SPECIFICITIES OF THE NURSING WORK IN THE MOBILE EMERGENCY CARE SERVICE OF BELO HORIZONTE

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ABSTRACT: This is a descriptive qualitative case study aimed at understanding the perception of nurses regarding their work in the mobile emergency care service of Belo Horizonte. Study subjects were 12 nurses and data were collected through interviews and subjected to content analysis. Results showed positive aspects of the work: service resolvability and dynamism, visibility in the care network, opportunity to deliver care and satisfaction with the work. The negative aspects involved poor knowledge of the population regarding the organization and operation of the mobile emergency care service, exposure to environmental and physical risk factors, violence in suburbs, and difficulties receiving patients in the fixed health units. It is possible to observe that the positive aspects are related to the work content and its purpose, whereas the negative ones are related to work conditions.

DESCRIPTORS: Emergency medical services. Emergency nursing. Transportation of patients.

PARTICULARIDADES DO TRABALHO DO ENFERMEIRO NO SERVIÇO DE ATENDIMENTO MÓVEL DE URGÊNCIA DE BELO HORIZONTE

RESUMO: Foi realizado um estudo de caso descritivo e qualitativo com o objetivo de conhecer a percepção de enfermeiros sobre seu trabalho no Serviço de Atendimento Móvel de Urgência de Belo Horizonte. Os sujeitos foram 12 enfermeiros e os dados foram coletados por meio de entrevistas e submetidos à análise de conteúdo. Os resultados apontaram como aspectos positivos do trabalho, o dinamismo e a resolutividade do serviço, sua visibilidade na rede de atenção, a execução de atividades primordialmente assistenciais e a satisfação no trabalho. Os pontos negativos envolvem o pouco conhecimento da população sobre a organização e funcionamento do Serviço de Atendimento Móvel de Urgência, exposição a fatores de riscos físicos ambientais e violência no momento do atendimento e problemas na recepção dos pacientes pelas unidades fixas de saúde. Percebe-se que os aspectos positivos são relacionados ao conteúdo do trabalho e sua finalidade, e os negativos, às condições de trabalho.


PARTICULARIDADES DEL TRABAJO DEL ENFERMERO EN EL SERVICIO DE LA ATENCIÓN MÓVIL DE URGENCIA EN BELO HORIZONTE

RESUMEN: Fue realizado un Estudio de Caso descriptivo y cualitativo que objetivó conocer la percepción de enfermeros sobre su trabajo en el Servicio de Atención Móvil de Urgencias. Los sujetos fueron 12 enfermeros y los datos fueron recolectados a través de entrevistas y sometidos al análisis de contenido. Los resultados muestran como aspectos positivos del trabajo: el dinamismo y la capacidad de resolución del servicio, su visibilidad en la red de salud, ejecución de las actividades de asistencia y la satisfacción en el trabajo. Los negativos implican: el poco conocimiento de la población acerca de la organización y el funcionamiento del Servicio, la exposición a los factores de riesgos ambientales y físicos, violencia en los barrios bajos en el momento del servicio y problemas de recepción de los pacientes en unidad de salud fija. Se puede observar que los aspectos positivos están relacionados con el contenido del trabajo y su propósito y los negativos con las condiciones del trabajo.

DESCRIPTOR: Servicios médicos de urgencia. Enfermería de urgencia. Transporte de pacientes.
INTRODUCTION

Health care networks have been considered an alternative to the inevitable and necessary rupture the health care system paradigm in our country. These networks constitute strategies to organize health care services in society, filled with various technologies and operating under the basic rule to mediate points of care. In this perspective, the organization of health care services in a network is aimed at substituting the fragmented model of care with one that emphasizes the health disease process in a global manner.

These health care networks are organizational arrangements of health actions and services, with different technological densities that, integrated with technical, logistic and management support systems, aim at assuring care comprehensiveness. These networks require three elements; namely, population, a health care model and an operational structure. The first element is the reason that networks exist, the second is a logical system that organizes its operation, and the third element is comprised of five components: primary health care (communication center), secondary and tertiary services, support systems, logistic systems and the management system.

