The Role of the Regulatory Nurse in the Mobile Emergency Care Service: Literature Review

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**Abstract**

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| This study aims to evaluate the scientific literature on the role of nurse regulators in the mobile emergency care service (SAMU). This is a qualitative study of the narrative literature review type, carried out through a search in the BVS, PubMED, and Google Scholar databases, which selected texts published between 2019 and 2024. The results show that nurse regulators perform functions in SAMU such as receiving and evaluating emergency calls, performing triage and risk classification of cases, in order to direct care appropriately; providing pre-hospital guidance to callers; recording and documenting all care information, contributing to the continuity of care and the assessment of the quality of the service provided, in addition to the need for effective communication and decision-making skills. These skills include technical knowledge and resource management. They must have a solid knowledge of SAMU protocols and guidelines, given that they need to quickly analyze the available information and direct the team accurately and efficiently. It is concluded that the nurse regulator is essential in the SAMU triage and regulation system, ensuring that medical care is directed efficiently and effectively. The complexity of their functions reflects the importance of robust and continuous training, aimed at improving technical skills and rapid decision-making. However, they face significant challenges such as work overload, which requires resilience and adequate organizational support to sustain the quality of care amid high demand. |

*Keywords: Nursing, Health Regulation, Emergency Medical Services*

*Keywords: Regulatory Nurse, Mobile Emergency Care Service*

1. Introduction

The role of the nurse regulator in the Mobile Emergency Care Service (SAMU) plays a fundamental role in the management and coordination of health resources, ensuring rapid response to emergency situations and saving lives. SAMU, created to offer pre-hospital care in urgent and emergency cases (UE), is an extremely important service in Brazil, integrating health care networks with a focus on interventions that prevent injuries and ensure continuity of care (Cambreiro; Teixeira, 2021).

Within this structure, the nurse regulator assumes a strategic role, since he or she is responsible for triaging emergency calls, analyzing patient needs, and deciding on the appropriate dispatch of teams and resources for care (Alves et al., 2013).

In recent years, the regulation and expansion of the responsibilities of nurse regulators in SAMU have been widely discussed topics in the literature. These professionals face significant challenges, such as the high demand for services, the need for quick and accurate decision-making, and the use of communication technologies to ensure efficient care (Ghussn; Souza, 2016).

In addition, the training and qualification of these nurses are essential aspects, since technical knowledge and the ability to manage complex situations directly influence the quality and safety of care (Pinheiro; Blank, 2018).

The role of the regulatory nurse also goes beyond the simple allocation of resources. He or she is responsible for assessing the severity of incidents and prioritizing care, contributing to the optimization of ambulance use and avoiding unnecessary overloads in hospital services. His or her performance can improve quality indicators in pre-hospital care, reducing response time and increasing patient and family satisfaction (Pinheiro, 2019).

Given the importance of this role, it is imperative to evaluate the contributions of the scientific literature on the subject in recent years. This article aims to evaluate the scientific literature on the role of the regulatory nurse in the mobile emergency care service, highlighting the challenges, responsibilities and relevance of this professional in the coordination of pre-hospital emergency care.

2. material and Method

This study is characterized as an integrative literature review (ILR), which adopts systematic search methods and rigorous sample selection criteria to analyze the results, seeking to correlate previous studies, provide new perspectives and interpretations, identify gaps and flaws in existing studies, and promote an in-depth discussion on the topic (Galvão; Ricarte, 2019).

The review was conducted in six stages, as described by Sousa et al. (2017): (1) definition of the research question; (2) creation of the data source and establishment of inclusion and exclusion criteria; (3) definition of the information to be extracted from the selected studies (categorization of the studies); (4) evaluation and critical analysis of the results, identifying differences and conflicts; (5) interpretation of the results; and, finally, (6) synthesis of the evidence found.

The guiding question of the study was: "What is the current scientific evidence on the performance of the regulatory nurse in the mobile emergency care service?" To answer this question, searches were conducted in the Virtual Health Library (BVS), SciELO, PubMed and Google Scholar databases. Descriptors validated in DeCS/MeSH in Portuguese and English were used, such as: “Enfermagem; Regulação em Saúde; Serviços Médicos de Urgência” or “Nursing; Health Regulation; Emergency Medical Services”. The combination of Boolean operators “AND” and “OR” was used to refine the data collection in the mentioned descriptors.

