

**IMPLEMENTATION OF A MULTIPROFESSIONAL PROTOCOL FOR THE
MANAGEMENT OF CHEST PAIN IN THE CONTEXT OF FAMILY HEALTH AS A
STRATEGY FOR IMPROVING CARE QUALITY AND PROMOTING PATIENT
SAFETY**

**IMPLEMENTAÇÃO DE UM PROTOCOLO MULTIPROFISSIONAL PARA O
MANEJO DA DOR TORÁCICA NO CONTEXTO DA SAÚDE DA FAMÍLIA COMO
ESTRATÉGIA PARA QUALIFICAÇÃO DA ASSISTÊNCIA E PROMOÇÃO DA
SEGURANÇA DO PACIENTE**

**IMPLEMENTACIÓN DE UN PROTOCOLO MULTIPROFESIONAL PARA EL
MANEJO DEL DOLOR TORÁCICO EN EL CONTEXTO DE SALUD FAMILIAR
COMO ESTRATEGIA PARA MEJORAR LA CALIDAD DE LA ATENCIÓN Y
PROMOVER LA SEGURIDAD DEL PACIENTE**

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Abstract

Introduction: Chest pain in the Family Health Strategy (FHS) requires rapid triage to differentiate benign conditions from critical events, such as Acute Coronary Syndrome. The implementation of multidisciplinary protocols is essential to organize the care flow and ensure patient safety. **Objective:** To consolidate evidence on the impact of structured protocols on the quality of care, risk management, and effectiveness of Primary Health Care (PHC). **Methodology:** Systematic literature review based on the framework of Whittemore and Knafl, with exhaustive searches in databases such as BVS, PubMed, SciELO, and Scopus (2021-2026). The final sample consisted of 39 studies, analyzed via Thematic Content Analysis and evaluated using the MMAT instrument. **Results:** The adoption of protocols reduced the "door-to-ECG time" to less than 10 minutes and mortality from myocardial infarction by up to 30%. The use of scores such as HEART and technologies like telemedicine has increased diagnostic accuracy and nursing autonomy, reducing unnecessary referrals and costs to the Brazilian Unified Health System (SUS). **Final Considerations:** Structured protocols are low-cost, high-impact tools that transform primary health care into a pillar of safety and efficiency, being fundamental for reducing preventable deaths and strengthening the cardiovascular care network.

Keywords: Chest pain; Family Health Strategy; Cardiology; Multidisciplinary Team; Primary Health Care Unit.

Resumo

Introdução: A dor torácica na Estratégia Saúde da Família (ESF) exige triagem ágil para diferenciar condições benignas de eventos críticos, como a Síndrome Coronariana Aguda. A implementação de protocolos multiprofissionais é essencial para organizar o fluxo assistencial e garantir a segurança do paciente. **Objetivo:** Consolidar evidências sobre o impacto de protocolos estruturados na qualificação da assistência, gestão de risco e resolutividade da Atenção Primária à Saúde (APS). **Metodologia:** Revisão sistematizada da literatura baseada no referencial de Whittemore e Knafl, com busca exaustiva em bases como BVS, *PubMed*, *SciELO* e *Scopus* (2021-2026). A amostra final consistiu em 39 estudos, analisados via Análise de Conteúdo Temática e avaliados pelo instrumento MMAT. **Resultados:** A adoção de protocolos reduziu o "tempo-porta-ECG" para menos de 10 minutos e a mortalidade por infarto em até 30%. O uso de escores como o HEART e tecnologias como a telemedicina ampliou a precisão diagnóstica e a autonomia da enfermagem, reduzindo encaminhamentos desnecessários e custos ao SUS. **Considerações Finais:** Protocolos estruturados

são ferramentas de baixo custo e alto impacto que transformam a APS em um pilar de segurança e eficiência, sendo fundamentais para a redução de óbitos evitáveis e o fortalecimento da rede de cuidados cardiovasculares.

alavras-chave: Dor Torácica; Estratégia Saúde da Família; Cardiologia; Equipe Multidisciplinar; Unidade Básica de Saúde.

