




ORIGINAL

## Nursing care for acute coronary syndrome in an emergency care unit

Cuidados de enfermagem na síndrome coronariana aguda em unidade de pronto atendimento

Atención de enfermería para el síndrome coronario agudo en una unidad de emergencias


Thábata Larissa Agostini dos Santos<sup>1</sup>

 <https://orcid.org/0000-0002-2639-5595>


Eliane Matos<sup>1</sup>

 <https://orcid.org/0000-0002-5105-870X>

Nádia Maria Chiodelli Salum<sup>1</sup>

 <https://orcid.org/0000-0002-2624-6477>

Sabrina da Silva de Souza<sup>1</sup>

 <https://orcid.org/0000-0001-9046-6434>

Cinthya Maria Lins Pereira<sup>1</sup>

 <https://orcid.org/0000-0002-5835-7905>

Melissa Orlandi Honório Locks<sup>1</sup>

 <https://orcid.org/0000-0003-0972-2053>

<sup>1</sup>Universidade Federal de Santa Catarina. Santa Catarina, Brasil.

### ABSTRACT

**Objective:** To verify nurses' actions in the care of patients with acute coronary syndrome and to identify which Nursing care measures were applied to the patients in emergency care units. **Methods:** A qualitative, exploratory and descriptive study, organized and guided according to the Contextualized Instructional Design model, in the analysis stage. Data collection took place from January to April 2019 in an Emergency Care Unit, through semi-structured interviews with 19 nurses from a municipality on the North coast of Santa Catarina (southern Brazil) and the data were submitted to thematic analysis. **Results:** Three categories emerged, as follows: "Identifying signs and symptoms of acute coronary syndrome", "Defining the courses of action" and "Proposal for Nursing care measures". Nurses base their evaluation on clinical and vital signs and on their experiences, highlight the performance of an electrocardiogram, restriction of physical efforts, and concern with the care measures performed in the emergency room until stabilization of the case or transfer to the reference hospital. **Conclusion:** The nurses' actions do not follow a care standard, resulting in variation of the care provided. Care measures were proposed that corroborate the literature and are paramount in adequate management of acute coronary syndrome in urgency and emergency services.

**Descriptors:** Nursing Care. Nursing. Critical Care. Acute Coronary Syndrome. Signs and Symptoms.

### RESUMO

**Objetivo:** Verificar a conduta do enfermeiro no atendimento ao paciente com síndrome coronariana aguda e identificar quais os cuidados de enfermagem realizados ao paciente em unidades de pronto atendimento. **Métodos:** Estudo qualitativo, exploratório, descritivo, organizado e guiado conforme o modelo de Design Instrucional Contextualizado, na etapa de análise. A coleta de dados ocorreu de janeiro a abril de 2019, em Unidade de Pronto Atendimento, por meio de entrevista semiestruturada com 19 enfermeiros de um município do litoral norte de Santa Catarina no sul do Brasil e os dados foram submetidos à análise temática. **Resultados:** Emergiram três categorias: "identificando sinais e sintomas da síndrome coronariana aguda", "definindo as condutas" e "proposta de cuidados de enfermagem". Os enfermeiros baseiam a avaliação nos sinais clínicos e sinais vitais e em suas experiências, destacam a realização do eletrocardiograma, restrição de esforço físico e preocupação com os cuidados realizados na sala de emergência até estabilização do caso, ou transferência para o hospital de referência. **Conclusão:** A conduta dos enfermeiros não segue um padrão de cuidados resultando na variação do atendimento. Foram propostos os cuidados e estes corroboram com a literatura e são primordiais no manejo aquedado da síndrome coronariana aguda na urgência e emergência.

