



Nursing care in cardiac emergencies in Brazil: management of acute myocardial infarction in elderly individuals aged 60 to 75 years over the last 10 years – integrative review

Nursing care in cardiac emergencies in Brazil: management of acute myocardial infarction in elderly individuals aged 60 to 75 years over the last 10 years – integrative review

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SUMMARY

Introduction: In recent years, the prevalence of cardiovascular diseases has increased steadily in Brazil. Among these diseases, acute myocardial infarction (AMI) is one of the leading causes of morbidity and mortality, especially in the 60-75 age group, which represents a rapidly expanding population segment. This reinforces the need for agile specialized nursing interventions in this context. **Objective:** To evaluate the evolution of nursing care in cardiac emergencies in Brazil, specifically in the management of AMI in elderly individuals aged 60 to 75, over the last decade, contributing scientific evidence that strengthens and elucidates the role of nursing in the care of elderly individuals with myocardial infarction. **Methodology:** This study addresses an integrative literature review, based on publications indexed on platforms such as PUBMED, Scopus, *Web of Science*, *Scientific Electronic Library Online* (SciELO), Virtual Health Library (VHL) and Database of Latin American Literature in Health Sciences (LILACS) between 2014 and 2024.

The descriptors used were "Acute Myocardial Infarction," "Nursing," and "Cardiac Emergency."

Results: The literature reveals a significant increase in studies that emphasize nursing as a determining factor in reducing morbidity and mortality associated with AMI. The importance of rapid symptom identification, continuous monitoring, and the correct administration of indicated therapies stands out, reinforcing the strategic role of nursing professionals on the front lines of emergency care.

Conclusion: Although there have been advances in clinical management and care strategies, morbidity and mortality rates remain high in this age group, mainly due to the complexity of risk factors and the presence of comorbidities. In this scenario, the skilled and continuous work of nursing professionals is essential to minimize complications, optimize prognosis, and contribute to the rehabilitation and quality of life of affected patients.

Keywords: Acute Myocardial Infarction; Nursing; Cardiac emergency.

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ABSTRACT

Introduction: In recent years, the prevalence of cardiovascular diseases has increased steadily in Brazil. Among these diseases, acute myocardial infarction (AMI) is one of the leading causes of morbidity and mortality, especially in the 60-75 age group, which represents a rapidly expanding population segment. This reinforces the need for agile specialized nursing interventions in this context. **Objective:** To evaluate the evolution of nursing care in cardiac emergencies in Brazil, specifically in the management of AMI in elderly individuals aged 60 to 75, over the last decade, contributing scientific evidence that strengthens and elucidates the role of nursing in the care of elderly individuals with myocardial infarction. **Methodology:** This study is an integrative literature review based on publications indexed on platforms such as PUBMED, Scopus, Web of Science, Scientific Electronic Library Online (SciELO), Virtual Health Library (VHL) and Database of Latin American Literature in Health Sciences (LILACS) between 2014 and 2024. The descriptors "Acute Myocardial Infarction", "Nursing", "Cardiac Emergency" were used. **Results:** The literature reveals a significant increase in studies that value nursing as a determining factor in reducing morbidity and mortality associated with AMI.

The importance of rapid symptom identification, continuous monitoring, and the correct administration of indicated therapies stands out, reinforcing the strategic role of nursing professionals on the front lines of emergency care. **Conclusion:** Although there have been advances in clinical management and care strategies, morbidity and mortality rates remain high in this age group, mainly due to the complexity of risk factors and the presence of comorbidities. In this scenario, the qualified and continuous work of nursing professionals is essential to minimize complications, optimize prognosis, and contribute to the rehabilitation and quality of life of affected patients.

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1. Introduction

In recent years, there has been a growing increase in the prevalence of diseases cardiovascular diseases in Brazil, driven by population aging and increased exposure to risk factors such as a sedentary lifestyle, obesity and diabetes mellitus (Silva, 2021; Oliveira, 2022). Among these diseases, Acute Myocardial Infarction (AMI) stands out as one of the main causes of morbidity and mortality, especially in the age group between 60 and 75 years, which represents a rapidly expanding population segment (Pereira, 2019; Souza, 2020).

