

## The Implementation of Nursing Care Systematization in the Mobile Emergency Care Service

Implementação da Sistematização da Assistência de Enfermagem (SAE) no Serviço de Atendimento Móvel de Urgência (SAMU)

Implementación de la Sistematización de la Asistencia de Enfermería en el Servicio de Atención Móvil de Urgencia

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### ABSTRACT

**Objective:** The study's purpose has been to identify the limitations in the implementation of the Systematization of Nursing Care in the *Serviço de Atendimento Móvel de Urgência (SAMU)* [Mobile Emergency Care Service] at Recife city. **Methods:** It is a cross-sectional and descriptive study with a quantitative approach. Data collection took place in the SAMU, where 51 nurses have participated. The study was approved under the No. 1.547.265. **Results:** It was evidenced the female workforce in the studied population and a high index of skilled professionals. In the other hand, a few more than half of the nurses knew the Resolution No. 358/2009 from the *Conselho Federal de Enfermagem (COFEN)* [Federal Nursing Council]. They understand that the systematization is important to the profession, but 42% affirm that it does not apply to the service. It was also verified that at some point in the systematization process some of the Nursing Care Systematization (NCS) stages were not performed. **Conclusion:** The NCS in the SAMU still needs to be discussed and performed by the Permanent Education Center of SAMU itself, and even more by the regulators of the profession.

**Descriptors:** Medical Emergency Services, Nursing, Nursing Legislation, Nursing Process.

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## RESUMO

**Objetivo:** Identificar as limitações na implementação da Sistematização da Assistência de Enfermagem no Serviço de Atendimento Móvel de Urgência em Recife. **Método:** Estudo descritivo, quantitativo, transversal, observacional. O estudo foi realizado no município de Recife-PE, a coleta de dados ocorreu no SAMU com 51 enfermeiros. O estudo foi aprovado sob o parecer nº 1.547.265. **Resultados:** Evidenciou-se a força de trabalho feminina na população estudada, alto índice de profissionais experientes, porém pouco mais da metade dos enfermeiros conheciam a Resolução COFEN 358 de 2009. Entendem que é a Sistematização é importante para a profissão, mas, 42% afirma que não se aplica ao serviço. Ficou evidenciado que em algum momento da sistematização alguma das etapas da SAE não é realizada. **Conclusão:** A realização da SAE no SAMU ainda precisa ser mais discutida e exercitada, pelo próprio Núcleo de Educação Permanente do SAMU, e mais ainda pelas entidades reguladoras da profissão.

**Descritores:** Serviços Médicos de Emergência, Enfermagem, Legislação de Enfermagem, Processos de Enfermagem.

## RESUMEN

**Objetivo:** Identificar de las limitaciones en implementación de sistematización de asistencia de enfermería en el Servicio de Atención Móvil de Urgencia. **Métodos:** Estudio descriptivo, cuantitativo, transversal, observacional. El estudio se llevó a cabo en la ciudad de Recife-PE, la recolección de datos ocurrió en el SAMU, con 51 enfermeros. El estudio fue aprobado en virtud de la opinión Nº 1.547.265. **Resultados:** Fuera evidente la fuerza de trabajo femenina en la población, alto nivel de profesionales con experiencia, pero poco más de la mitad de enfermeras sabía Resolución COFEN 358 de 2009. Ellos entienden que La sistematización es importante para la profesión, pero el 42% dice que no se aplica servicio. Era evidente que en algún momento de la sistematización no se realizan pasos de SAE. **Conclusión:** La realización de SAE en SAMU necesita ser discutido más y ejercido por el Centro de Educación Continua de SAMU, y más aún por las autoridades reguladoras de la profesión.