One of the elements of the logistic system, which constitutes the operational structure of the health care networks, is the transportation system that structures the flow and contraflow of people and products within the networks. Transportation systems are made up of transportation subsystems of biological material, health service waste, and people; the latter being both a facilitating and complicating factor in access. The transportation of patients happens both with primary actions, and in secondary actions between two different health care units; transportation may also be divided into the modules of emergency and elective transportation.

The mobile emergency care service (~ SAMU as per its acronym in Portuguese, standing for Serviço de Atendimento Móvel de Urgência) accomplishes the transportation of patients in emergency situations in Brazil. Access to the service takes place through a free telephone call to the number 192. This services receives calls for help from people “suffering from acute health problems of clinical, psychiatric, surgical, traumatic, obstetric and gynecological nature”.

The Ministry of Health has established that the SAMU team must be comprised of physicians, nurses, nursing technicians and the vehicle driver, and resolutions no. 814 from 01/06/01, and no. 2.048, from 05/11/02, determine the specific functions and capabilities for each one of these members. This multiprofessional team suffers intense pressure in their daily work practice because of the need for immediate response to the requests of the population and the daily inability of the local health care services to solve problems related to emergency care in a broader and more resolved manner.

Operationally, SAMU receives and identifies the requests, which are judged and classified according to the service protocols. The regulating physician decides whether to guide the provision of service over the telephone or to send a basic support unit (BSU) or an advanced support unit (ASU). The BSU is comprised of a driver and a nursing technician; that is, it offers technical support for the transportation of patients whose lives may be at risk but who do not require immediate medical intervention. The ASU is comprised of a physician, a nurse and a paramedic-driver, and has the necessary material and equipment for the transportation of high-risk patients. When a BSU or an ASU is sent, the patient is evaluated and stabilized and he/she is transported to a health service that may meet his/her needs at that time. Hence, SAMU is an important link among the different health care service levels of the system.

In the work routine of the SAMU, it is important to observe the daily work and the relationships of the nursing team, since there are unique aspects evident in their performance. Among these aspects, there is the fact that nursing technicians provide care to patients under the direction of the regulating physician, in spite of being, hierarchically, subordinate to the nurse, performing their functions under his/her supervision. This situation often generates tension among the team members. In addition to this, there is the duplication of roles played by the nurse in the exercise of activities of care and team leadership, as established by the internal regulations of SAMU. Therefore, the ASU nurse is a professional who is part of the team providing direct care to the patient, but the nurse is also responsible for leadership of the BSU nursing team, as established by the internal regulations of SAMU.

Considering the specific and unique aspects mentioned, the lack of literature regarding the work performed by nurses in the SAMU and the fact that this service has been recently implement-
ed in Belo Horizonte, it is relevant and timely to develop new studies regarding this theme. Moreover, since the SAMU is a complex and stressful service that causes both physical and emotional wearing, and may be unpredictable in terms of the patients they assist, it is important to learn the specificities of this form of nursing work as a way to propose improvements in their quality of life and in the care provided to society. Therefore, the present study has the purpose to learn the perception of nurses regarding the work developed in SAMU, emphasizing its facilitating and complicating aspects. The results are expected to contribute to the advancement of knowledge regarding nursing work in the mobile pre-hospital care service and to provide new directions for further study.

METHOD

This is a descriptive study with a qualitative nature. Qualitative studies value processes, not just the final product, and enable the capturing and analysis of subjective data that allow one to understand phenomena characterized by a high degree of internal complexity.5

The study was developed with SAMU nurses from Belo Horizonte. Initially, the authors contacted the service administration and were provided with permission for data collection. They were also provided with the contact information for the nurse responsible for the service, facilitating access to all of the nurses. Subjects included 12 SAMU nurses who were approached at one of the ambulance “stations”, which are strategically distributed throughout the entire city. The nurses were invited to participate in the study. The number of participants was defined through the criterion of data saturation, since an “ideal sample is capable of reflecting totality in its multiple dimensions”.5-10 Data were collected through interviews carried out in the months of May and June of 2010.