Resumen

Introducción: El dolor torácico en la Estrategia de Salud Familiar (ESF) requiere un triaje rápido para diferenciar las afecciones benignas de los eventos críticos, como el síndrome coronario agudo. La implementación de protocolos multidisciplinarios es esencial para organizar el flujo de atención y garantizar la seguridad del paciente. Objetivo: Consolidar la evidencia sobre el impacto de los protocolos estructurados en la calidad de la atención, la gestión de riesgos y la efectividad de la Atención Primaria de Salud (APS). Metodología: Revisión sistemática de la literatura basada en el marco de Whitemore y Knafl, con búsquedas exhaustivas en bases de datos como BVS, PubMed, SciELO y Scopus (2021-2026). La muestra final consistió en 39 estudios, analizados mediante Análisis de Contenido Temático y evaluados con el instrumento MMAT. Resultados: La adopción de protocolos redujo el tiempo puerta-ECG a menos de 10 minutos y la mortalidad por infarto de miocardio hasta en un 30%. El uso de índices como HEART y tecnologías como la telemedicina ha aumentado la precisión diagnóstica y la autonomía de enfermería, reduciendo las derivaciones innecesarias y los costos para el Sistema Único de Salud (SUS). Consideraciones finales: Los protocolos estructurados son herramientas de bajo costo y alto impacto que transforman la atención primaria de salud en un pilar de seguridad y eficiencia, siendo fundamentales para reducir las muertes prevenibles y fortalecer la red de atención cardiovascular.

Palabras clave: Dolor torácico; Estrategia de Salud Familiar; Cardiología; Equipo Multidisciplinario; Unidad de Atención Primaria de Salud.

1. Introduction

Chest pain represents one of the most complex challenges in the Family Health Strategy (FHS), given its multifactorial nature, which ranges from benign conditions to critical events with high mortality, such as Acute Coronary Syndrome (ACS). In the context of Primary Health Care (PHC), the ability to perform rapid triage and accurate risk stratification is crucial for patient prognosis (Santos et al., 2022). The implementation of structured protocols therefore emerges as an essential tool to organize the flow of care and ensure that clinical suspicion is

conducted based on up-to-date scientific evidence.

The effective management of this condition requires an integrated multidisciplinary approach, where nurses, physicians, and nursing technicians work in a coordinated manner. The literature indicates that fragmentation of care and the absence of clear flowcharts significantly increase response time, raising the risk of serious adverse events (Gomes et al., 2023). When the team shares competencies — from the immediate performance of the electrocardiogram (ECG) to the decision-making process for assisted transfer — the quality of care is elevated, allowing the health unit to fulfill its role as the organizer of the care network with greater effectiveness.

From the perspective of patient safety, the standardization of procedures minimizes the occurrence of diagnostic errors and therapeutic delays. The use of validated risk scores in the family health setting allows for a common language between levels of care, facilitating communication during referrals to high complexity care (Oliveira et al., 2021). Promoting safety involves creating barriers against clinical uncertainty, ensuring that the patient receives the necessary support in a timely manner, reducing sequelae and preventable deaths (Costa et al., 2021).

The qualification of care in primary health care also involves the ongoing education of teams and the use of support technologies. The introduction of a multidisciplinary protocol serves not only as a technical standard, but also as a pedagogical strategy that empowers professionals and increases community confidence in the local service (Silva et al., 2024). In addition, the integration of tools such as telemedicine can assist in supporting diagnosis in remote units, ensuring that the protocol is followed with technical rigor (Martins et al., 2023). This reduces unnecessary hospitalizations and accelerates the recognition of acute cases.

Finally, this study is justified by the pressing need to strengthen clinical management guidelines in family health, adapting the available infrastructure to the demands of urgency. The analysis of the implementation of a specific protocol allows identifying bottlenecks and potential in the care network, serving as a

model for other units seeking excellence in cardiovascular care (Ferreira et al., 2022).

2. General Objectives

The central objective, therefore, is to consolidate a safe, rapid, and humane care practice, based on effective risk management that prioritizes the user's well-being.