**Descriptorios:** Servicios Médicos de Urgencia, Enfermería, Legislación de Enfermería, Procesos de Enfermería.

## INTRODUCTION

In overall context, nursing is a profession committed to health and acts in the promotion, prevention, recovery and rehabilitation of health, with autonomy and in accordance with legal ethical precepts. Given this context, nursing, because it is characterized as a dynamic profession, needs a methodology that is capable of reflecting and putting into practice this dynamism.<sup>1-2</sup>

In accordance with the aforementioned resolution, nursing must act according to the precepts of Nursing Care Systematization (NCS). It is known that the NCS had its theoretical bases from the Nursing Process (NP), being considered the best-known and accepted work methodology in the world, facilitating the exchange of information among nurses of several institutions. The NCS is based on the Resolution No. 358/2009 from the *Conselho Federal de Enfermagem (COFEN)* [Federal Nursing Council], which establishes standardization and a methodological process for care, basically consisting of five steps, as follows: Nursing

Data Collection (nursing history); Nursing Diagnosis; Nursing Planning; Implementation; Nursing Assessment.<sup>3-6</sup>

In this way, the realization of the NCS becomes a private activity of the nurse, who performs the function of normalizing and prioritizing nursing care, and so the nursing process must be carried out in a deliberate and systematic way in all environments, either public or private, in which the nursing care occurs. It is also worth noting that the planning and programming of health services include, as a nurse activity, nursing planning and programming, this nursing program includes the prescription of the nursing care.<sup>4,7</sup>

The nurse's professional performance has legal support through the law of professional practice, the Law No. 7.498 of 1986, and follows ethical principles that regulate the practice of nursing. So, the nurses' professional performance is carried out in accordance with what determines the aforesaid law:

*The Nurse performs all the Nursing activities, which is exclusive [...] prescription of the Nursing care; direct Nursing care toward serious life-threatening patients; Nursing care of higher technical complexity and requiring scientifically based knowledge and ability to make immediate decisions.*<sup>7: 2</sup>

With the creation of differentiated and specialized services, and in compliance with the regulations of Law No. 7.498, the nurse began to work in the *Serviço de Atendimento Móvel de Urgência (SAMU)* [Mobile Emergency Care Service] from its effective creation and regulation in the year 2003. In order for the SAMU to come into operation there was a need to implement specialized transportation and adequate to the early care of victims in all regions of Brazil. Among the mobile units planned by the Health Ministry are Basic Support Unit (BSU) for terrestrial life support, Advanced Support Unit (ASU) for terrestrial life support, medical transport aircraft, medical transport boat and *motolância*.<sup>8-11</sup>

The service was both regulated and authorized by the Administrative Order *GM/MS No. 1.863/2003*, which establishes the National Policy for Emergency Care, to be implemented in all federated units, respecting the competencies of the three management spheres. The regulation mentioned above in conjunction with Administrative Order *GM/MS No. 1.864*, which establishes the mobile prehospital component set forth in the National Policy on Emergency Care, directs the implementation of Mobile Emergency Care Services - *SAMU 192*, and is also backed by the Administrative Order *GM/MS No. 2048* of November 5<sup>th</sup>, 2002, which establishes the Technical Regulation of Emergency and Urgency State Systems.<sup>8,10</sup>

With the regulation and effective activity of the SAMU,

the nurse became responsible for supervising and evaluating the nursing actions of the team in the mobile Pre-Hospital Care (PHC). It also provides care of greater technical complexity to serious and life-threatening patients who require adequate scientific knowledge and the ability to make immediate decisions. The workplace of the care nurse in the PHC is the ambulance, specifically the ASU, which by definition is a vehicle (land, air or water) that is exclusively intended for the transportation of patients, according to the provisions of the Administrative Order *GM/MS* No. 1.010 of May 21<sup>th</sup>, 2012.<sup>9-11</sup>

The assistance must be supported by the Law No. 7.498/1986. To this end, it is important that this action is directly linked to the action of research, nursing diagnosis, nursing planning, nursing evaluation, as well as history and physical examination. These steps should be guided by the Resolution No. 358/2009, nonetheless, nursing care in any mobile pre-hospital service provided by technicians and nursing assistants can only be performed under the direct supervision of the nurse. This assistance should be provided to critically ill patients at risk of death, as presented in Administrative Order.<sup>4, 7, 9, 12</sup>

Conclusively, it is worth mentioning that the care provided in the pre-hospital environment is fast, transient and suffers a continuity solution (between teams) when PHC professionals pass the patient to the hospital emergency professionals. In this scenario, the application stated in the *COFEN* Resolution No. 358/2009 is compromised, then standing a challenge to the nurse managers and assistants of the *SAMU*, in order to plan and implement the NCS for this service.