**Descritores:** Cuidados de Enfermagem. Enfermagem. Emergência. Síndrome Coronariana Aguda. Sinais e Sintomas.

### RESUMÉN

**Objetivo:** Verificar las acciones de los profesionales de Enfermería en la atención provista a pacientes con Síndrome Coronario Agudo e identificar la atención de Enfermería que se ofrece a los pacientes en unidades de emergencias. **Métodos:** Estudio cualitativo, exploratorio y descriptivo, organizado y guiado conforme al modelo de Diseño Instruccional Contextualizado, en la etapa de análisis. La recolección de datos tuvo lugar entre enero y abril de 2019 en una Unidad de Emergencias, por medio de entrevistas semiestructuradas con 19 profesionales de Enfermería de un municipio ubicado en el litoral norte de Santa Catarina (sur de Brasil), y los datos se sometieron a análisis temático. **Resultados:** Surgieron tres categorías, a saber: identificación de signos y síntomas del Síndrome Coronario Agudo, Definición de las acciones a realizar y Propuesta de atención de Enfermería. Los profesionales de Enfermería basan su evaluación en las señales clínicas, en los signos vitales y en sus experiencias, al igual que destacan la realización de un electrocardiograma, la restricción de esfuerzo físico y la preocupación con respecto a las acciones realizadas en la sala de emergencia hasta estabilizar cada caso, o bien, hasta transferir al paciente al hospital de referencia. **Conclusión:** Las acciones de los profesionales de Enfermería no siguen un estándar de atención, lo que deriva en variaciones en la asistencia provista. Se propusieron medidas que corroboran con la literatura y son primordiales en el manejo adecuado del Síndrome Coronario Agudo en servicios de urgencia y emergencia.

**Descritores:** Atención de Enfermería. Enfermería. Urgencias Médicas. Síndrome Coronario Agudo. Signos y Síntomas.

## INTRODUCTION

Cardiovascular diseases represent a severe public health problem worldwide, affecting both developed and developing countries. Among cardiovascular diseases, Acute Coronary Syndrome (ACS) has been highlighted due to the progressive increase in morbidity and mortality related to it in all Brazilian regions.<sup>(1)</sup> It is an acute event that comprises several clinical manifestations triggered by myocardial ischemia, including unstable angina (UA) and acute myocardial infarction with or without ST-segment elevation.<sup>(2)</sup>

The clinical manifestations of ACS are severe and have an unfavorable prognosis, which can lead to sequelae or death. Factors such as prompt care and early recognition of signs and symptoms increase the patient survival rate.<sup>(3)</sup> Hence the importance of health teams deeply qualified to attend to ACS-related events and prepared to act in the acute manifestation of the disease.

Therefore, the health professionals' role in ACS is challenging, requiring ability to recognize and act early in time on the signs and symptoms that concern triggering of acute coronary syndromes, as well as having instruments that assist in the rapid identification of ACS to provide an agile and safe service capable of reducing morbidity and mortality due to the disease.<sup>(3-4)</sup>

In this context, a number of studies reinforce that in the face of severe coronary events, the reduction of cases such as AMI in ACS occurs through the use of guidelines based on scientific evidence.<sup>(5-6)</sup> In urgency and emergency services, Reception with Risk Assessment and Classification provides a basis for the immediate evaluation of the patient, providing early identification of severe signs and symptoms. Nurses are the reference professionals in RRAC and are also present throughout the care cycle, from the patient's arrival to the outcome.<sup>(6-7)</sup>

The nurses' role is crucial for proposing adequate clinical management. The professional's evaluation of the patient in RRAC, knowledge about the ACS symptoms, and anamnesis to identify predisposing factors determine prioritization of the care to be provided, approach and early intervention; however, recent studies on the nurses' role in emergency situations in ACS are scarce. There are many review studies, although publications about the practice corroborating theory and practice need to be explored.<sup>(9-10)</sup>

Considering the care of critically-ill patients in urgency and emergency services, this study is justified due to the need to know the nurses' routine practice in the face of ACS, so that care standardization instruments can be developed considering institutional and professional specificities, aiming at an safe, assertive and executable assistance.

Given the above and considering the complexity of caring for patients with ACS and the importance of the nurses' role in the management of serious health situations, the question is as follows: How do nurses perform Nursing care measures for these patients? This study aimed at verifying the nurses' behavior in caring for patients with ACS, as well as at identifying

Nursing care for acute coronary syndrome.. which Nursing care measures are provided to patients in Emergency Care Units.

## METHOD

This is a qualitative, exploratory and descriptive study, organized and guided according to the Contextualized Instructional Design (CID) model, which constitutes an intentional action to plan, develop and apply specific didactic situations, providing tools and resources to respond to the learning needs.<sup>(11)</sup> Conventional instructional design models generally structure the teaching-learning planning processes in four distinct stages, namely: analysis, design and development, implementation and evaluation.<sup>(12)</sup>

This model was chosen because, later, with data collection, the authors intend to build a technological standardization product to be implemented in the practice. Therefore, this research focused on the analysis stage, which involves the identification of learning needs, the definition of instructional objectives and the survey of the restrictions involved.<sup>(12)</sup>

The study was carried out in two 24-hour ECUs from a municipality on the North coast of Santa Catarina. The emergency care units are part of the municipality's Urgency Network and provide nearly 600 individual services a day each.