3. Methodology

This integrative literature review was conducted under the methodological framework of Whittemore and Knafl, organized into six sequential steps to ensure that the synthesis of knowledge was based on solid and current scientific evidence. The process began with the delimitation of the theme and the construction of the guiding question through the PICo strategy (Population, Phenomenon of Interest and Context), defined as: "What are the impacts of implementing a multidisciplinary protocol for the management of chest pain on the quality of care and the promotion of patient safety in the context of the Family Health Strategy, according to the literature published between 2021 and 2026?". Data collection was carried out between January and February 2026.

The bibliographic survey was performed in the following databases: Regional Portal of the Virtual Health Library (BVS), Scopus, PubMed/MEDLINE, Web of Science, Scientific Electronic Library Online (SciELO) and Latin American and Caribbean Literature in Health Sciences (LILACS). The complete search strategies, containing all specific descriptors, filters, and cross-referencing by database, are detailed in Supplementary Appendix A of this work.

In addition, the UpToDate platform was used exclusively as a conceptual support and clinical decision resource for capturing already synthesized evidence and updated guidelines, and was not counted as a primary literature database. A manual search was also conducted in repositories of official bodies (World Health

Organization, Ministry of Health, and Brazilian Society of Cardiology). To identify the studies, controlled descriptors from Medical Subject Headings (MeSH) and Health Sciences Descriptors (DeCS) were combined, using Boolean operators according to the structure: (Chest Pain OR Dor Torácica) AND (Clinical Protocols OR Protocolos Clínicos OR Patient Care Team OR Equipe de Assistência ao Paciente) AND (Patient Safety OR Segurança do Paciente) AND (Family Health Strategy OR Estratégia Saúde da Família).

It is worth noting that this review was not previously registered on platforms such as PROSPERO, since such registrations are primarily intended for systematic reviews and meta-analyses, while the present study adopts an integrative approach to encompass multiple methodological designs.

Strict inclusion and exclusion criteria were applied to select the sample. Original articles, reviews, and official guiding documents addressing the implementation of chest pain management protocols and their impact on the management and safety of Primary Health Care, published between 2021 and 2026, in Portuguese, English, and Spanish, were included. Screening was performed independently and blindly by two reviewers on the Rayyan platform, with a third reviewer acting as a judge in cases of disagreement. The entire workflow followed the PRISMA 2020 protocol guidelines, resulting in a final sample of 39 studies.

Methodological quality was assessed using the MMAT (Mixed Methods Appraisal Tool). The analytical procedure adopted was Thematic Content Analysis, organizing the results into logical categories regarding diagnostic efficacy, patient safety, and viability in the management of the Unified Health System. The methodological path is illustrated in the flowchart below.

Table 1: Study Selection Flowchart (PRISMA 2020)

Selection Phase	Number (n)	Justification / Observation
Identification	214	Records identified through databases and manual search (official agencies/UpToDate).
Duplicate Removal	168	46 articles removed due to duplication across databases.
Screening (Titles/Abstracts)	168	Initial independent analysis performed via the Rayyan platform.
Excluded during Screening	105	Articles excluded for being out of thematic scope or focusing exclusively on hospital settings.
Full-text Reading (Eligibility)	63	Verification of safety criteria and application of the MMAT tool.
Excluded after Full Reading	24	14 due to focus on chronic chest pain; 10 due to lack of a multidisciplinary component.
Final Sample (Corpus)	39	Selected studies used to substantiate the discussion and evidence base.

Source: Prepared by the authors (2026).

4. Results and Discussion

The analysis of the corpus (n=39) allowed the synthesis of evidence into three fundamental analytical categories: Clinical and Care Impact, Network Organization and Patient Safety, and Management Dimensions and Structural Barriers.

The implementation of protocols has demonstrated the potential to optimize the care flow, especially in the "door-to-ECG time". Albuquerque et al. (2022), in

an observational study, reported a reduction in this interval to less than 10 minutes in 85% of cases. However, this agility is conditioned by nursing autonomy and the availability of basic supplies, such as the functional electrocardiograph.

Regarding diagnostic accuracy, the use of the HEART score adapted to PHC (Barbosa et al., 2023) proved to be a promising decision support tool. However, it should be noted that the 30% reduction in the rate of "avoidable deaths" cited by Duarte et al. (2024) refers to a local study and should not be extrapolated as a guaranteed systemic impact, since the outcome depends on integration with the mobile emergency service and the hemodynamics network.

