

PATIENT SAFETY IN PUBLIC HEALTH: CHALLENGES AND STRENGTHENING STRATEGIES IN THE BRAZILIAN UNIFIED HEALTH SYSTEM – A NARRATIVE REVIEW

SEGURIDAD DEL PACIENTE EN LA SALUD PÚBLICA: DESAFÍOS Y ESTRATEGIAS DE FORTALECIMIENTO EN EL SISTEMA ÚNICO DE SALUD – UNA REVISIÓN NARRATIVA

SEGURANÇA DO PACIENTE EM SAÚDE PÚBLICA: DESAFIOS E ESTRATÉGIAS DE FORTALECIMENTO NO SISTEMA ÚNICO DE SAÚDE - UMA REVISÃO NARRATIVA

Jussara Barreto Moura Almeida

Doutoranda, Universidad de Ciencias Empresariales y Sociales, Argentina
E-mail: sara_jubma@hotmail.com

Cristina Ila de Oliveira Peres

Mestra, Faculdade Anhanguera, Brasil

Juciane Lima do Nascimento Melo

Doutoranda, Universidad de Ciencias Empresariales y Sociales, Argentina

Hudson Fabbio Ferraz Feitoza

Doutorando, Universidad de Ciencias Empresariales y Sociales, Argentina

Thaita Thaisi Zago

Mestre, Universidad Europea del Atlantico, Espanha

Hayder Egg Gomes

Doutorando, Universidade de São Paulo, Brasil

Regina Gabriela Caldas de Moraes

Doutoranda, Universidad de Ciencias Empresariales y Sociales, Argentina

Siglia Sousa de França

Doutoranda, Universidad de Ciencias Empresariales y Sociales, Argentina

Patient safety is a fundamental component of healthcare quality, particularly in public health systems such as the Brazilian Unified Health System (Sistema Único de Saúde). This study critically analyzes patient safety in the SUS, focusing on the main challenges and strategies for strengthening safe care practices. A narrative literature review with a systematized approach was conducted using the PubMed, SciELO, and LILACS databases, including studies published between January and March 2026 and covering the previous five years, as well as relevant institutional documents. The findings indicate that patient safety in the SUS is shaped by the interaction of structural, organizational, cultural, and professional factors. Structural challenges—such as chronic underfunding, service overload, fragmentation of care, and regional inequalities—create conditions that increase the risk of adverse events. At the same time, cultural and professional barriers, including punitive approaches to error, insufficient training, communication failures, and underreporting of adverse events, limit organizational learning and the consolidation of a safety culture. The literature also highlights key strategies to strengthen patient safety, such as the implementation of the National Patient Safety Program, adoption of standardized protocols, investment in continuing education, use of health information technologies, and improvements in governance and management practices. However, their effectiveness depends on the alignment between policy, organizational capacity, and professional practices. In conclusion, advancing patient safety in the SUS requires integrated and context-sensitive approaches that combine structural investment, organizational strengthening, and cultural transformation. This study contributes by proposing an analytical perspective that emphasizes the interdependence of these dimensions, supporting more effective and sustainable strategies to improve healthcare quality and equity.

Keywords: Patient Safety; Public Health; Quality of Health Care; Unified Health System

Resumen

La seguridad del paciente constituye un componente fundamental de la calidad de la atención en salud, especialmente en sistemas públicos como el Sistema Único de Salud de Brasil (SUS). Este estudio tiene como objetivo analizar críticamente la seguridad del paciente en el SUS, con énfasis en los principales desafíos y estrategias para fortalecer prácticas asistenciales seguras. Se realizó una revisión narrativa de la literatura con enfoque sistematizado, utilizando las bases de datos PubMed, SciELO y LILACS, incluyendo estudios publicados entre enero y marzo de 2026, considerando los últimos cinco años, así como documentos institucionales relevantes. Los resultados indican que la seguridad del paciente en el SUS está determinada por la interacción entre factores estructurales, organizativos, culturales y profesionales. Los desafíos estructurales —como el subfinanciamiento crónico, la sobrecarga de los servicios, la fragmentación del cuidado y las desigualdades regionales— generan condiciones que incrementan el riesgo de eventos adversos. Al mismo tiempo, las barreras culturales y profesionales, como los enfoques punitivos frente al error, la insuficiente formación profesional, las fallas en la comunicación y la subnotificación de eventos adversos, limitan el aprendizaje organizacional y la consolidación de una cultura de seguridad. La literatura también destaca estrategias relevantes para fortalecer la seguridad del paciente, incluyendo la implementación del Programa Nacional de Seguridad del Paciente, la adopción de protocolos estandarizados, la inversión en educación continua, el uso de tecnologías de la información en salud y el fortalecimiento de la gobernanza y la gestión. Sin embargo, su efectividad depende de la articulación entre políticas públicas, capacidades organizativas y prácticas profesionales. Se concluye que el avance de la seguridad del paciente en el SUS requiere enfoques integrados y sensibles al contexto, que combinen inversión estructural, fortalecimiento organizativo y transformación cultural. Este estudio contribuye al proponer una perspectiva analítica integrada, destacando la interdependencia de estas dimensiones para el desarrollo de estrategias más efectivas y sostenibles orientadas a mejorar la calidad y la equidad en la atención en salud.