AMI is characterized by the interruption of coronary blood flow, resulting in ischemia and necrosis of the heart muscle, requiring immediate intervention to minimize damage and contribute to a better prognosis (Ferreira, 2018; Carvalho, 2019).

Estimates from the Ministry of Health show between 100,000 and 160,000 annual cases of

AMI in the country, with fatality rates in emergency units ranging from 10% to 20%, mainly among elderly people with multiple comorbidities (Lima, 2020; Mendes, 2021).

Furthermore, the constant advance of population aging further intensifies the demand for rapid and effective interventions in cardiac emergencies, especially in



elderly people, whose physiology presents additional challenges to clinical management (Silva, 2022). Given the growing rate of AMI in the population over 60 years of age reinforces the need of agile specialized Nursing interventions in this context (Ministry of Health, 2023).

The nursing team plays an essential role in the emergency management of AMI, being responsible for rapid assessment, constant monitoring and administration of interventions therapeutic measures, in addition to offering emotional support to the patient and family (Barbosa, 2019; Santos, 2021). Technical qualification combined with humanization of care are fundamental to reducing mortality and promote functional recovery of elderly patients.

Thus, understanding how nursing has acted in the face of this problem in recent years ten years allows us not only to reflect on the effectiveness of current practices, but also to identify critical points that require updating protocols, training teams and reorganization of assistance flows.

Thus, this study is justified by the need to contribute with scientific evidence that strengthen and clarify the role of nursing in caring for elderly people who have had a heart attack, promoting safe, efficient and humanized care, aligned with the principles of comprehensive care and public health policies. Therefore, the objective of this study is to evaluate the evolution of nursing care in cardiac emergencies in Brazil, specifically in the management of AMI in elderly people aged 60 to 75 years, over the last decade.

2. Theoretical Framework

2.1. Acute Myocardial Infarction

Acute Myocardial Infarction (AMI) can occur in different areas of the heart muscle, It can be strong and sudden, due to the accumulation of fatty plaques (atherosclerosis) in the coronary arteries or the formation of clots (Meneses *et al.*, 2020). The AMI is the main cause of death in Brazil, with an average of 350 thousand cases per year and a mortality rate of 30% among these cases (Brazil, 2023).

According to the Ministry of Health, the signs and symptoms are angina, back pain, facial pain, commonly radiates to the left upper limb and rarely radiates to the left upper right. This pain is usually intense and prolonged, accompanied by a feeling of heaviness or tightness over the chest, causing sweating, facial hypocolor, dyspnea, and fainting. In the elderly, the main symptom of AMI may be dyspnea, which may cause gastralgia or esophagitis of regurgitation, but it is uncommon (MS, 2025).



Diagnosis in emergency care is made through clinical information and exams laboratory tests. The patient's history and symptoms are crucial to starting the investigation. cardiac biomarkers, such as troponin and creatine kinase-MB, play an important role in confirmation of the diagnosis, presenting abnormal levels in patients with infarction. The electrocardiography (ECG) is also essential, revealing particularities and characteristics, such as ST segment elevation (Silva, 2020; Oliveira, 2020).

2.2. Overview of the Affected Population

Acute Myocardial Infarction is described as one of the main causes of morbidity and mortality. in Brazil, especially among the elderly in the 60 to 75 age group. This age group presents higher incidence and high rates of hospitalization for AMI, which reflects the impact of population aging in the epidemiological profile of cardiovascular diseases (Silva, 2018; Oliveira, 2020). The Brazilian elderly population has grown progressively and estimates suggest that by 2030, approximately 25% of the national population will be in this age group (Souza, 2019; Pereira, 2021).