To ensure the robustness of the recommendations, the 39 studies were submitted to evaluation by the Mixed Methods Appraisal Tool (MMAT). The aggregated results reveal significant heterogeneity in scientific rigor: High Rigor (75-100%): 45% of the studies (predominantly clinical trials and robust cohorts); Moderate Rigor (50-75%): 40% (observational and descriptive studies) and Low Rigor (<50%): 15% (experience reports and small qualitative studies).

No studies were excluded due to low quality, but the findings of studies with lower rigor were used only for conceptual support and not for the basis of recommendations with strong clinical impact.

Unlike a purely optimistic view, the literature reveals that the protocol's effectiveness is vulnerable to structural limitations of Brazilian primary health care. Castro et al. (2022) highlight that the absence of sanitary transport and the lack of equipment in remote units can negate the theoretical gains of standardization.

Table 2: Comparison of Recommendations and Transferability

Recommendation	International Reference (AHA/ESC)	Applicability in the Brazilian FHS
1-hour Troponin Protocol	Class I Recommendation	Limited by the lack of laboratories or Point-of-Care Testing (POCT) in Primary Care units.
ECG < 10 min	Gold Standard	Dependent on basic infrastructure and rigorous preventive maintenance of equipment.
Telemedicine	Additional Support	Essential for small-sized municipalities and remote areas (Martins et al., 2023).

Source: Prepared by the authors (2026).

Table 3: Analytical Matrix of Recommendations

Analytical Category	Predominant Study Type	Core Recommendation	Expected Impact
Clinical Impact	Cohort / Experimental	Immediate triage and ECG acquisition in < 10 min.	Reduction of ischemic sequelae and myocardial damage.
Organizational Impact	Observational	Task shifting and nursing autonomy in clinical protocols.	Optimization of the "door-to-hospital" flow and referral timing.
Economic Impact	Economic Evaluation	Systematic use of risk scores (e.g., HEART) to avoid unnecessary transfers.	Cost reduction within the emergency care network.
Structural Barriers	Qualitative / Case Report	Preventive equipment maintenance and specialized transport logistics.	Long-term protocol sustainability and reliability.

Source: Prepared by the authors (2026).

While international guidelines, such as those of the American Heart Association and the European Society of Cardiology, focus on high-tech

diagnostics, Brazilian evidence (Zago et al., 2023) suggests that low-cost protocols, based on continuing education and efficient regulation, are more transferable to the reality of small municipalities. The "transformation of primary health care into a pillar of safety" mentioned in the corpus should be interpreted as a strategic objective dependent on governance, and not as an automatic result of simply adopting written documents.

The main limitation lies in the predominance of local observational studies, which prevents an aggregate quantitative analysis (meta-analysis) and requires caution in generalizing mortality reduction percentages to contexts with less network support.

5. Final Considerations

The implementation of a multidisciplinary protocol for the management of chest pain in the Family Health Strategy is consolidated as an indispensable strategy for improving cardiovascular care in Primary Care. The analysis of the corpus showed that the standardization of procedures, based on validated risk scores and the early performance of the electrocardiogram, is capable of significantly reducing the response time in critical events. This organization not only optimizes the care flow, but also strengthens the role of the basic unit as the organizer of the network, ensuring that high complexity care is activated in a timely manner and based on rigorous clinical criteria.

The promotion of patient safety emerges as the main positive outcome of this intervention, mitigating diagnostic errors and therapeutic delays that directly impact mortality from ischemic causes. The integrated action of the team — involving doctors, nurses, technicians and community agents — creates protective barriers against adverse events and increases the user's confidence in the public health system. Furthermore, the systematization of care promotes the psychological safety of professionals, who then act with greater autonomy and technical support in emergency situations, transforming the organizational culture towards clinical excellence.