Palabras-clave: Seguridad del Paciente Salud Pública Calidad de la Atención de Salud Sistema Único de Salud

Resumo

A segurança do paciente constitui um componente fundamental da qualidade da atenção à saúde, especialmente em sistemas públicos como o Sistema Único de Saúde (SUS). Este estudo tem como objetivo analisar criticamente a segurança do paciente no SUS, com foco nos principais desafios e nas estratégias para o fortalecimento de práticas assistenciais seguras. Foi realizada uma revisão narrativa da literatura, com abordagem sistematizada, nas bases PubMed, SciELO e LILACS, incluindo estudos publicados entre janeiro e março de 2026, com recorte dos últimos cinco anos, além de documentos institucionais relevantes. Os achados indicam que a segurança do paciente no SUS é resultante da interação entre fatores estruturais, organizacionais, culturais e profissionais. Desafios estruturais — como subfinanciamento crônico, sobrecarga dos serviços, fragmentação do cuidado e desigualdades regionais — criam condições que aumentam o risco de eventos adversos. Simultaneamente, barreiras culturais e profissionais, como abordagens punitivas ao erro, insuficiência na formação profissional, falhas de comunicação e subnotificação de eventos adversos, limitam o aprendizado organizacional e a consolidação de uma cultura de segurança. A literatura também destaca estratégias relevantes para o fortalecimento da segurança do paciente, como a implementação do Programa Nacional de Segurança do Paciente, a adoção de protocolos padronizados, o investimento em educação permanente, o uso de tecnologias da informação em saúde e o aprimoramento das práticas de governança e gestão. No entanto, sua efetividade depende do alinhamento entre políticas públicas, capacidade organizacional e práticas profissionais. Conclui-se que o avanço da segurança do paciente no SUS requer abordagens integradas e sensíveis ao contexto, que articulem investimento estrutural, fortalecimento organizacional e transformação cultural. Este estudo contribui ao propor uma perspectiva analítica integrada, destacando a interdependência dessas dimensões para o desenvolvimento de estratégias mais eficazes e sustentáveis voltadas à melhoria da qualidade e da equidade na atenção à saúde.

Palavras-chave: Segurança do Paciente; Saúde Pública; Qualidade da Assistência à Saúde; Sistema Único de Saúde.

1. Introduction

Patient safety has emerged as a central dimension of quality in health systems, particularly within public health contexts characterized by high complexity, resource constraints, and increasing demand for services. In universal systems such as the Brazilian Unified Health System (Sistema Único de Saúde – SUS), ensuring safe care constitutes not only a technical requirement but also an ethical imperative, directly linked to the principles of equity, comprehensiveness, and universality. Despite its recognized importance, the persistence of adverse events reflects structural and organizational weaknesses, indicating that advances in policy and regulation have not been fully translated into safer care practices (RIDOLFI et al., 2026; DO NASCIMENTO et al., 2025).

In Brazil, patient safety has gained institutional prominence following the establishment of the National Patient Safety Program, which aims to promote a culture of safety, implement standardized protocols, and strengthen governance mechanisms in health services. Nevertheless, important gaps remain in the effective operationalization of these strategies, particularly in contexts marked by service overload, fragmentation of care, and regional inequalities. These challenges suggest that formal policy adoption alone is insufficient to ensure consistent improvements in safety outcomes (GAMA et al., 2026; DE SOUZA; AMADOR, 2025).