The inclusion criteria included full articles, theses and dissertations from institutional repositories, freely available, written in Portuguese, English and Spanish, published in the last five years (2019 to 2024). Duplicate articles, incomplete publications or other types of documents were excluded, as well as studies that did not directly address the research questions.

For data analysis, Laurence Bardin's "Content Analysis" (2011) was used, allowing the classification and grouping of studies according to their themes and main elements.

3. results and discussion (the results should be separated from the discussion of the results. this is an item and this is an item).

**3.1. Profile and training of the nurse regulator**

The role of the nurse regulator in SAMU requires a highly qualified professional profile, composed of technical skills and interpersonal abilities, which ensure efficiency and safety in emergency care. The nurse regulator must have in-depth knowledge of emergency conditions, as well as the ability to use communication systems and manage health resources in real time. In addition, the complexity of the demands requires that these professionals be constantly updated on specific protocols and guidelines for the area of ​​ED (luchtemberg, Pires, 2016).

The initial training of the nurse, although solid, is not always sufficient to fully prepare him or her for the responsibilities of the position of regulator. The regulation of emergencies requires specific training, generally acquired through specialization courses in ED or through training provided by the health service itself. These courses are essential for the nurse to be able to develop skills such as risk assessment, triage of serious cases, fast and effective communication, and decision-making under pressure conditions, crucial elements in regulation (Costa; Gaspar, 2017).

In addition to technical training, the profile of a nurse regulator requires well-developed interpersonal skills, such as leadership skills, agile and decisive decision-making, and stress management. As pointed out by Silva et al. (2014), the ability to communicate clearly and effectively is a central aspect, since the nurse regulator needs to communicate with different teams, from callers to mobile units and hospitals, in order to coordinate care efficiently. The study also highlights the importance of empathy and emotional control, since the nurse regulator frequently deals with high-tension situations and with families in a state of anxiety or despair.

Recent literature also highlights the importance of practical experience and continuous learning for the development of this profile. Acosta, Duro and Lima (2012) emphasize that many nurses who enter emergency regulation bring with them previous experience in other areas of nursing, such as the ICU, hospital emergency room or ambulance services. This practical experience is highly valued, as it gives the professional greater clinical judgment capacity, essential in triaging emergency calls. Furthermore, skills acquired in other contexts help in adapting to the use of monitoring and regulation technologies, which are central tools in the day-to-day work of nurse regulators.

Finally, Mendonça et al. (2022) emphasize that, despite technical training and practical experience, continuous qualification is an indispensable requirement for maintaining the quality of the regulation service. The constant technological advancement and the evolution of EU practices require that nurse regulators regularly participate in training and qualifications, as a way of updating and improving the skills required for the position.

**3.2. Challenges and difficulties in decision-making**

Quick and effective decision-making is one of the main challenges faced by nurses in charge of emergency services. These professionals deal with complex situations, in which they need to make immediate assessments of urgency and allocate limited resources, ensuring that emergencies are handled in the most appropriate manner. The overload of calls received daily is one of the biggest obstacles to efficient triage, requiring nurses to perform a severity analysis of each case in a few seconds. This situation is often aggravated in regions where demand is high and the available resources are insufficient to promptly meet all requests (Santana et al., 2021).

Another recurring challenge involves triaging complex cases. The nurse in charge must identify, based on descriptions provided over the phone, the cases that require immediate care and those that can wait or receive guidance for referral to conventional health units. This task is even more challenging when there is incomplete or contradictory information provided by the requesters, which can lead to an inaccurate judgment, with the risk of sending resources to less serious cases, while more critical emergencies await care (Silva; Franco; Santana, 2024).

The pressure under which the nurse regulator works is also a factor that directly influences the quality of decision-making. The regulatory environment is characterized by high levels of stress, since nurses are often faced with decisions that can mean the difference between life and death for patients. In addition, the need to prioritize cases, often without having all the necessary information, requires a high degree of resilience and the ability to deal with pressure. This emotional burden can affect performance, leading to decision fatigue, a phenomenon that occurs when the professional is overwhelmed by complex decisions in a short space of time, compromising their judgment capacity (Araújo et al., 2020).