Furthermore, there are few publications relating these two topics: nursing assistance in mobile PHC (*SAMU*) and Nursing Care Systematization (NCS), which makes it even more difficult to identify possible solutions to this problem. Therefore, the study's aim is to identify the limitations in the implementation of NCS in the *SAMU* at *Recife* city.

## METHODS

It is a cross-sectional and descriptive study with a quantitative approach. The main advantage of a cross-sectional study is its high descriptive power over certain investigated characteristics, which provides the basis for planning actions that may intervene on these characteristics. A descriptive research is responsible for describing the characteristics of particular populations or phenomena; the approach quantifies the data and generalizes the results of the sample to those interested. Then, it is delineated as descriptive because it is not possible to infer a cause-effect relationship, and it can verify association between two or more variables.<sup>13-15</sup>

The design used to collect information through the observation of a number of individuals, in a single moment, in each situation investigated, the research was

carried out in the first half of 2016, in a systematized way, seeking to answer the guiding question << what are the limitations regarding the implementation of the NCS in the *SAMU* at *Recife* city?

The study data collection was performed in the *SAMU* at *Recife* city. In this city, *SAMU* was inaugurated on December 21<sup>th</sup>, 2001, and currently the service has 22 vehicles including 18 BSU, 4 ASU, and two *Motolâncias*. Currently 2,000 monthly visits are performed, on average, according to information from the Health Department of *Recife*, available on the Health Department's Internet portal.<sup>16-18</sup>

The research involved nursing professionals, either with or without specialization, who perform care functions in the ASU, and today the population of 61 nurses involving the assistance, management and regulation activities. The sample was determined after applying the inclusion and exclusion criteria, taking into account the pertinence and the population limitation, which is a finite population. The sample size was defined by convenience, covering all nursing professionals working in the health area, involved with the care function within the scope of their work. An intentional sample was used taking into account all the professionals filled in the service and included in the service scale.

In this way, all the nurses who performed a care role in the ASU of the *SAMU* at *Recife* city, nurses linked to this *SAMU* service, were used as inclusion criteria, whether with a statutory relationship or a work contract. And as exclusion criterion, it was decided to exclude nurses from other institutions that provide services in said research field, nurses who do not work at the ASU of the *SAMU* at *Recife* city or who perform managerial functions, nurses who are on vacation or work leave.

It was applied a script in order to collect data about the subjects of the research, rescuing important and pertinent subsidies to obtain comparative constructions of experiences, opinions and individual professional experiences on the realization of NCS in the *SAMU*. This instrument used for data collection was a semi-structured interview script, composed of closed questions. The content of the questions contained socioeconomic and demographic variables (age, occupation, income, place of residence, level of schooling), as well as professional experience, knowledge about legislation relevant to the activity carried out in the *SAMU*, and difficulties in implementing NCS in the service.

During the data collection process, there was concern in the construction of a roadmap with reference in the Resolution No. 466/12 that regulates research involving human beings. These structures made possible both the dynamization and the best use in the segregation of the data of interest, as well as the legal means in the length of which the *Comitê de Ética e Pesquisa (CEP)* [Ethics and Research Committee] was established. All the guidelines were met as established by both the Resolution No. 466/12



and the Resolution No. 251 from the National Health Council, which deals with Research involving human beings. It is emphasized that such data were used for this study only.

Eligible nurses were invited to participate in the study and only responded to the form after they had read the “Free and Informed Consent Term” and signed the same through the interviewer’s reading. Moreover, the confidentiality of the information provided and the anonymity of the interviewees were ensured, and the participants were numerically identified. The project was submitted to the CEP of the Mauricio de Nassau-Recife Faculty and approved under the *Certificado de Apresentação para Apreciação Ética (CAAE)* [Certificate of Presentation for Ethical Appraisal] No. 55406216.5.4444.5193, and CEP Legal Opinion No. 1.547.265, the collection was done by the researchers only after the approval of the CEP.