Interviewees were instructed regarding their individual autonomy and privacy and the fact that results would be used strictly for scientific purposes. Following these clarifications, subjects signed the Free and Informed Consent Form. The study project was approved by the Human Research Ethics Committee of the Federal University of Minas Gerais (COEP/UFMG, protocol no. 215/08) and by the Research Ethics Committee of the City Health Department of Belo Horizonte (protocol no. 014/2008).

RESULTS AND DISCUSSION

Regarding the profile of the professionals interviewed, it was observed that most of them were women, with five in the age range between 21 and 30 years, four between 31 and 40 years and three over 41 years of age. Among the 12 nurses interviewed, five were married, five were single, and two did not provide information regarding marital status. As for experience, five nurses had been out of school for up to five years, two nurses between six and ten years, one between 11 and 15 years and four had been out of school for more than 16 years. Ten nurses out of twelve had specialized in various nursing areas, including emergency nursing, and three held a master’s degree. Since all interviewees belonged to the same professional category, remuneration did not vary much; thus, ten of them earned three to five minimum wages, one earned seven minimum wages and one did not provide this information. Most nurses (eight) have worked in SAMU for ten years, and four have worked for 11 to 15 years.

Positive aspects of working in the SAMU

Concerning positive aspects, nurses refer to service dynamism, resolvability, overall view of the health care network and the opportunity...
to deliver care. The dynamism expressed refers to the workflow according to the demand and unpredictability inherent in the work routine. Resolvability concerns the immediate response provided according to the patients’ request, whether it is through telephone guidance or by sending transportation as per the patient’s need. Visibility is the confirmation of SAMU as a dynamic link in the health care network, a function that is readily acknowledged by the workers who are in daily contact with the fixed points of the health care network and with the population. Nurses experience, in their daily care practice, the opportunity to deliver care, exercising their technical-scientific educational knowledge, which is not always possible in other service areas of the network, since they often perform several administrative functions in these places.

In this first axis, the dynamism of SAMU was considered an important aspect and is characterized by the absence of routine in the service and execution of unexpected requests with varied challenges. […] there isn’t a routine, everyday is different, different requests from different victims; you are always in a different place, in different hospitals […] (I).

A study developed in Chile with nurses from the emergency medical care service revealed that the satisfaction of the professionals towards their work was also related to the activities performed, which are not considered monotonous and are actually useful, despite being stressful and threatening to the health of the workers.7

Resolvability was expressed by the study participants through the act of arriving at the “scene” and providing the first care, which results in a positive impact for the patient. A positive impact is the immediate response to the patient; you get there and see that your work makes all the difference, you are the first to get to the place; it is generally a faster service (I); I can see the result of my work immediately (I).

The resolvability of the health care service may be evaluated both in relation to the service itself and to the health system as a whole. In the first case, the service is resolutive when it is able to meet the demand and send patients who need care to other health care points of the network. The second case contemplates the process that begins with the patient’s initial care and continues until the resolution of his/her problem at other levels of health care.8

The notion of resolvability in emergency services is also shared by the hospital care units that have the ability to provide greater technical and physical support to assist the population.9 Hence, considering this is a pre-hospital emergency care service that sends patients to fixed units, the perception of resolvability expressed by the study participants may be overestimated. It may be considered, thus, a “pseudo-resolvability” shaped by a sense of accomplishment, since the patient was taken from a situation of initial injury and transferred to a fixed unit. However, it is also necessary to consider that the patient’s needs are often not met comprehensively in the fixed health care units. SAMU, despite its contributions, is not sufficient for the resolvability of the entire network, and a more detailed analysis is necessary regarding this sense of accomplishment and the resolvability actually achieved.