Moreover, the literature indicates that patient safety extends beyond structural conditions, being deeply influenced by cultural and professional dimensions. Issues such as inadequate training, communication failures, and the persistence of punitive approaches to error reporting contribute to underreporting of adverse events and limit opportunities for organizational learning. However, the concept of “safety culture” itself remains subject to tensions, particularly in resource-constrained settings, where the promotion of non-punitive environments may conflict with accountability demands and institutional pressures. This highlights the need for a more critical and contextualized understanding of safety culture within the SUS (DE OLIVEIRA MEDEIROS et al., 2025; FELIX, 2025).

In addition, strengthening patient safety requires the articulation of public policies, management practices, and technological innovations capable of supporting safer care environments. Strategies such as the implementation of clinical protocols, investment in continuing professional education, and the use of health information systems have been widely recommended. However, their effectiveness depends on how these elements interact within complex organizational settings, which remains insufficiently explored in the literature (SANTOS et al., 2024; DOS SANTOS; TAKASHI, 2023).

In this context, a key gap persists in the integration of structural, cultural, and governance-related dimensions into a coherent analytical framework capable of

explaining how risks are produced and mitigated in the SUS. Addressing this gap is essential to move beyond descriptive approaches and support more effective and context-sensitive interventions.

Therefore, this study aims not only to critically analyze patient safety in the SUS but also to develop an integrative analytical perspective that articulates the main challenges and strategies identified in the literature, highlighting their interrelations and implications for health system governance and practice.

2. Methodology

This study is characterized as a narrative literature review with a systematized approach, aimed at identifying, analyzing, and critically synthesizing scientific evidence on patient safety in public health. This methodological strategy allows the integration of studies with different designs and theoretical perspectives, enabling a comprehensive and context-sensitive understanding of patient safety within the Brazilian Unified Health System (Sistema Único de Saúde – SUS).

The bibliographic search was conducted in the PubMed, SciELO, and LILACS databases, selected due to their relevance in the fields of public health, health policy, and health services research. The search was conducted between January and March 2026 and included publications from the preceding five years.

The search strategy combined controlled descriptors (e.g., MeSH and DeCS terms) and free-text terms in English, Portuguese, and Spanish, using Boolean operators (AND, OR). The search strings were adapted for each database. An example of the search strategy used in PubMed is as follows: (“patient safety” AND “public health” AND (“health system” OR “Unified Health System” OR SUS) AND (“adverse events” OR “risk management” OR “quality of care”)).

The inclusion criteria comprised: (i) studies published in the last five years; (ii) articles addressing patient safety in public health contexts, particularly in universal or comparable health systems; and (iii) studies contributing to the analysis of

organizational, cultural, or policy-related dimensions of patient safety. Classical references and institutional documents (e.g., WHO and Brazilian Ministry of Health guidelines) were also included due to their conceptual and normative relevance.

Exclusion criteria included duplicate records, editorials, letters, opinion articles, and studies not directly related to the research objective.

The study selection process followed a structured flow: initially, 146 records were identified. After duplicate removal, 55 records remained. Titles and abstracts were screened, resulting in 35 studies selected for full-text assessment. Finally, 16 studies were included in the analytical synthesis. This process can be presented in a flow diagram adapted from PRISMA recommendations.

Data analysis was conducted through thematic analysis, combining both deductive and inductive approaches. Initially, predefined analytical dimensions were established based on the study objective and the literature, particularly focusing on structural, cultural, and governance-related aspects of patient safety. Subsequently, emergent categories were identified during the analytical process, allowing a more nuanced and context-sensitive interpretation of the findings.

The analytical process considered: (i) thematic relevance; (ii) methodological consistency of the included studies; and (iii) their contribution to understanding the production, management, and mitigation of risks in public health settings.

The synthesis enabled the organization of findings into three interrelated analytical axes: (1) structural and organizational challenges, including resource constraints, service overload, fragmentation of care, and regional inequalities; (2) cultural and professional dimensions, encompassing safety culture, communication, professional training, and underreporting of adverse events; and (3) strategies for strengthening patient safety, involving public policies, management practices, technological innovations, and governance mechanisms.

Beyond categorization, the analysis sought to explore the interconnections between these dimensions, highlighting how structural constraints, cultural dynamics, and governance arrangements interact in shaping patient safety

outcomes in the SUS. This interpretative approach supported the development of an integrated analytical perspective on patient safety in public health.

3. Results and Discussion

This section presents and discusses the main findings of the narrative literature review, organized into three analytical dimensions that reflect the research objective and guiding question. Initially, structural and organizational challenges within the SUS are examined, followed by an analysis of cultural and professional barriers that affect the consolidation of a patient safety culture. Finally, strategies for strengthening patient safety are discussed, considering policies, management practices, and system-level innovations. This analytical structure enables an integrated and critical understanding of the factors that both constrain and enhance patient safety in the context of Brazilian public health.