A total of 36 nurses work in both units, of which 19 participated in the study. The inclusion criteria considered the following: working in one of the two Emergency Care Units of the municipality for a period longer than 30 days, in the night and/or day shifts. The exclusion criteria were as follows: being away from the working activities either due to vacation, medical certificate or leave during the data collection period. All nurses were invited to participate but, during the data collection period, 04 professionals were away from the service due to vacations, medical certificates or leave, and the total number of participants was defined considering the criterion of data saturation, which was reached when the information began to repeat itself contributing the same analysis content.<sup>(13-14)</sup> Thus, 59% (19) of the professionals who met the inclusion criteria freely participated in the study. There were no withdrawals of participants in the research.

Data collection took place from January to April 2019, the selection criterion was for convenience, a semi-structured interview was carried out, guided by an instrument consisting of professional information from the interviewee, such as time working in the ECU, training time and level and the following open-ended questions: Do you use any standardized instrument/tool that assist in the ACS risk classification? Which signs and symptoms warn you about ACS? Which steps do you take when you suspect ACS? Which care measures do you consider important in the care for ACS cases? The first interview was considered a pilot and was archived and there was no need to adjust the questionnaires; therefore, the interview schedule was continued. The interviews were conducted by a researcher, a student of the professional master's program, they were audio-recorded, lasted a mean of 30 minutes

and were immediately transcribed in full, allowing the researcher to identify repetitions until reaching the saturation point, when the information was exhausted and no new topics were identified.<sup>(13)</sup> The previously agreed upon interviews were carried out during the nurses' working hours, according to their availability, after signing the FICF.

The data were submitted to content analysis as proposed by Minayo.<sup>(15)</sup> A thorough reading of each interview was carried out, and later on the reading as a whole, so that it was possible to appropriate what the nurses pointed out as the care routine and need for care in patients with ACS. The findings from the interviews were organized based on codes that represented the key information of the interviews; the set of similar codes with the same core of meaning gave rise to three analysis categories. The entire data collection, transcription, categorization and analysis process was in charge of the main researcher.

The project was submitted to the UFSC Ethics Committee (CEP/UFSC), as recommended by Resolution 466/12 of the National Health Council, on research involving human beings, and was approved through opinion No. 3,057,593 of CEP/UFSC. The participants' consent was obtained by their signing the Free and Informed Consent Form (FICF). Anonymity was maintained using alphanumeric identification (E for interview [*“entrevista”* in Portuguese], followed by a numerical order from 1 to 19).

## RESULTS

The results show that the nurses participating in the study are predominantly women, 17 (89%), aged between 30 and 40 years. Of these, 16 (84%) have a specialization, two (11%) have a master's degree and one (5%) has only an undergraduate degree. Four nurses have a specialization in the area of urgency and emergency. The mean training time was 13 years, and the mean time working in the city's emergency network was between five months and six years.

The participants' speeches are presented in three categories: 1) Identifying ACS signs and symptoms; 2) Defining Nursing courses of action in ACS; and 3) Proposal for Nursing care measures in the assistance to be provided to patients with suspected and/or installed ACS.

### Identifying ACS signs and symptoms

The ACS signs and symptoms direct early identification, allowing for greater treatment and survival chances. Chest pain was considered by the study participants as the fundamental complaint to define and initiate care for ACS, being pointed out by 18 (90%) of the interviewees as the most frequent sign and symptom in patients with ACS.

“There are three warning signs: chest pain, epigastric pain and back pain. We always pay more special attention to pain reports” (E-2)

Nursing care for acute coronary syndrome..

Even though pain is reported as the main warning sign, its definition and classification are difficult to identify, considering that it is subjective, in addition to being associated with different etiologies in some situations.

“It is very difficult to make this difference, because of this we always end up increasing the classification, at least I end up giving more value to the patient's complaint, especially when it is associated with some other factor or some other altered vital sign, aged patient, diabetic patient, hypertensive patient” (E-16)

In order to qualify the symptoms and be able to define whether chest pain is related to ACS, it was asked, in relation to the characteristics of pain, how they are evaluated in order to better qualify it and thus define it.

“I ask: How's that pain? Sternal pain, if it is needle-type, weight-type, grip-type, burning pain, compressing pain, if it is radiating pain” (E-4)

“I do have doubts, I see when there are many other complaints together, which is a possibility of not being coronary, [...] normally when pain lasts many days I already rethink other things” (E-7)

In addition to pain, other information such as previous diseases, family health history, presence of stressful signs in recent days and vital signs, are important in the initial evaluation.

“[...] family history or cardiovascular risk due to some prevalent disease in that patient such as diabetes, smoker, hypertensive [...] and also vital signs collected there at that time, altered heart rate, hypertensive or hypotensive patient, sweating, pallor” (E-16)

Verification of the vital signs is highlighted as of paramount importance in Reception with Risk Classification, especially for ACS.