After the approval of the Research Ethics Committee, then were started the interviews with the full-time nurses in the SAMU at Recife city. The approach was taken taking into consideration the on-call duty scale of each professional, so the professionals were individually approached to conduct the research on their workday. For the accomplishment of the research, it was realized how many meetings were necessary until the saturation of the sample. It is worth mentioning that the data collection was carried out from June to August 2016.

The final data tabulation procedure was performed using Windows® Excel®. After the correction of possible typing errors, the analysis and interpretation of the results was initiated, and a descriptive approach was started on the variables and the characterization of the studied population. The descriptive analysis essentially included measures of central tendency (arithmetic average), and data percentage. The results were exposed through the construction of one table and figures of both relative and absolute frequency distribution of the variables.

## RESULTS AND DISCUSSION

The results presented below are presented in a way to facilitate the understanding and discussion of them, for better visualization the results will be presented in the form of figures and one table.

Considering the SAMU at Recife city, a total of 61 nurses are currently working, of this total 07 (11.48%) nurses work in administrative functions, another 03 (4.92%) do not perform care work because they have physical limitations. Remaining 51 nurses qualified to conduct the interviews, out of these, only 1 (1.61%) of the professionals refused to participate in the survey, and 02 (3.28%) were separated by medical leave, making a total of 48 nurses interviewed.

In the first moment the results of the sociodemographic characterization of the population with respect to the representativeness of the sample are presented, it was

considered sufficient to approach a finite population, using a sample for convenience and that reached the percentage of approximately 80% of the nurses working in the SAMU at Recife city.

The population under analysis has half the professionals in the age group from 35 to 45 years old. As well as more than 90% of professionals are female. According to the age the same profile was verified in the research done by other authors, as well as this age group is in agreement with what was presented by Cofen regarding the average age of nurses from Pernambuco.<sup>19-22</sup>

Even though SAMU is a service that requires physical strength to develop certain activities, the female presence is expressive; this fact is one of the hallmarks of nursing, the feminization of the nurses’ workforce. The same profile was presented in other researches, as well as the percentage presented in the Nursing Profile Survey in Brazil, approximately 87%, are nurses, which corroborates with the findings of this study, being also in line with census population data from the Pernambuco State.<sup>19-23</sup>

In this study it was possible to perceive that the nurses from the SAMU at Recife city surveyed have sufficient training time to consider themselves experienced in nursing. According to Luchtemberg<sup>21</sup> (2016), the nurses’ activity time in the SAMU should be around six years in order to be considered satisfactory. With this in mind, the nurses of the SAMU at Recife city are in agreement with this concept.<sup>22,24</sup>

Regarding the study’s results about the accomplishment of the NCS. When argued about the importance of NCS as an instrument for standardizing care for nursing as a profession, more than half said that this achievement is important. When asked about the performance of NCS in the SAMU at Recife city, which is a PHC service, just over half of the nurses answered that the realization facilitates the service. Nevertheless, when they were asked whether or not to know the COFEN Resolution No. 358/2009, just over half said they did not know the content of the resolution, as can be seen in **Table 1**.

**Table 1** – Identification and perception of the SAMU nurses regarding the limitations of NCS implementation in the service, Recife-PE, 2016.

	Frequency	Percentage (%)
<b>It is important recording the NCS steps (n=48)</b>		
Yes	35	72.92
No	13	27.08
<b>Perception about the NCS in the SAMU</b>		
Facilitate	26	54.17
Does not influence	19	39.17
Difficults	3	6.25
<b>Knows the Resolution No. 358/2009 (n=48)</b>		
Yes	22	45.83
No	26	54.17
<b>Better announcement and training about NCS in the SAMU (n=48)</b>		
Yes	38	79.17
No	10	20.83

These responses diverge from each other, as can be seen in **Table 1**, most nurses say that NCS as an instrument for standardization of care is important, but the number of nurses who have the perception that NCS facilitates activity in the SAMU was little more than half of the studied population, evidencing an imbalance between the practice and the theory.