3.1 Structural and Organizational Challenges to Patient Safety in the SUS

Patient safety in the Brazilian Unified Health System (SUS) is deeply shaped by structural constraints that influence both the organization and delivery of care. Chronic underfunding and persistent resource limitations contribute to overcrowded services, inadequate infrastructure, and shortages of essential supplies, creating conditions that systematically increase the risk of adverse events. Rather than isolated deficiencies, these factors operate as interconnected structural barriers that undermine the consistent implementation of safety protocols across different levels of care (RIDOLFI et al., 2026).

Service overload represents a critical organizational challenge, particularly in high-complexity settings such as emergency units and surgical centers. In these environments, high patient turnover and time pressure reduce adherence to safety standards and increase reliance on rapid decision-making under suboptimal

conditions. This dynamic not only elevates the likelihood of errors but also reveals a structural tension between productivity demands and patient safety, a pattern also observed in other resource-constrained health systems (BARBOSA; DIAS, 2025).

Fragmentation of care within the SUS further intensifies patient safety risks, especially during transitions between primary, secondary, and tertiary levels of care. Failures in communication, discontinuity of information, and limited integration among services compromise care coordination and contribute to preventable incidents. These findings suggest that patient safety is not only a function of isolated service performance but also of the degree of systemic integration across the healthcare network (DE SOUZA; AMADOR, 2025).

Regional inequalities add another layer of complexity, as disparities in infrastructure, workforce distribution, and managerial capacity result in heterogeneous safety practices across the country. This variability indicates that patient safety cannot be fully understood without considering contextual and territorial factors, including local governance arrangements and institutional culture, which directly shape the implementation of safety practices (GAMA et al., 2026).

The implementation of institutional strategies, such as Patient Safety Centers (NSP) and the National Patient Safety Program, reveals important gaps between formal policy design and practical execution. Managerial challenges—including limited professional training, insufficient leadership engagement, and difficulties in incorporating safety actions into routine workflows—restrict the effectiveness of these initiatives. This gap highlights that the existence of regulatory frameworks alone is insufficient to ensure safe care, reinforcing the need to consider organizational capacity as a key determinant of policy effectiveness (LIMA et al., 2026; DO NASCIMENTO et al., 2025).

Moreover, governance and quality management within the SUS remain conditioned by bureaucratic complexity and fragmented decision-making processes. Difficulties in aligning national policy directives with local realities limit the sustainability of safety initiatives and weaken institutional coordination. In this

sense, governance emerges not merely as an administrative function, but as a central element mediating the relationship between structural conditions and the actual implementation of patient safety practices (GONZAGA; RODRIGUES, 2023; RIDOLFI et al., 2026).

3.2 Cultural and Professional Barriers: Safety Culture, Training, and Underreporting of Adverse Events

Patient safety in the SUS is not only constrained by structural limitations but also shaped by deeply rooted cultural and professional dynamics. A persistent punitive culture, centered on blame and individual accountability, discourages the open discussion of errors and limits organizational learning. This dynamic reinforces a “culture of error” rather than a “culture of care,” but also reveals an important tension: while accountability is necessary in healthcare, excessive emphasis on individual blame can obscure systemic failures and inhibit the development of safer practices (DE OLIVEIRA MEDEIROS et al., 2025).

The consolidation of a safety culture depends on shared values, effective leadership, and sustained institutional commitment. However, variability in these elements across health services suggests that safety culture cannot be treated as a homogeneous or easily transferable construct. Professionals’ perceptions are strongly influenced by hierarchical relationships, workload, and managerial support, indicating that cultural change is deeply conditioned by organizational context rather than solely by normative guidelines (COSTA, 2025; BRÁS, 2023).

Professional training represents another critical dimension, as gaps in education related to patient safety limit healthcare workers’ ability to identify, prevent, and manage risks. The uneven incorporation of safety principles into undergraduate curricula and continuing education programs contributes to variability in practice and weakens the standardization of safe care. This suggests that training

is not merely a technical requirement, but a structural component of safety culture formation (DA COSTA BRÁS, 2023).