### Defining Nursing courses of action in ACS

Definition of the course of action occurs after evaluating the signs and symptoms, when the nurse conducts the next stages of the care to be provided.

According to the study participants, there is no guiding protocol of the course of action to be implemented in the care of patients with suspected or even installed ACS, after risk classification.

“Everyone does a lot of things in a given way, I don't even know if the way I do it is right; some worry too much sometimes for things that are not even worth it and others don't care [...] the course of action is very varied, I can't define it, I think that each person does it their own way, even doctors” (E-7)

Although there is no formal standardization, it is observed in the reports that nurses maintain a regular course of action of referring the patient to a priority service and adopt measures that they consider to be important.

“I prevent him from walking, I put him in the wheelchair and take him straight to the electro room and warn the attending physician. According to the protocol, you have to do the electro in up to “so many” minutes and if you need catheterization and angioplasty, everything is already referred to the hospital” (E-4)

For the nurses, the team has the concern to act with agility performing the exams and implementing the necessary referrals and care measures. It is observed that most of the courses of action adopted are similar, although there is a perception of different actions among the participants.

“It’s quite different, on every shift, so it depends on the work of each team” (E-12)

“Not all nurses do it the same way” (E-18)

One question raised by most of the interviewees is about continuity of care for the patients assisted in the ECU and the need for referral to the reference hospital. They point out that the transfer is not standardized with reports of difficulties accessing the reference hospital.

“Today our biggest difficulty, our biggest trouble is transfer to the hospital. Sometimes the doctor spends 2 hours trying to talk to the cardiologist to pass the case on and can’t do it, then wants to refer the patient without contact, and the Nursing team that ends up being exposed, because the doctor doesn’t go along to lead the patient” (E-9)

In addition to the difficulty referring the patient, the team faces lack of standardization in relation to the transportation of severely-ill patients, sometimes performed by the Mobile Emergency Care Service and others by the ECU ambulance. When choice is for the ECU ambulance there is no standardization in composition of the team, if led by a physician and nurse or only by the nursing technician.

“Sometimes in transportation, there is a doctor who’s in a good mood to go and accompany such patients, severely-ill ones, but sometimes there is not, sometimes they call the SAMU, but it does not always come right away, there’s these obstacles” (E-18)

“If the advanced SAMU can’t come on the transfer, we’re going to have to make that transfer. Our ambulance is not the most adapted for advanced transportation. And we didn’t even have training for this, so you will remove a professional from his sector to do the transportation [...]” (E-12)

### **Proposal for nursing care measures in the assistance to be provided to patients with suspected and/or installed ACS**

In the indication of the care measures for patients with suspected or installed ACS, nurses highlight RAC, with prioritization of immediately assisting the patients.

Another aspect indicated by the participants is the need to standardize care, with agreed autonomy for nurses to initiate some measures immediately

Nursing care for acute coronary syndrome.. after classification, highlighting the performance of an electrocardiogram.

“Identify the issue of pain and refer early in time to the electrocardiogram, and then communicate to the medical professional so that they can start a protocol as soon as possible” (E-6)

The care measures mentioned are the following: monitoring the patient, puncture calibrated venous access, installing oxygen, restricted bed rest, controlling urinary output, controlling vital signs, guiding the patient and welcoming the family.

“The care issue is very important: all will be rest, cardiac monitoring, O<sub>2</sub> support for comfort, bedpan or probe, emergency room. So I think that these actions have to be standardized and also this autonomy of Nursing” (E-2)

“And collection of the tests, as soon as possible to be forwarded to the laboratory, also to get the result as soon as possible to define the referral” (E-14)

The need to standardize the assistance provided after stabilization in the emergency room was also pointed out, in the cases when the patients are referred to the observation room and/or referred and transferred to the reference hospital.

“We always have a look at these patients who stay in the emergency room [...], but when these patients leave there and come to observation this is lost, so here we don’t have this (standardization)” (E-16)

“How to make this referral to the hospital, who is the telephone contact, [...] who goes in the vehicle and how this transfer has to be done, patient on stretcher, with or without companion, with printed reports or not, presence of the doctor and nurse? And what does the ambulance need to carry, need only the O<sub>2</sub>, only the stretcher, or has some other specific equipment that it needs to have?” (E-18)

They point out that an instrument for the standardization of care measures would assist in the care of patients with suspected and/or installed ACS, as well as permanent education of the professionals.