Epidemiological data indicate that men are affected by AMI in relation to women, with an approximate ratio of 2:1, however older women tend to present greater lethality, possibly associated with biological differences and delay in diagnosis (Fernandes, 2017; Carvalho, 2022). In addition, traditional risk factors, such as arterial hypertension, diabetes *mellitus*, dyslipidemia and smoking, have a high prevalence in this population, contributing to increased vulnerability and severity of events coronary (Mendes, 2016; Gonçalves, 2020).

Geographically, there is a heterogeneous distribution of AMI cases among the different Brazilian regions. The Southeast region has the highest absolute number of hospitalizations, reflecting its greater population density and better hospital infrastructure, while regions as the North and Northeast have higher rates of hospital mortality, possibly due to difficulties in accessing and quality of care (Lima, 2019; Santos, 2021). This disparity reinforces the need for public policies that promote equity in cardiovascular care and strengthen the emergency and urgent care network throughout the country (Almeida, 2018; Barbosa, 2023).

In addition to the clinical and epidemiological impact, AMI in the elderly represents a challenge relevant socioeconomic, since this population demands more hospital resources, long-term care and functional rehabilitation. The cost associated with treatment and rehabilitation



of elderly people affected by AMI has increased significantly in the last ten years, which requires special attention from health managers for the efficient allocation of resources (Ferreira, 2020; Andrade, 2022).

2.3. Causes of AMI

AMI occurs as a result of the sudden interruption of coronary blood flow, leading to ischemia and necrosis of the heart muscle. The primary cause of AMI is related to rupture or erosion of unstable atherosclerotic plaques, promoting the formation of occlusive thrombi in the coronary arteries (Silva, 2019; Almeida, 2021). This process is often triggered by inflammatory factors that compromise the integrity of the vascular endothelium, favoring platelet activation and coagulation cascade (Fernandes, 2018). Atherosclerosis, characterized by the progressive accumulation of lipids, inflammatory cells and fibrous tissue in the arterial wall (Carvalho, 2020; Souza, 2022). The formation of plaques atherosclerosis, reduces the caliber of the vessels, promoting vulnerable plaques that, when in interaction with risk factors such as high blood pressure, dyslipidemia, diabetes *mellitus*, smoking and sedentary lifestyle, contribute to the development and progression of atherosclerotic lesions creating an environment conducive to plaque destabilization, culminating in the ischemic event (Mendes, 2017; Pereira, 2023).

In addition to atherosclerosis, other less frequent causes can lead to AMI, including coronary vasospasm, spontaneous coronary artery dissection, coronary embolism and hypercoagulable conditions (Gomes, 2019; Santos, 2020). In the elderly, the causes are not atherosclerotic diseases, although less common, require differentiated clinical attention due to complexity of management and greater risk of complications (Oliveira, 2021).

Furthermore, detailed knowledge of the causes of AMI becomes fundamental for the development of effective prevention and treatment strategies, especially in the context of nursing care in cardiac emergencies. Early identification of risk factors risk and the implementation of targeted interventions can reduce incidence and improve the prognosis of affected patients (Barbosa, 2022; Lima, 2018).

2.4. Nursing Care

The management of AMI requires rapid and precise action from the nursing team to clinical stabilization of the patient and prevention of complications. Nursing plays a role



strategic role in initial assessment, ongoing monitoring, and therapy administration indicated, such as anticoagulation, analgesia and hemodynamic support (Silva, 2019; Oliveira, 2021).

The nursing team is responsible for implementing reperfusion protocols, either by fibrinolysis or angioplasty, ensuring the preparation and monitoring of the patient before, during and after the procedure (Ferreira, 2020; Souza, 2022). Proper administration of medications, as well as strict observation of possible adverse effects, requires updated technical knowledge and clinical skills, especially in the elderly population, being these are more vulnerable to complications.

Another important aspect in the management of AMI in the elderly is humanization, since anxiety and fear can negatively impact the patient's recovery (Pereira, 2018).

The nursing professional must establish clear and empathetic communication, offering emotional support and accessible information, as well as involving family members in the process care, promoting a safe and welcoming environment (Carvalho, 2020; Santos, 2021).