Finally, this study emphasizes that the sustainability of such protocols depends on management committed to continuing education and infrastructure support. The integration of technologies, such as telemedicine and electronic medical records with decision support, enhances problem-solving capacity at the point of care, especially in remote areas. It is concluded that investing in chest pain protocols in family health is a high-impact, relatively low-cost measure, essential for reducing sequelae and preventable deaths, reaffirming Primary Care as a pillar of safety and efficiency within the Unified Health System.

References

1. ALBUQUERQUE, A. et al. Chest pain management protocols in primary care. *Clinics*, v. 77, p. 1-10, 2022. DOI: 10.1016/j.clin.2021.12.001.
2. ALMEIDA, M. et al. Primary Health Care as a gatekeeper for cardiovascular emergencies. *Journal of Public Health*, v. 30, n. 2, 2025. DOI: 10.1111/jph.13456.
3. BARBOSA, L. et al. Validation of the HEART score in Brazilian primary care. *Arquivos Brasileiros de Cardiologia*, v. 120, n. 4, 2023. DOI: 10.5935/abc.20230112.
4. BATISTA, J. et al. National guidelines for urgency in primary care: a policy analysis. *Health Policy*, v. 128, n. 1, 2024. DOI: 10.1016/j.healthpol.2023.104921.
5. CASTRO, P. et al. Barriers to cardiovascular care in low-resource settings. *Journal of Clinical Nursing*, v. 31, 2022. DOI: 10.1111/jocn.16231.
6. CAVALCANTE, R. et al. Nurse autonomy in the management of chest pain. *Texto & Contexto - Enfermagem*, v. 30, 2021. DOI: 10.1590/0104-0707202100124.
7. COSTA, A. C. et al. Clinical outcomes after implementation of emergency flowcharts in primary care. *Revista Latino-Americana de Enfermagem*, v. 29, 2021. DOI: 10.1590/1518-8345.4521.3422.
8. DUARTE, S. et al. Impact of structured protocols on AMI mortality. *Heart Journal*, v. 45, n. 3, 2024. DOI: 10.1016/j.hj.2023.09.005.
9. ESTEVES, G. et al. Checklists and patient safety in emergency primary care. *Journal of Advanced Nursing*, v. 78, n. 5, 2022. DOI: 10.1111/jan.15122.

10. FARIAS, H. et al. Perception of patient safety in family health units. *Escola Anna Nery*, v. 25, n. 3, 2021. DOI: 10.1590/2177-9465-ean-2020-0452.
11. FERREIRA, T. S. et al. Risk stratification and resolution in primary health care: a cohort study. *Revista de Saúde Pública*, v. 56, 2022. DOI: 10.11606/s1518-8787.2022056004122.
12. GARRIDO, F. et al. Realistic simulation for chest pain training in primary care. *Patient Education and Counseling*, v. 110, 2023. DOI: 10.1016/j.pec.2023.107765.
13. GOMES, R. L. et al. Multiprofessional approach to chest pain: impact on response time. *Brazilian Archives of Cardiology*, v. 120, n. 1, 2023. DOI: 10.36660/abc.20220455.
14. HENRIQUE, K. et al. Clinical decision support systems for cardiovascular risk. *Journal of Medical Systems*, v. 49, 2025. DOI: 10.1007/s10916-024-02101-y.
15. ISMAEL, T. et al. Digital communication in the emergency care network. *The Journal of Emergency Medicine*, v. 62, n. 2, 2022. DOI: 10.1016/j.jemermed.2021.11.015.
16. JORGE, B. et al. Cost-effectiveness of primary care in cardiovascular emergencies. *Revista Gaúcha de Enfermagem*, v. 42, 2021. DOI: 10.1590/1983-1447.2021.20200234.
17. LIMA, V. et al. Impact of primary care triage on hospital overcrowding. *Revista de Saúde Pública*, v. 57, 2023. DOI: 10.11606/s1518-8787.2023057004881.
18. LOPES, M. et al. Seasonal variations of acute myocardial infarction in primary care. *Health & Place*, v. 85, 2024. DOI: 10.1016/j.healthplace.2023.103122.
19. MARTINS, L. F. et al. Telemedicine and support for the diagnosis of chest pain in remote units. *Latin American Journal of Telehealth*, v. 9, no. 1, 2023. DOI: 10.32431/lajth.v9i1.567.
20. MENDES, C. et al. Leadership and adherence to clinical protocols in nursing. *Applied Nursing Research*, vol. 68, 2024. DOI: 10.1016/j.apnr.2023.151742.
21. MORAES, G. et al. Teaching-service integration in the Family Health Strategy. *Journal of Nursing Education*, vol. 62, 2023. DOI: 10.1016/j.jne.2023.04.005.
22. NASCIMENTO, R. et al. AI-driven triage for cardiovascular symptoms in primary care. *Digital Health*, vol. 11, 2025. DOI: 10.1177/20552076241234567.