“I believe that it is very important to have a SOP, a protocol, for everyone to have this look at chest pain, so that there is no classification error, no delay in the electro, no delay in the transfer and medication of this patient, I believe that it would be of paramount importance” (E-4)

In their statements, the nurses mention the Nursing care actions necessary for the assistance to be provided to patients with ACS who arrive at the urgency and emergency services; the care measures were organized in order to, in the future, subsidize an instrument that guides ACS care in the ECU (Chart 1).

**Chart 1.** Essential Nursing care measures in the assistance to be provided to patients with suspected and or confirmed acute coronary syndrome, in the perception of nurses from the ECU, of a municipality in the state of Santa Catarina. Santa Catarina, Brazil.

Essential nursing care measures
Assess vital signs
Restrict efforts, use wheelchair
Perform ECG
Perform cardiac monitoring
Prepare venous access
Install oxygen
Administer medication
Collect laboratory tests
Maintain bed rest
Control urinary output
History and evolution
Welcome and guide family members
Arrange the transfer

Source: Prepared by the authors (2022).

## DISCUSSION

The results of the study indicate that Nursing care in the ECU is performed by young female professionals, with just over five years of experience in emergencies, which portrays the national profile of the profession, with the category being mostly female and a predominant level of specialization training.<sup>(16)</sup>

Chest pain was the main symptom reported in ACS identification, which converges with studies on this theme. ACS can be confirmed or ruled out for clinical reasons in a patient with chest pain. The clinical characteristics of chest pain, age, previous history of cardiovascular disease, gender and ECG abnormalities are the most common ACS predictors.<sup>(17)</sup>

The need for a differential pain diagnosis is fundamental, as pain can be of coronary, gastrointestinal, pulmonary or muscular origin and variations in the description of pain by the patient may lead to suspicion of non-cardiac etiology.<sup>(17)</sup>

The aspects related to the description of pain were found in the study participants' speeches, constituting a factor that generates anxiety and insecurity in performance of the activity due to the high mortality rate associated with myocardial infarction, being fundamental to safely rule out a possible coronary event.<sup>(18)</sup>

Thus, other signs and symptoms are highlighted in studies on ACS, such as: shortness of breath, fatigue, dizziness, nausea, arm pain, sweat, shoulder pain, back pain, palpitation and epigastric pain.<sup>(19)</sup>

In conjunction with the evaluation of the symptoms reported by the patient, verification of the vital signs is also essential for evaluation.<sup>(20)</sup> These aspects were also pointed out in the current study as a Nursing care measure and reinforced the importance of verifying and analyzing vital signs in the risk classification in ACS.

The care for patients with ACS is based on medical protocols and guidelines based on scientific consensus. In this perspective, and understanding the importance of Nursing care in the face of this health

Nursing care for acute coronary syndrome.. condition, nurses need to plan the care to be provided according to the patient's health-disease conditions.<sup>(21)</sup>

However, it is observed that Nursing studies are focused on the theme of Reception with Risk Assessment and Classification (RRAC) in ACS, but the care measures to be performed after RRAC are little described and refer more to compliance with medical prescriptions.<sup>(21)</sup> Absence of standardization weakens decision-making and organization of Nursing care is essential for a systematized and assertive care practice with a view to safety in patient care.<sup>(22)</sup>

Given that issue, it was possible to list the Nursing care measures required in ACS in the nurses' perception, namely: restrict physical effort, perform electrocardiogram, perform cardiac monitoring, establish venous access, install oxygen, administer prescribed medication, collect laboratory tests, maintain bed rest, control urinary output, Nursing history and evolution, welcome and guide family members, and organize transfer to the referral service.

It is noted that there is no institutional standardization; however, the aforementioned care measures corroborate with the literature, as they are found in and are based on national<sup>(2)</sup> and international<sup>(23)</sup> Nursing treaties<sup>(24)</sup> and scientific journals.<sup>(25-26)</sup>

Therefore, the care measures mentioned by the nurses are necessary for adequate assistance in ACS cases. According to the literature, the restriction of physical effort helps reduce oxygen consumption of the myocardium; therefore, it is recommended to use a wheelchair and prevent the patient from exerting effort when walking.<sup>(24)</sup> Performance of an ECG provides agility in care and security for nurses' decision-making.<sup>(2-25)</sup> Strict monitoring in the emergency room is necessary due to the potential complications caused by the myocardial injury.<sup>(23)</sup>