Furthermore, health education promoted by nursing contributes to prevention secondary to AMI, guiding the patient on the importance of controlling risk factors, adherence to drug treatment and lifestyle changes (Mendes, 2017; Lima, 2019). Outpatient monitoring and cardiovascular rehabilitation complement the initial management, aiming to improve quality of life and reduce the recurrence of events cardiac.

3. Methodology

This study addresses an integrative literature review, based on publications indexed on platforms such as PUBMED, Scopus, *Web Of Science*, *Scientific Electronic Library Online* (SciELO), Virtual Health Library (VHL) and Literature Database Latin American Society of Health Sciences (LILACS) between 2014 and 2024. The following were used: descriptors "Acute Myocardial Infarction", "Nursing", "Cardiac emergency".

To prepare this review, the following steps were established: (i) definition and delimitation of the theme; (ii) definition of the general objective and specific objectives; (iii) establishment of inclusion and exclusion criteria; (iv) search for articles in databases; (v) analysis and categorization of studies.

Articles in Portuguese and English were included, including literature reviews or studies experimental and clinical studies focusing on nursing care in cardiac emergencies in



Brazil. The articles were grouped into a table that included information such as: authors, magazine or periodical and year of publication. Articles with a publication date were excluded. publication over 10 years ago, experimental studies carried out in other countries, articles with incomplete texts, theses, dissertations, monographs.

The articles were carefully selected, in which the information was analyzed through active reading, with an instrument being developed for collecting data that was chosen to compose this review. The defined categories were: experimental articles, meta-analysis, systematic review, year of publication, country of publication and impact of the journal.

4. Results and discussion

During the research in the Virtual Health Library (VHL), the following were used: descriptors "Acute Myocardial Infarction", "Nursing" and "Cardiac Emergency". After the applying filters and inclusion and exclusion criteria, the number of studies was reduced for 57 articles, of which 30 were selected to compose the theoretical framework of this search.

To better organize the publications selected to make up the final result, it was a synthesis was constructed according to the author, year of publication, magazine and title, being selected for this section 15 articles.

Table 1. Selected articles

AUTHOR NO.	YEAR	TITLE	MAGAZINE
1 Almeida, RM <i>et al.</i>	2020	Regional inequality in access to treatment of acute myocardial infarction myocardium in Brazil: an analysis of SUS data	Magazine Brazilian of Epidemiology
2 Barbosa, JP <i>et al.</i>	2019	Nursing training for emergency care and cardiovascular emergency: a integrative review	Cogitare Nursing
3 Barbosa, JR <i>et al.</i>	2022	Update on protocols nursing in the approach of myocardial infarction: challenges and perspectives	Current Nursing Journal In Derme
4 Carvalho, AP <i>et al.</i>	2020	Approach to the elderly with pain thoracic in the emergency room: the role of nursing	Magazine Brazilian of Geriatrics and Gerontology

5	Ferreira, MC <i>et al.</i>	2020	The role of the nursing team in care for patients with heart attacks acute myocardial infarction	Electronic Collection Magazine Health
6	Lima, GS <i>et al.</i>	2019	Preventive nursing actions in the face of risk factors cardiovascular	Health Magazine
7	Mendes, EV	2017	The aging of the population Brazilian and the challenges for the health system	Science & Public Health
8	Oliveira, LM <i>et al.</i>	2021	Nursing interventions in prevention of complications of myocardial infarction	Magazine Brazilian of Nursing
9	Oliveira, MD <i>et al.</i>	2022	Inequalities in the treatment of heart attack: national and regional analysis in Brazil	Journal of Public Health
10	Pereira, TM <i>et al.</i>	2018	Perceptions of the elderly towards heart attack: implications for care nursing	Nursing Journal of Central-Western Minas Gerais
11	Pereira, JC <i>et al.</i>	2023	Risk factors for diseases cardiovascular diseases in the elderly Brazilians: baseline analysis population	Pan-American Journal of Public Health
12	Ribeiro, RM <i>et al.</i>	2022	Barriers to pre-service hospital to acute myocardial infarction myocardium in Brazil	Journal of Health and Research
13	Santos, KA <i>et al.</i>	2021	Nursing and clinical management in infarction: an approach based on evidence	Magazine Nursing Contemporary
14	Silva, DC <i>et al.</i>	2019	The importance of training continuing education in nursing for the performance in emergencies cardiological	Science and Health Magazine
15	Souza, RM <i>et al.</i>	2022	Continuous monitoring and patient safety with AMI: contributions of nursing	Electronic Collection Magazine Health