The SAMU worker’s overall view of the health care network is clear in some statements of the nurses, who acknowledge this service as part of the logistic system comprising the network of care. When, through a center, you are able to perceive the operation of the emergency units, from the network setting, the constitution of a reference structure […] who responds to which requests, where the severe cases go, where the simple cases stay […] this center provides us with important knowledge regarding the emergency, and also regarding what is happening in the city (I).

The concept of health care services integrated into a network means that no isolated service will be able to solve all of the demands for service and will have to rely on other services of lower or higher complexity, and on other networks as well. It refers to the network of education, science and technology, transportation and infrastructure, among others, which must combine and cooperate to offer support to the health sector.10

The nurse’s opportunity to deliver care in SAMU is expressed by the interviewees as the time that the nurse is in direct contact with the patient, working in the ASU and providing immediate care. Nurses also perform other functions, such as paperwork registering the event and organizing their workplace: the ambulance. We develop several nursing procedures; we really apply the grounding we learn in college, placing gastrointestinal tubes, venous puncture, and assisting in invasive procedures such as thoracentesis, pericardiocentesis and immobilizations. Hence, the greatest advantage I see is the opportunity to be involved in this practice (I).

[…] it is both related to care and bureaucratic and administrative functions, because the SAMU nurse really provides care once he/she approaches a patient, evaluating his/her needs and the best action to be taken.
in light of the situation. So he/she really provides care, and needs to be informed regarding all subjects within nursing knowledge regarding diseases, in order to avoid harming the patient (I₁₁).

This characteristic of the work of SAMU nurses is identified as a positive factor in this practice, since they perform techniques learned in college and also work together with the physician in performing invasive procedures, which allows the constant exchange and renewal of knowledge. These results are consistent with those found in other studies in which nurses and paramedics report that the activities providing greatest satisfaction include the direct care of patients.⁷,¹¹

Some statements point to the identification of the professional with the execution of techniques, which are considered the apex of nursing care and its achievement. The nursing work consists of working processes together with the production of care in appropriate quality and quantity,¹² and these working processes are subdivided into delivering care/assisting, administrating/managing and studying and teaching, with delivering care and managing being the most common processes in nursing work.¹³

The satisfaction in working as a SAMU nurse is related to the pleasure of delivering direct care, a personal affinity with the area, the dynamism of the emergency service and the opportunity to observe the clinical improvement of the patient. Moreover, some characteristics of the service (for instance, living with the unexpected regarding the patient’s clinical condition), are factors that contribute to their learning and are considered to be a source of satisfaction. It is a very rewarding job, in which we are able to provide care to critical patients outside the hospital, who apparently have no resources, taking these resources to them (I₉).

[...] it is rewarding when we can see that our work makes a difference, when we get to the hospital and see that the victim received good support in terms of pre-hospital care, this is really good! (I₉).

[...] overcoming limits, the satisfaction in seeing the patient improve after you provide the first care; it is the satisfaction of seeing the immediate result (I₉).

The speeches restate, as positive points, the opportunity to deliver care and the satisfaction related to the purpose of the work in SAMU. A study developed in the SAMU of Natal-RN showed that the members of the nursing team enjoy their work, are satisfied and choose to work in this service. The authors attributed the satisfaction, in this case, to the availability of qualified professionals with the appropriate profile to work in the pre-hospital service.¹⁴

The service is considered to be an educational opportunity by the interviewees, since they face emergency cases in several different health situations, such as people run over by vehicles, clinical, psychiatric and obstetric emergencies, and transportation of patients between different points of the health care network. Qualification needs are constant in order to broaden the knowledge of professionals and allow discussion regarding the theory learned versus the practice experienced, comparing what is recommended to the reality faced. Hence, it is important for the professional to be up-to-date and to develop competences to execute specialized techniques under pressure, using his/her knowledge, attitudes and skills.