Other studies affirm that for the nursing professional to constitute their identity in the sphere of care and to undo concepts and ideas, it is of extreme importance to recognize that the NCS is the framework of the nursing profession, becoming an essential tool to manage care through of the planning, execution, control and evaluation of the actions taken in the direct and indirect care to the patient. Nurses seek autonomy through the application of the NCS, developing the planning of their care, guaranteeing responsibilities to the patients and guiding them in the decision making process in several situations experienced.<sup>25-28</sup>

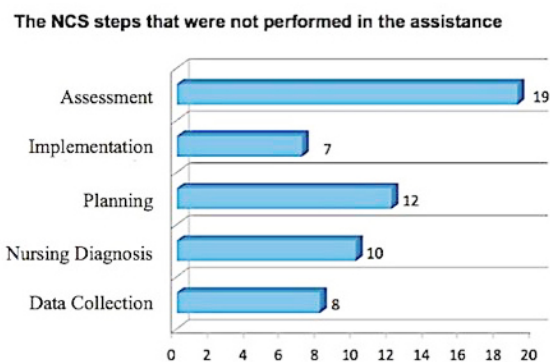
In the scientific literature it is possible to perceive the importance of performing the NCS for the better assistance of the professional to the patient, however the SAMU nurses, when asked if they know the COFEN Resolution No. 358/2009, just over half stated that they did not know about such regulations. This Resolution establishes the implementation of NCS in all health care units that provide nursing care, such as the SAMU, which is regulated by its own legislation, updated by Administrative Order GM/MS No. 1.010 of 2012, to Which affirms the indispensable presence of the nurse in the unit. Nonetheless, the performance of this professional is often precarious in terms of physical, human resources and knowledge necessary for the applicability of NCS.

Other studies have also shown the difficulty of nurses in implanting or performing NCS, in a way, the COFEN Resolution No. 358/2009 itself creates a gap in the interpretation of this norm when affirming that it must be performed in all either public or private environments, where the professional nursing care occurs. However, the normative disregards the variations of the health services, and their peculiarities, treating the health services with a reductionist and universal vision, refuting the specificities of the characteristics of the SAMU.<sup>4, 26, 29-32</sup>

Reinforcing what was recommended by the COFEN Resolution No. 358/2009, another regulation was elaborated, COFEN Resolution No. 375/2011, affirming that nursing assistance should only be developed in the presence of the Nursing Person in the Pre-Hospital and Inter-Hospital Attendance service, in situations of either known or unknown risk. It also reiterates that in these services, nursing professionals must comply with the COFEN Resolution No. 358/2009. In this way the nurse has the duty to perform the NCS in the SAMU, as recommended and determined in the current legislation.<sup>33-34.4</sup>

However, as mentioned earlier it is necessary to consider the particularities of each service.

When asked about the stages of NCS that are not performed during patient care in Prehospital Care, the frequency of responses on this question, the step that appears most often not is the evaluation of results. However, it is worth mentioning that at some point at least one of the steps is not performed, as shown in **Figure 1**.



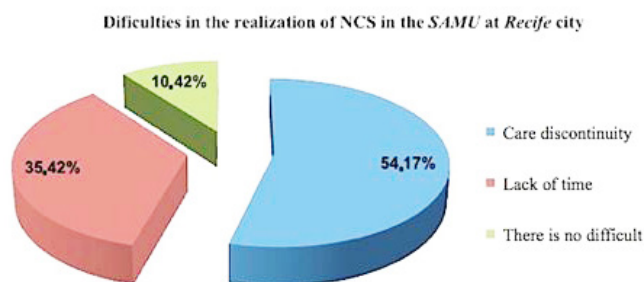
**Figure 1** – Frequency distribution of the NCS steps not performed at SAMU, Recife-PE, Brazil, 2016.

The interviewees presented several difficulties for the execution of the NCS, and although these professionals recognize their relevance, some do not carry out this fact registration, evidencing the lack of knowledge about the steps to be performed. The NCS is a process implanted in the service, but there are steps that are not performed, this situation can be perceived in the stage of Results Assessment that appears with greater prevalence between the phases not performed, it is worth noting that this is a systematic and continuous process, it is through this process that the changes in the responses of the victims are verified in order to ascertain if the nursing actions or interventions reached the expected results.<sup>2,27,29</sup>