With regard to the need to puncture the venous access, it is important because it guarantees a route to infuse medications for the administration of fluids and drugs with rapid and systemic effect.<sup>(24)</sup> With regard to oxygen support, care should be taken; its administration is indicated in patients with oxygen saturation <94%, pulmonary congestion, or in the presence of respiratory distress.<sup>(2,25)</sup> In relation to the administration of drug therapy, it is the first line of action in order to preserve the myocardial tissue, and it is performed upon medical prescription.<sup>(23-24)</sup>

Subsequently, collection of exams is fundamental to assist both in the diagnosis and prognosis of patients with ACS.<sup>(25-26)</sup> In addition, the indication of maintaining the patient in bed rest and with the headboard up helps reduce chest discomfort and dyspnea in order to improve lung expansion. Therefore, drainage of the upper lung lobes improves and the preload decreases, reducing myocardial work.<sup>(24)</sup>

Complementing the care measures, elaboration of the patient's history and Nursing records needs to be carried out in a judicious way, as they establish the basis of care and guidelines for the patient, helping to determine priorities, and also allow nurses to perform the diagnosis and plan the Nursing actions, monitoring and evaluating the patient's evolution; in

addition, the records provide an overview of the patient's conditions, to ensure a targeted intervention in any situation involving care.<sup>(23-24)</sup>

Regarding continuity of care, the literature points out that, in the case of patients who need follow-up treatment and percutaneous coronary intervention and the emergency service does not offer it, transfer to the referral center is recommended.<sup>(2, 26)</sup> In-hospital transportation is related to the incidence of complications and clinical adverse events such as hemodynamic instability, respiratory failure, psychomotor agitation, decreased level of consciousness, and non-clinical adverse events such as failure to communicate, lack of oxygen, and battery failures in multiparameter monitors. Therefore, it becomes important to plan adequate transportation and that it is in charge of trained and experienced professionals with appropriate materials and equipment.<sup>(23-24)</sup>

The study shows that, even if diverse scientific information is available, it is important to have consolidated and structured Nursing care measures in protocols scientifically based on the reality of the health institution, making them accessible and executable by all professionals, contributing to better care quality indicators, increased survival and quality of life of the patient and a reduction in mortality.<sup>(27)</sup>

It is also noteworthy to highlight continuing training and education for professionals as fundamental for safe care, as well as the formulation of institutional protocols as a way to maintain qualified health teams and effective care.<sup>(27)</sup>

The study did not find mishaps in execution of the research; however, it is worth highlighting the limitations, such as the scarcity of publications in the literature on the nurses' role in ACS in urgency and emergency services, apart from review studies, as well as the perception of the limitations found in the practice such as non-standardization of the nurses' actions.

Thus, this study contributes to the care of patients with suspected and/or installed acute coronary syndrome, as it lists the main care measures required for severely-ill patients, enabling standardized and safe care that can be envisioned in the practice and to support Nursing care planning. It is expected that nurses can provide patients with systematized and targeted Nursing care, providing safety in patient care and to the Nursing professionals in decision-making in the assistance to be provided to severely-ill patients in urgencies and emergencies.

## CONCLUSION

The results of the study show that the nurses' actions in the care provided to patients with suspected and/or an already installed ACS does not follow a standard of care measures and demonstrates that there is some variation in the nurses' approach, which is understood as a complicating element for excellence in care.

The nurses exhibit diverse knowledge about the topic, and care measures have been proposed corroborating with the literature and being

Nursing care for acute coronary syndrome.. paramount in adequate management of ACS. Nursing care is seen as essential for a patient's favorable prognosis, and confirm that a care protocol only becomes effective when it covers the specific needs of the population served and when this corresponds to the expectations of the health professionals who will be using it.

Thus, positively, it is observed that there is openness to change in the professionals who understand their vulnerabilities, have an interest in improving the way they perform their practice, and yearn for standardized routines and professional improvement.

The need for standardization protocols for care planning and the need for training and updates aimed at the care of patients in this clinical condition is emphasized. Such aspects are fundamental for the safety of both patient and Nursing professionals.