Being a relatively new service in the network of Belo Horizonte, started in 2002, SAMU is considered to be a differentiated opportunity when compared to other services. The learning and the experience in emergency care provided by SAMU are coherent with the diversity of patients assisted and with clinical and traumatic complications of variable severity and in different contexts.

Negative aspects of working in the SAMU

Among the negative aspects reported by the interviewees, the ones that stood out were the lack of understanding regarding the emergency mobile service on the part of the population, the easy access to service through a telephone call and the differences inherent in going to where the victim is. Professionals are exposed to physical and environmental risk factors, such as accidents on highways, violence in suburbs, rain, and intense heat, among others. Moreover, they report problems in the fixed health care units in receiving the patients picked up by SAMU.

The main negative point reported by the interviewees is the lack of understanding regarding the purpose and mission of SAMU on the part of the population, who inappropriately request the service and cause inconveniences due to erroneous information, generating stress among the professionals and an increase in demand, besides the significant number of mock telephone calls received, leading to a waste of time and effort. We suffer with the lack of information of the population regarding the service and the irresponsible use of the system, you know? (I₆).
Society often uses the service as a taxi [...] they call saying the patient is more ill than he really is and, once we get there, they simply want us to measure their blood pressure. This is serious, because you are taking an ambulance off the streets, a BSU or an ASU; that is, you may be slowing response time to a person who is in real need at that moment. So, I see this misuse of the SAMU service as the main negative point (I₃).

In this sense, a recent study developed with health professionals of an emergency service unit (Unidades de Pronto Atendimento - UPA) of Belo Horizonte revealed the inappropriateness of the use of the SAMU by the population, referring to it as a “taxi”. The described situation may be related to an increase in urban violence and low resolvability in primary and secondary health care.¹⁶

The patient’s lack of understanding, reported by the nurses in the present study, reflects the variability of the concept of emergency, which is determined according to the person who perceives or feels it. The need and severity evidenced by the patients and their family members, at a certain moment in time, often do not reflect the severity of the emergency and the situation established in the protocols. "In the point of view of the patients and their relatives, emergency is associated with a rupture in the order and course of life".³⁴⁷ Therefore, patients express the usual statement: “I cannot wait”. For the medical professional, on the other hand, the idea of emergency is not based on rupture, but on time, related to the vital prognosis of a certain interval: “he cannot wait”. The population does not understand our work. Sometimes, they treat the team aggressively, saying that the unit took a long time to respond, but they do not understand we came from the other side of the city, from a hospital, or that sometimes it is just the traffic, the city is full of construction so you cannot get there within a reasonable time (I₃).

In a study developed in the SAMU of Valencia, in Chile, interviewees mentioned the need for a good relationship with patients in order to facilitate the service, but this good relationship does not always happen, a fact which generates emotional weariness in the team.¹⁷

A study developed with patients of the SAMU of Belo Horizonte-MG identified the lack of knowledge of the subjects regarding the organization and operation of the emergency service, and that they evaluate this service as negative unless their request is responded to with an ambulance or when the vehicle takes time to get to the call. In the perspective of the patients, the service is not appropriate if they only receive medical guidance to intervene themselves in the victim’s situation or to seek care at another network point by their own means, and they have difficulty understanding the reasons for delays resulting from traffic jams or the journey from the station to the requested location.¹⁸

A study developed in Chile with SAMU nursing professionals from the city of Valdivia showed that one of the most stressful situations in the service is delivering care to patients out of a mobile health care unit, since working on the streets generates risks such as the possibility of getting into an accident while enroute to the service location and violence on the part of the population.¹⁷

The constant variation in environmental factors to which the SAMU professionals are exposed is also pointed as a negative aspect of the work, since they work 24 hours a day delivering care to the population. You work day and night, so you are subject to climate changes: rain, sun, cold, warmth, which interfere negatively with our ability to do our jobs. Sometimes you get caught in the rain, other times you are shut inside a hot ambulance, sweating, dehydrating. These are negative points (I₃).

