I thought it was serious, we don't have a car and he couldn't take the bus (E3).*

*I think he [brother] could have run the risk of having a respiratory arrest and I wouldn't know what to do (E7).*

*He [husband] said he was feeling dizzy, so I told him to take a deep breath, then he said he was better, when I looked at him again, he fell! I ran to the streets crying for help, but none of my neighbors heard me (E5).*

To the callers, the presumption of the severity of a health problem aggravation does not seem to involve only evaluations focused on the aggravation itself. They can also include an evaluation of the situation in which the aggravation is inserted. Such evaluation is composed by the limits of the context and by the emotional aspects present at the moment of help request. Statements exemplify the emphasis on these limits as definers of the situation severity: "we don't have a car, he couldn't take the bus"; "I wouldn't know what to do"; "he had never felt that way before". The conditions to personally finish or minimize the suffering caused by health problem aggravation of someone close are not always ideal. The lack of resources and the ignorance or unpreparedness to evaluate and to attend the first-aid needs can cause anxiety. In this context, the pursuit for immediate assistance is evident, which creates the association between RV presumption and the demand for SAMU assistance.

Phone calls made by interviewed callers were related to situations involving the caller's relative, neighbor or friend<sup>(4)</sup>. The anguish of witnessing someone else's suffering together with the impotence in the face of personal limitations to terminate or minimize such suffering results in the

need of getting help as quickly as possible. This need is perceived even though, at first, caller does not realize the situation as an imminent RD or is not sure of that.

In such circumstances getting a mean of transportation such as an ambulance ends up imposing itself as an urgent need. Another aspect to be taken into account is that, in situations of acute aggravation, people who could help are not always emotionally prepared to do so, especially if there is a close relationship between them. Not everyone has skills to help in emergencies. Even among health professionals who have knowledge on what to do in the face of an acute aggravation there are those that do not present emotional conditions to deal with such situations. Legislation on pre-hospital care services recognizes this limitation and establishes as general requisite for its professionals personal disposition to the activity, emotional balance and self-control<sup>(1)</sup>.

## CONCLUSION

It's not the task of SAMU, a high complexity service in the emergency field, to attend the demand of help requests that are not compatible with the nature of the service. Neither the situations that lead to help requests considered as NP by SAMU are a problem to be solved only in the health department context. These are problems that extrapolate such department and, therefore, a network of resources must be activated in order to minimize or to solve the situations of vulnerability that give origin to NPD.

The limitation of the research relies on the fact that it was carried out specifically in one residential state. In spite of this limiting factor, user's perception on service functioning and on the meaning of RD can be taken into account for the comprehension of NPD coming from other locations. Results raise important subsidies to the reflection on possible scenarios that lead users to help requests which are, however, considered by the service as NP.

The credibility of SAMU and the possible ease and quickness on the solution of people's needs make them call this service. Thus, the service receives cases that could be handled in the primary levels of health system as in the case of other emergency services. This suggests that the interpreta-

tion of health problem aggravation as RD or as a task of SAMU leads users to choose the service as a "gateway" to the health system instead of waiting for assistance in places where the solution of a problem perceived as severe could take longer.

Nursing activity is crucial to the reduction of NPD. Initiatives of SAMU nurses, such as educating the population on first-aid procedures, carrying out studies that explore users perception on health problems aggravation – what they are and what to do in the face of these situations – and taking part of intersectoral projects capable of intervene in situations that cause vulnerabilities are some of the possible strategies in this context.

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