It was also possible to show that the Planning stage was the second most prevalent among those not performed. For other authors, the problems that make NCS difficult are the lack of practice and the lack of stimuli for better systematization. One of the indicatives is the lack of knowledge to perform the stages of NCS as the main deficit in the first stage, leading to disbelief in nursing care, a fact also presented in this research, evidenced by the low frequency of responses for not performing step of Data Collection. It is important to highlight that in addition to direct care actions for patients and families, management actions are also developed in large numbers by the SAMU nurses.<sup>34-35</sup>

Corroborating with the information presented previously, the SAMU nurses at Recife city, when they were accused of difficulties in performing the NCS in said service, a little more than half (54%) nurses stated that discontinuation of care was the main difficulty for the accomplishment of the NCS, and 17 (35%) nurses also stated that lack of time

figures as a difficulty for achievement, according to the data showed in **Figure 2**.



**Figure 2** – Percentage of the factors that impair the realization of NCS in the SAMU, Recife-PE, Brasil, 2016..

Hence, understanding the SAMU specificities is imperative for the development of activities related to victim assistance to be carried out in an integral and continuous way. The actions of the nursing professional in this context need to be efficient and effective. It is important to remember that the procedures performed with the victims served by the SAMU can often be associated with unhealthy environments or that endanger the physical integrity of the nurse, which corroborates with the data coming from this research, being one of the factors that prevent the realization of NCS in the SAMU.<sup>21, 11</sup>

The statement by the SAMU nurses about the lack of time to perform the NCS in the service is linked to the outcome given to the victim who is under the care of the PHC service. The patient stays as short as possible with the SAMU team, and the sooner it is to be delivered to a fixed hospital or pre-hospital unit, there is a discontinuity of care provided to the victim in this transition, then preventing the NCS steps.<sup>36-38</sup>

It is known that the time elapsed between the accident and hospital care is a decisive factor in reducing mortality and the occurrence of sequelae, which is why the need for professionals who are increasingly trained and qualified for care. Though, there is little debate as to what steps should be taken to maintain the care provided outside the hospital after the victim is received in the either hospital or the pre-hospital unit, thus favoring the health care continuity.<sup>36-8</sup>

## CONCLUSIONS

This study was based on the descriptive methodological perspective to support its objective. It is important to point out that the objectives of the research were achieved by identifying the limitations in the implementation of NCS in SAMU at Recife city. It is important to highlight the importance of this research on the application of NCS in SAMU at Recife city, given that most of the nurses find it difficult to develop it in the care provided. It is clear the feminization of the nurses' workforce.

This study allowed to identify aspects that hinder and limit the NCS in the SAMU, it was possible to verify that the nurses interviewed, although more than half say that the NCS facilitates and that is important for the assistance, they cannot do it or not perform as requested by Resolution 358 standards from the COFEN, either due to lack of time, lack of knowledge of NCS, or discontinuation of the process.

This discontinuity occurs due to the dynamics of the SAMU that in turn attends the victim outside the hospital unit and then delivers to the destination sector, within the hospital or in the Emergency Services Units, and all care provided to the victim is recorded only on the form that The nurse of the SAMU fills in, consequently, the team that receives the victim does not keep a record of the assistance rendered outside the unit.

Therefore, it is suggested as a way to minimize these shortcomings of the NCS implanted in SAMU at Recife city, the possibility to provide a copy of the form used in the service so that the established assistance for the patient during the PHC can be given continuity. In this way, it would supplement the deficiency evidenced in this research as to the lack of continuity of the NCS performed in SAMU at Recife city.

Hence, it is necessary that the regulating bodies of the COFEN/COREN system understand the specificity of the SAMU, to (re)formulate the legislations on the NCS, thinking about the various services that require the nurse's performance. In order for NCS to be applied in order to rethink ways of thinking, doing, teaching and managing, nursing practices should be questioned, avoiding that they become a purely normative, regimental, and punitive process.

It should be considered that the results of the present study do not involve the entire population of nurses from the PHC Services in Pernambuco State, which represents a limitation of the research. Differences between cities and states exist and should not be forgotten, the theme needs to be broader in scope of study, thus reducing the margins of difference between the target population. As well, other studies need to be done to reduce the differences between the realities of the various Brazilian capitals, in order to obtain more information about the topic addressed in this research.

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