A study regarding the occupational risks in BSU and ASU indicates the exposure of workers in the health area to several unique risks, such as biological (through the contact with microorganisms), physical (inappropriate conditions of lighting, temperature, noise, radiation), chemical (handling of disinfectants, medications), psychosocial (constant tension, stress and fatigue, accelerated rhythm, working alternate shifts) and ergonomic risks (excessive weight, working in uncomfortable positions). Thus, it is important to identify the occupational risks unique to their activities and to adopt preventive measures aimed at maintaining the health of both the worker and the assisted patient.¹⁹

Nurses also report risks related to the delivery of care in suburbs and on highways, where they are exposed to violence and accidents, respectively. Because we get very scared; we enter these slums and they are shooting, we are right in the middle and we can end up being shot. Other times you have to assist a patient on a highway and another car can come and hit you, right? (I₃).

You are exposed, being seen, and accidents can happen to you, too. From the moment you are on the street you can get hurt, you can suffer an accident, because it is a mobile ambulance, it is a vehicle, and since you have to deliver care anywhere, without any sort of

Another question is related to problems in the fixed units regarding the reception of the patients. The professionals mention that the interaction with the health care points of the network are often deficient, because professionals from other health services still do not have a clear understanding regarding the mission of SAMU, which generates conflict in their relationships. The relationship with other health professionals is a little more complicated, because the emergency service has a greater demand than it is capable of meeting. Thus, when we get to the hospital with a victim, we are often not treated kindly; it is as if we were taking more patients to that team on duty (I).

This reality is identified by studies developed with physicians working in the integrated system of medical emergencies of Guantánamo, who report difficulties in the transferring of patients to secondary care units.\(^1\) The low quantity of beds in many health care services of the network is the main factor triggering the precarious relationship between SAMU and the professionals of these units, increasing the waiting time for patients to receive care. In capital cities, where there is good articulation among health care units, there is a decreased response time.\(^2\)

Similar to other health care units of the network, SAMU nurses perceive their work to be permeated with both highly positive and negative situations. However, it is challenging work, and at the same time all-consuming, in which the work environment has a great influence since the scenario is the city, and is no longer a closed structure such as a hospital or a health care center. Another important aspect is that professionals have to go where the patients are in order to meet their needs, instead of waiting for them with strictly established schedules, and must relate with the entire network despite the mentioned conflicts.

**FINAL CONSIDERATIONS**

The nurses who work in SAMU highlight as positive aspects the dynamism of the provided service, its resolvability and its visibility in the health care network and its unpredictability, as well as the workflow organized according to the demand. The strategies used to respond immediately to the patient, through either direct care or guidance, are related to the purpose of the work and generate a sense of accomplishment. The constant learning and the opportunity to deliver direct care are considered areas of satisfaction, which differentiates working in SAMU from working in other health care services.

Nevertheless, considering the extent and complexity of the activity of the nurse in the mobile emergency care service in the municipality of Belo Horizonte, environmental factors are considered as negative, especially regarding traffic and climate conditions such as heat, cold and rain. Furthermore, conflicts in the relationships between SAMU professionals and the teams from fixed health care units that receive the patients must also be highlighted, since they complicate the execution of the work in the network.

The work of SAMU nurses is marked by constant challenges that result in opportunities for learning and satisfaction; on the other hand, it consists of high complexity actions, which generate stress, as well as physical and emotional weariness. Therefore, the nurses of the service reveal problems that must be discussed and broadened so that this field may strengthen its positive points and minimize the negative ones, providing greater quality care and professional satisfaction. The satisfaction with the positive aspects of the work is related to its purpose, whereas negative aspects, in general, are related to the work conditions, interpersonal relationships and communication.

This study, as per its nature, applies to the work of SAMU nurses from Belo Horizonte-MG. Other studies regarding nursing practice in complex emergency environments and the integration of multiple health care services in networks are necessary for a broad comprehension of the specificities of the daily routine of these nurses.

**REFERENCES**