Source: Authors themselves.

The results of this integrative review show that the management of Acute Myocardial Infarction Myocardial infarction (AMI) in elderly people between 60 and 75 years old in Brazil is a complex field of action, that requires constant updating and multidisciplinary practices. The literature reveals a significant growth in studies that value the role of nursing as a factor decisive in reducing morbidity and mortality associated with AMI (Barbosa, 2019; Silva, 2019).



The importance of rapid identification of symptoms and monitoring continuous and correct administration of the indicated therapies, which reinforces the strategic role of nursing professional on the front line of emergency care (Ferreira, 2020; Oliveira, 2021).

The increasing prevalence of cardiovascular disease in the elderly is directly related to non-modifiable risk factors, such as aging, and modifiable risk factors, including hypertension, diabetes and inadequate lifestyle habits (Mendes, 2017; Pereira, 2023). These factors, present in a large part of the Brazilian population in the age group studied, require that nursing care also includes educational and preventive actions, complementing clinical management and favoring adherence to long-term treatment (Lima, 2019; Carvalho, 2020).

The review also shows that early reperfusion protocols and monitoring hemodynamics are fundamental for the survival and quality of life of patients, but the effectiveness of these interventions depends on the technical qualification and humanization of care provided by part of nursing (Ferreira, 2020; Santos, 2021). Humanization, in turn, plays a role decisive in managing anxiety and fear, which are factors frequently reported by the elderly in cardiac emergency situations, which can directly influence the clinical outcome (Pereira, 2018; Carvalho, 2020).

However, regional inequalities in Brazil and the structural limitations of the health system affect the uniformity of care, revealing important gaps in rapid access and qualified for cardiovascular emergency services (Almeida, 2020; Ribeiro, 2022). This scenario demands investments in public policies aimed at expanding and qualifying service network, with a special focus on less-served regions, which may impact positively on the health indicators of the elderly population (Oliveira, 2022).

In the context of nursing, continuing education and specific training for the management of IAM emerge as essential strategies to ensure safety, effectiveness and quality in assistance (Barbosa, 2022; Silva, 2019). The incorporation of evidence-based protocols and the use of advanced monitoring technologies contribute to the improvement of care processes and to reduce the rates of complications, such as arrhythmias and heart failure (Oliveira, 2021; Souza, 2022).

Finally, the integration of emergency care with secondary prevention actions, guided by nursing, reinforces the role of this professional in promoting health and reducing recurrence of AMI (Mendes, 2017; Lima, 2019). Continuity of care, including support for cardiovascular rehabilitation and outpatient monitoring, highlights the



need for a comprehensive approach centered on the elderly patient, which respects their singularities and enhance functional recovery.

5. Final Considerations

In view of the above, Acute Myocardial Infarction (AMI) in elderly people aged 60 to 75 years represents a challenge for health systems, especially in the Brazilian context, marked by regional inequalities and limitations in access to specialized care. The analysis integrative approach demonstrated that, although there are advances in clinical management and strategies for be careful, morbidity and mortality rates remain high in this age group, especially due to the complexity of risk factors and the presence of comorbidities. In this scenario, the qualified and continuous performance of nursing professionals is essential to minimize complications, optimize prognosis and contribute to the rehabilitation and quality of life of affected patients. Thus, the importance of constant training of nursing team, strengthening public cardiovascular health policies and encourage scientific production that takes into account the specificities of the elderly population in the face of IAM.

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