In addition, difficulties with the use of communication technologies can impact the efficiency of regulation. Although telecommunications tools and computerized systems are essential for SAMU regulation, the lack of standardization or technical failures can compromise the accuracy of the information received and sent. Interruptions in communication between the regulatory center and the mobile teams make it difficult to transmit information quickly and clearly, which can delay the dispatch of ambulances and increase the risk of unfavorable outcomes (Souza et al., 2021).

Finally, a structural challenge is the scarcity of resources, which often forces the nurse regulator to make difficult decisions about how to allocate ambulances and care teams. In regions with poor infrastructure and few vehicles available, professionals need to prioritize care strictly, which, in some situations, can lead to delays in the care of cases that also require immediate attention. The lack of resources creates a constant ethical dilemma for nurse regulators, who must reconcile the need to save the greatest number of lives with the limited means of intervention available (Frota et al., 2021).

**3.3. The impact of regulation on care and clinical outcomes**

The quality of regulation performed by nurses in SAMU has a direct impact on the care provided and the clinical outcomes of patients. The role of the regulatory nurse is essential to ensure that emergency resources are appropriately allocated, which directly influences the efficiency of the service, the speed of care and, consequently, the chances of survival of patients. Adequate regulation can reduce the response time of care teams, resulting in a better clinical evolution of cases, especially in the most critical emergencies, such as cardiorespiratory arrests, serious accidents and traumas (Mendonça et al., 2022).

One of the main impacts of regulation on care is the reduction in response time, which is a critical factor in emergency situations. The triage performed by the regulatory nurse, when well executed, allows the most serious cases to be treated as a priority, avoiding delays that could worsen the clinical condition of patients. In regions with high demand and limited resources, this prioritization process is vital to ensure that emergency teams are directed to patients at highest risk of death or serious complications. Effective triage can significantly reduce mortality in emergency situations, especially in remote areas or areas with poor hospital infrastructure (Pinto et al., 2021).

In addition to triage, the guidance provided by the nurse dispatcher during the emergency call can also be decisive for the clinical outcome. In many cases, the guidance provided by the nurse while the care team is on the way can help family members or close people to stabilize the patient until the ambulance arrives. This guidance includes first aid maneuvers, cardiopulmonary resuscitation (CPR), bleeding control, among other interventions, which are essential to increase the chances of survival and reduce complications. The study also highlights that effective communication between the nurse dispatcher and the caller can reduce anxiety and panic, contributing to a more controlled and collaborative environment while waiting for help (Araújo et al., 2021).

The impact of regulation is also reflected in the adequate use of available resources. In contexts where emergency care resources are scarce, the nurse dispatcher plays a central role in optimizing the use of ambulances, medical teams, and advanced mobile units. This not only improves the efficiency of the service, but also prevents the waste of resources in less serious cases, allowing critical cases to be prioritized. The rational use of resources, combined with precise regulation, results in a more agile and efficient emergency system, capable of responding appropriately to the needs of the population (Bezerra; Silva; Ramos, 2012).

Another relevant aspect is the collaboration between the regulation and the destination hospitals. The regulating nurse is responsible for coordinating the transfer of patients to the most appropriate health units, taking into account the severity of the case, the availability of beds and the hospital's capacity to receive the patient. This coordination is crucial to avoid overloading certain hospital units and ensuring that the patient receives the necessary treatment quickly. Studies indicate that good coordination between SAMU and referral hospitals improves clinical outcomes, reducing hospitalization time and post-care complications (Goulart, 2021).

Finally, the impact of regulation can also be seen in user satisfaction. SAMU users’ perception of service quality is strongly linked to the speed and effectiveness of care, both of which are directly influenced by the performance of the nurse regulator. Patients and family members who receive clear guidance and prompt care tend to evaluate the service more positively, reflecting the importance of regulation in the user’s experience with the health system. Thus, the performance of the nurse regulator not only directly affects clinical outcomes, but also patients’ trust and satisfaction with the UE service (Pereira et al., 2021).