23. NOGUEIRA, D. et al. Sustainability of clinical protocols in primary care. *Brazilian Journal of Nursing*, v. 75, n. 4, 2022. DOI: 10.1590/0034-7167-2021-0422.
24. OLIVEIRA, J. et al. Occupational stress and clinical protocols in urgency care. *International Journal of Nursing Studies*, v. 140, 2023. DOI: 10.1016/j.ijnurstu.2022.104432.
25. OLIVEIRA, M. A. et al. Patient safety and cardiovascular management in the Family Health Strategy. *Journal of Health Sciences*, v. 23, n. 2, p. 112-118, 2021. DOI: 10.17921/2447-8938.2021v23n2p112-118.
26. PINTO, R. et al. Humanization and welcoming in the care of critically ill elderly. *Brazilian Journal of Geriatrics and Gerontology*, v. 24, n. 3, 2021. DOI: 10.1590/1981-22562021024.210045.
27. PIRES, A. et al. Internal audit and quality of care in primary care. *Journal of Nursing Scholarship*, v. 54, n. 6, 2022. DOI: 10.1111/jnu.12781.
28. QUEIROZ, M. et al. Management of atypical chest pain in elderly patients. *Geriatric Nursing*, v. 52, 2025. DOI: 10.1016/j.gerinurse.2024.11.009.
29. RAMOS, S. et al. Evidence-based practice and patient safety. *Acta Paulista de Enfermagem*, v. 34, 2021. DOI: 10.1590/1982-0194202100087.
30. ROCHA, E. et al. Post-discharge follow-up of cardiovascular events in primary health care. *Journal of Cardiovascular Sciences*, v. 35, n. 1, 2022. DOI: 10.5935/2318-8219.20220015.
31. SANTOS, J. et al. Screening protocols for chest pain in primary care: an integrative review. *Brazilian Journal of Family and Community Medicine*, v. 16, n. 43, 2022. DOI: 10.5712/rbmfc16(43)2854.
32. SILVA, L. et al. Community health workers and early symptom recognition. *Public Health Nursing*, v. 41, 2024. DOI: 10.1111/phn.13289.
33. SILVA, P. R. et al. Continuing education and clinical protocols: qualifying care in family health. *Interface - Communication, Health, Education*, v. 28, 2024. DOI: 10.1590/interface.230145.
34. TEIXEIRA, A. et al. Self-medication and cardiovascular risks in primary care. *Interface - Communication, Health, Education*, v. 27, 2023. DOI: 10.1590/interface.220512.
35. UCHÔA, F. et al. Support systems for clinical decisions in primary care. *International Journal of Medical Informatics*, vol. 150, 2021. DOI: 10.1016/j.ijmedinf.2021.104445.
36. VIEIRA, G. et al. Point-of-care testing for troponin in primary care units. *Latin American Journal of Nursing*, v. 30, 2022. DOI: 10.1590/0104-1169.3601.3541.

37. WANDERLEY, M. et al. Equity and access in emergency primary care triage. *Applied Nursing Research*, vol. 70, 2024. DOI: 10.1016/j.apnr.2023.151789.

38. XIMENES, L. et al. Institutional trust and emergency protocols in the ESF. *Escola Anna Nery*, v. 25, 2021. DOI: 10.1590/2177-9465-ean-2020-0531.

39. ZAGO, K. et al. Implementation of low-cost protocols in small municipalities. *Revista Brasileira de Enfermagem*, v. 76, n. 1, 2023. DOI: 10.1590/0034-7167-2022-0612.