## REFERENCES

1. Santos J, Meira KC, Camacho AR, Salvador PTCO, Guimarães RM, Pierin AMG, et al. Mortalidade por infarto agudo do miocárdio no Brasil e suas regiões geográficas: análise do efeito da idade-período-coorte. *Ciênc saúde colet.* [Internet]. 2018 [cited 06 mar 2021]; 23(5):1621-34. doi: <http://dx.doi.org/10.1590/1413-81232018235.16092016>
2. Sociedade Brasileira de Cardiologia. V Diretriz da Sociedade Brasileira de Cardiologia sobre Tratamento do Infarto Agudo do Miocárdio com Supradesnível do Segmento ST. *Arq Bras Cardiol.* 2015 [cited 06 mar 2021]; 105(2 Suppl 1):1-121. doi: <http://dx.doi.org/10.5935/abc.20150107>
3. Cavalcante A, Santos AAA, Braz DDS, Trindade LS, Barros AMMS, Souza DS. Identificação precoce da síndrome coronariana aguda: uma revisão bibliográfica. *Ciênc Biol Saúde Unit.* [Internet]. 2017 [cited 06 mar 2021]; 2(4):219-36. Available from: <https://periodicos.set.edu.br/index.php/cadernobiologicas/article/view/4609>
4. França VEA, Borges PA, Amaral LV, Nery MW, Rodrigues D, Martins FL, et al. Results of an infarction care telemedicine program. *J Transcat Interven.* [Internet]. 2020 [cited 13 mar 2021]; 28:eA20190028. doi: <http://dx.doi.org/10.31160/JOTC1202028A20190028>
5. Pina JCB, Romão MAVB, Jesus MMJC, Carvalho JD, Silva CR. Psychometric study of a knowledge questionnaire on autonomous nursing interventions in patients with acute coronary syndrome. *Rev. Enf. Ref.* [Internet]. 2020 [cited 13 mar 2021]; (4):1-9. doi: 10.12707/RV20070
6. Frisch SO, Brown J, Faramand Z, Stemler J, Sejdić E, Martin GC, et al. Exploring the complex interactions of baseline patient factors to improve nursing triage of acute coronary syndrome. *Res. nurs. health.* [Internet]. 2020 [cited 13 mar 2021]; 43(4):356-64. doi: <https://doi.org/10.1002/nur.22045>
7. Rodrigues MC, Mota NA, Melo RE de, Sousa EE; Quaresma FRP, Maciel ES. Acolhimento com classificação de risco em unidades de pronto atendimento: avaliação sob a ótica do enfermeiro. *Saúde Rev.* [Internet]. 2019 [cited 13 mar 2021]; 19(51):101-7. Available from:

8. Davis LL, Maness JJ. Nurse practitioner knowledge of symptoms of acute coronary syndrome. *J Nurse Pract* [Internet]. 2019 [cited 13 mar 2021];15(1):e9-12. doi: <https://doi.org/10.1016/j.nurpra.2018.09.017>
9. Nunes BX, Lara FAL, Andrade FMS, Ribeiro TAR, Montefusco SRA. Atribuições do enfermeiro frente ao paciente com suspeita de infarto agudo do miocárdio admitido em uma unidade de pronto atendimento: uma revisão da literatura. *Rev Cien FacMais*. 2018 [cited 28 maio 2019]; 12(1):96-112. Available from: <http://revistacientifica.facmais.com.br/>
10. Oliveira TMC de, Antunes BS, Diefenbach G, Zamberlan C. Vivência de uma residente de enfermagem no atendimento ao paciente com síndrome coronariana aguda. *Disciplinarum Scientia*. [Internet]. 2018 [cited 13 mar 2019]; 19 (3):515-24. Available from: <https://periodicos.ufn.edu.br/index.php/disciplinarumS/article/view/2708/2262>
11. Galvão ECF, Püschel VAA. Aplicativo multimídia em plataforma móvel para o ensino da mensuração da pressão venosa central. *Rev Esc Enferm USP*. 2012 [cited 26 out 2018]; 46(spe):107-15. doi: <http://dx.doi.org/10.1590/S0080-62342012000700016>
12. Filatro A, Piconez SCB. Design Instrucional Contextualizado. In: *Anais do 11º Congresso Internacional da ABED, 2004*; p. 1-8; Salvador, Brasil. Bahia: ABED; 2004.
13. Minayo MCS. Amostragem e saturação em pesquisa qualitativa: consensos e controvérsias. *Rev Pesqui Qual*. [Internet]. 2017 [cited 26 maio 2019]; 5(7):01-12. Available from: <https://editora.sepq.org.br/index.php/rpq/article/view/82/59>
14. Nascimento LCN, Souza TV de, Oliveira ICS, Moraes JRMM, Aguiar RCB, Silva LF. Theoretical saturation in qualitative research: an experience report in interview with schoolchildren. *Rev Bras Enferm*. [Internet]. 2018 [cited 20 jun 2019]; 71(1):228-33. doi: <http://dx.doi.org/10.1590/0034-7167-2016-0616>
15. Minayo MCS O desafio do conhecimento: pesquisa qualitativa em saúde. 13ª ed. São Paulo: Hucitec; 2013.
16. Silva MCN, Machado MH. Sistema de Saúde e Trabalho: desafios para a Enfermagem no Brasil. *Ciênc. saúde coletiva* [Internet]. 2020 [cited 10 Mar 21];25(1): 7-13. doi: <https://doi.org/10.1590/1413-81232020251.27572019>
17. Stepinska J, Lettino M, Ahrens I, Bueno H, Garcia-Castrillo L, Khoury A, Lancellotti P, et al. Diagnosis and risk stratification of chest pain patients in the emergency department: focus on acute coronary Nursing care for acute coronary syndrome.. syndromes. A position paper of the Acute Cardiovascular Care Association. *Eur Heart J. Acute Cardiovascular Care*. [Internet]. 2020 [cited 13 mar 2021]; 9(1): 76-89. doi: <https://doi.org/10.1177/2048872619885346>
18. Silva JG da, Alves YL, Barbosa DCS, Santos VCS, Viana JS, Oliveira JC. O enfermeiro na tomada de decisão ao paciente com infarto agudo do miocárdio em uma unidade de emergência. *Braz J Dev*. [Internet]. 2021 [cited 13 mar 2021]; 7(2):15941-15951. doi: <http://doi.org/10.34117/bjdv7n2-289>
19. Zègre-Hemsey JK, Burke LA, Devon HA. Patient reported symptoms improve prediction of acute coronary syndrome in the emergency department. *Res Nurs Health*. 2018 out [acesso em 26 abr 2019]; 41(5):343-7. doi: <https://doi.org/10.1002/nur.21902>
20. Wen-Fang M, Liang Y, Zhu J, Yan-Min Y, Hui-qiong T, Li-tian Y, et al. Comparison of 4 admission blood pressure indexes for predicting 30-day mortality in patients with ST-segment elevation myocardial infarction. *Am J Hypertens*. 2016 [cited 03 maio 2019]; 29(3):332-9. doi: <https://doi.org/10.1093/ajh/hpv109>
21. Caveião C, Santos RB, Montezeli JH, Visentin A, Brey C, Oliveira VBCA. Dor torácica: atuação do enfermeiro em um pronto atendimento de um hospital escola. *Rev Enferm Cent-Oeste Min*. 2014 [cited 13 jul 2019]; 4(1):921-8. doi: <https://doi.org/10.19175/recom.v0i0.427>
22. Lopes DP, Mariot MDM, Riegel F. Perceptions of the nursing team in an Emergency Care Unit on urgency and emergency. *Rev Enferm UFPI*. 2019 [cited 01 mar 2021]; 8(3):24-9. doi: <https://doi.org/10.26694/2238-7234.8324-29>
23. Aehlert B. ACLS, suporte avançado de vida em cardiologia: emergência em cardiologia. Rio de Janeiro: Elsevier; 2016.
24. Smeltzer SC, Bare BG, Hinkle JL, Cheever KH. Brunner & Suddarth. *Tratado de Enfermagem Médico-Cirúrgica*. 13ª ed. Rio de Janeiro: Guanabara Koogan; 2016.
25. Anderson JL, Morrow DA. Acute myocardial infarction. *N Engl J Med*. 2017 [cited 10 maio 2019]; 376:2053-64. doi: <https://doi.org/10.1056/NEJMra1606915>
26. Nakashima T, Tahara Y. Achieving the earliest possible reperfusion in patients with acute coronary syndrome: a current overview. *J Intensive Care*. [Internet]. 2018 [cited 05 maio 2019]; 6(20):1-10. doi: <https://doi.org/10.1186/s40560-018-0285-9>
27. Malfussi LBH, Bertoncetto KCG, Nascimento ERP, Silva SG, Hermida PMV, Jung W. Concordância de um protocolo institucional de avaliação com classificação de risco. *Texto contexto - enferm*. [Internet]. 2018 [cited 02 mar 2021]; 27(1): e4200016. doi: <https://doi.org/10.1590/0104-07072018004200016>

**Financing source:** No  
**Conflicts of interest:** No  
**Date of submission:** 2021/04/07  
**Accepted:** 2022/05/17  
**Publication:** 2022/06/24

**Autor correspondente:**

Thábata Larissa Agostini dos Santos  
Email: [tata\\_lari@hotmail.com](mailto:tata_lari@hotmail.com)

**How to cite this article:**

Santos TLA, Matos E, Salum NMC, Souza SS, Pereira CML, Locks MOH. Nursing care for acute coronary syndrome in an emergency care unit. Rev Enferm UFPI [internet]. 2022 [acesso em: dia mês abreviado ano]; 11:e801. DOI: 10.26694/reufpi.v11i1.801