**3.4. Skills required for the role of a nurse regulator in SAMU**

The role of a nurse regulator in SAMU requires a combination of specific technical, cognitive, and behavioral skills, which are essential to ensure quality of care and real-time decision-making. These professionals play a critical role in triaging incidents and managing available resources, which demands enhanced clinical assessment, efficient communication, and leadership skills (Morais Filho et al., 2016).

One of the main skills required is technical-scientific knowledge. The nurse regulator must have solid training in emergencies, with mastery of clinical protocols for care in serious situations, such as cardiorespiratory arrests, multiple traumas, and strokes (Celeste; Maia; Andrade, 2021).

Continuous training in new technologies and emergency care protocols is crucial for the nurse regulator to be able to accurately assess the severity of incidents and make quick and assertive decisions. Furthermore, familiarity with the specificities of the different types of care—basic and advanced—allows nurses to choose the most appropriate team for each case (Celeste; Maia; Andrade, 2021).

Quick and accurate decision-making is another fundamental skill, since nurse regulators often face high-pressure situations in which the time available for assessment is limited. To perform this role with excellence, the professional must be able to quickly interpret the information provided by the caller and prioritize the most serious cases effectively. This skill is especially important in densely populated urban environments, where the volume of calls is high and response time can be a determining factor in patient survival. Nurse regulators must therefore have a high degree of autonomy and clinical reasoning skills (Morais Filho et al., 2016).

In addition to technical skills, clear and effective communication is essential. Nurse regulators need to interact not only with callers, who are often under great stress and may provide confusing information, but also with care teams and referral hospitals. The ability to establish assertive and empathetic communication, both with the person requesting the service and with the teams involved, is essential to ensure that the instructions are understood and followed correctly, which can make a difference in pre-hospital care. In many cases, the first instructions provided by the nurse regulator, such as first aid maneuvers or CPR, are essential to stabilize the patient before the ambulance arrives (Cielo; Camponogara; Pollion, 2013).

Stress management and emotional resilience are also crucial skills. The regulatory environment is characterized by a fast pace and the responsibility of making decisions that can directly impact the lives of patients. Regulatory nurses are constantly exposed to high levels of stress, which can compromise their ability to reason quickly and affect the quality of triage. To mitigate these effects, it is essential that nurse regulators develop emotional self-control and resilience strategies that allow them to deal with pressure effectively without compromising performance. The ability to remain calm in emergency situations is essential to ensure accurate decisions and effective communication with care teams (Bezerra; Silva; Ramos, 2012).

The nurse regulator acts as the central link in the SAMU care chain, being responsible for directing ambulances, communicating with destination hospitals and monitoring the progress of ongoing care. This requires a leadership posture, decision-making ability under pressure and the ability to coordinate several teams simultaneously, ensuring that all cases are managed as efficiently as possible (Hoelz et al., 2024).

These skills make the nurse regulator a highly specialized professional, whose training and continuous development are essential to ensure an agile and effective emergency service. In addition, the literature indicates that periodic training programs, emergency simulations and training in communication and crisis management are fundamental strategies to enhance these skills and improve performance in the regulatory environment (Hoelz et al., 2024).

4. Conclusion

The role of the nurse regulator in SAMU is essential for the efficient and effective functioning of the emergency system in Brazil. This professional performs multiple functions, such as triage and risk classification, providing pre-hospital guidance and coordinating available resources, ensuring that care reaches the patients who need it most in an appropriate and timely manner. Their ability to make quick and accurate decisions, in an environment marked by constant pressure and the need for clear communication, highlights the importance of solid technical training and continuous improvement of their skills.

The challenges faced by nurse regulators, such as work overload, lack of resources and the need for support technologies, demand attention from health institutions and managers. The lack of adequate organizational support and the structural limitations of the public health system directly impact the quality of the service provided, making it imperative to invest in ongoing training, infrastructure and emotional support for these professionals.

Therefore, the nurse regulator is an essential part of ensuring the quality and safety of pre-hospital care at SAMU, and their role is decisive in coordinating and regulating resources in emergency situations. Strengthening working conditions and developing refresher and psychological support programs are essential measures to ensure the continuity and excellence of this service. Thus, the relevance of this role in the UE care chain must be continually valued and improved.

Disclaimer (Artificial Intelligence)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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