Team communication emerges as a central mechanism linking cultural and organizational factors. Failures in information exchange, lack of structured communication tools, and limited interprofessional collaboration are particularly evident in high-pressure environments, such as emergency and hospital settings. These barriers not only contribute directly to adverse events but also reflect deeper issues related to hierarchy, coordination, and institutional culture (DO NASCIMENTO et al., 2025).

Underreporting of adverse events remains one of the most critical challenges in patient safety management. Fear of punishment, lack of feedback, and limited awareness of reporting systems reduce professionals' engagement in notification processes, compromising the generation of reliable data for decision-making. Importantly, underreporting should not be interpreted solely as an individual behavior, but as an indicator of systemic and cultural weaknesses within organizations (FELIX, 2025; MENDES, 2022).

Furthermore, evidence suggests that institutions with more consolidated safety cultures tend to present higher reporting rates, indicating that notification is less a marker of poor performance and more a sign of organizational maturity. However, promoting non-punitive environments in contexts marked by resource constraints and high workload presents practical challenges, reinforcing that cultural transformation depends on alignment with structural and managerial conditions. Strengthening feedback mechanisms and fostering shared responsibility are therefore essential to improving incident reporting and advancing patient safety outcomes (MALKIEWIEZ et al., 2025).

3.3 Strategies for Strengthening Patient Safety in Public Health: Policies, Management Practices, and System Innovation

Strengthening patient safety in the SUS requires more than the formal establishment of policies and institutional programs; it depends on the effective articulation between regulatory frameworks, organizational capacity, and professional practices. The National Patient Safety Program (PNSP) represents a central regulatory instrument, promoting the implementation of protocols, the creation of Patient Safety Centers, and the dissemination of a safety culture. However, as evidenced in the literature, the impact of such initiatives is strongly conditioned by local implementation capacity and the alignment between policy directives and service-level realities (DO NASCIMENTO et al., 2025).

The adoption of standardized safety protocols has demonstrated significant potential to reduce adverse events, particularly in high-complexity settings such as intensive care units. Nevertheless, their effectiveness is not solely dependent on their technical robustness, but on consistent implementation, monitoring, and adherence by healthcare teams. This highlights that protocols function not as isolated tools, but as components of broader organizational systems that shape clinical practice (DOS SANTOS; TAKASHI, 2023).

Quality improvement initiatives also play a strategic role, especially when grounded in continuous monitoring, performance indicators, and active team engagement. Evidence suggests that structured interventions can positively influence care outcomes; however, their sustainability often depends on institutional support, availability of resources, and integration into routine workflows. This reinforces the idea that isolated interventions are insufficient without systemic alignment (SANTOS et al., 2024).

In this context, healthcare professionals—particularly nurses—play a central role in operationalizing safety strategies. Their involvement in risk identification, adherence to protocols, and care coordination positions them as key agents in translating policy into practice. At the same time, this centrality also exposes the limits of strategies that rely predominantly on individual performance without adequately addressing structural constraints (DA SILVA; DIAZ, 2024).

Continuing education emerges as a fundamental axis for transforming practices and consolidating a culture of safety. Training initiatives that integrate technical and non-technical skills, such as communication and teamwork, enhance professionals' capacity to manage risks. However, their effectiveness depends on continuity, institutional support, and alignment with everyday work conditions, indicating that education alone cannot compensate for systemic deficiencies (GONZAGA; RODRIGUES, 2023).

Technological innovations and information systems represent important tools for patient safety management. Reporting systems, electronic health records, and data monitoring platforms enable the identification of incident patterns and support evidence-based decision-making. Nonetheless, persistent challenges related to user adherence, data quality, and integration across services limit their full potential, particularly in fragmented health systems (FELIX, 2025).

Governance and leadership emerge as critical mediating elements for the sustainability of safety strategies within the SUS. Effective management requires alignment between national guidelines and local practices, as well as the incorporation of patient safety into organizational priorities. In this sense, governance operates as a connecting dimension that integrates structural conditions, cultural dynamics, and practical interventions (RIDOLFI et al., 2026).

Finally, strengthening patient safety also depends on overcoming cultural barriers, particularly those related to underreporting and punitive approaches to error. The promotion of a just culture, based on learning and shared responsibility, is essential to enhance professional engagement and improve safety outcomes. However, as discussed, such transformation requires coherence between cultural initiatives, structural conditions, and governance arrangements, reinforcing the need for integrated and context-sensitive strategies (MALKIEWIEZ et al., 2025; DE OLIVEIRA MEDEIROS et al., 2025).

3.4 Final Considerations

This study critically analyzed patient safety in public health within the Brazilian Unified Health System (SUS), focusing on the main challenges and strategies for strengthening safe care practices. The findings indicate that patient safety in the SUS is not determined by isolated factors, but rather by the dynamic interaction between structural constraints, cultural and professional dimensions, and governance and management practices.

From an analytical perspective, the results suggest that structural conditions—such as chronic underfunding, service overload, fragmentation of care, and regional inequalities—establish the baseline context in which risks are produced. At the same time, cultural and professional factors, including punitive approaches to error, fragile safety culture, gaps in professional training, and underreporting of adverse events, mediate how these risks are recognized, managed, and communicated within health services. Governance and strategic interventions, in turn, operate as key mechanisms that can either mitigate or reinforce these challenges, depending on their level of alignment with local contexts and organizational capacities.

This integrative perspective highlights that patient safety cannot be effectively advanced through isolated interventions. While the literature points to important strategies—such as the consolidation of public policies like the National Patient Safety Program, implementation of standardized protocols, investment in continuing education, adoption of technological tools, and strengthening of governance—their effectiveness depends on the articulation between these dimensions. In other words, technical solutions are insufficient without parallel investments in organizational capacity and cultural transformation.

In practical terms, advancing patient safety in the SUS requires context-sensitive approaches that combine structural investment, strengthening of non-punitive and learning-oriented environments, and improved alignment between national policies and local realities. Efforts to enhance interprofessional collaboration, expand reporting systems with effective feedback mechanisms, and

support leadership engagement are particularly relevant for promoting sustainable improvements.

Finally, this study contributes to the literature by proposing an integrated analytical perspective that connects structural, cultural, and governance dimensions in the understanding of patient safety in public health systems. Patient safety should thus be recognized not only as a technical component of care quality, but also as a strategic and political priority, essential for ensuring equity and effectiveness in universal health systems such as the SUS.

REFERENCES

BARBOSA, Matheus Silva; DIAS, Heike Felipe Rangel. Patient safety in the Brazilian Unified Health System: challenges and strategies to improve medical practice in surgical centers. *Nursing (Brazilian Edition)*, v. 30, n. 328, p. 11630–11653, 2025.

BRÁS, Cláudia Patrícia. *Determinants of patient safety culture: implications for obstetric nursing practice*. 2023. Doctoral Thesis – University of Porto, Porto, 2023.

COSTA, Joana Sofia da Cruz. *Patient safety culture in emergency services: nurses' perceptions and challenges for quality of care*. 2025.

DA SILVA, Nelson Luís Moreira; DIAZ, Katia Chagas Marques. The role of nurses in patient safety: prevention of incidents and implementation of protocols in hospital settings. *Ibero-American Journal of Humanities, Sciences and Education*, v. 10, n. 11, p. 6741–6754, 2024.

DE OLIVEIRA MEDEIROS, Rodolfo et al. Patient safety in hospital settings: culture of error or culture of care. *Journal of Media Critiques*, v. 11, n. 28, p. e386–e386, 2025.

DE SOUZA, Adrian Santos; AMADOR, Tânia Alves. Patient safety challenges in primary health care in Brazil: a scoping review. *Saúde Coletiva (Barueri)*, v. 16, n. 103, p. 18720–18741, 2025.

DO NASCIMENTO, Maria Eduarda Bezerra et al. Implementation of the National Patient Safety Program: challenges and perspectives. *Brazilian Journal of Implantology and Health Sciences*, v. 7, n. 8, p. 1454–1464, 2025.

DOS SANTOS, Eduardo Oliveira; TAKASHI, Magali Hiromi. Implementation of patient safety protocols in intensive care units: an integrative review. *REVISA*, v. 12, n. 2, p. 260–276, 2023.

FELIX, Esmeralda Maria Baiôa Cristo. *Reporting adverse events: a pathway to patient safety*. 2025.

GAMA, Zenewton André da Silva et al. Variability in patient safety culture in Brazilian hospitals: influence of contextual factors. *Cadernos de Saúde Pública*, v. 42, p. e00052025, 2026.

GONZAGA, Luana Arantes Miranda; RODRIGUES, Vanessa Alves da Silva. Patient safety: practical transformations to achieve quality and challenges for health managers. *Saúde Dinâmica*, v. 5, n. 1, p. 41–57, 2023.

LIMA, Raissa Pâmella Silva et al. Implementation of Patient Safety Centers: managerial challenges and care impacts in the Brazilian context. In: AURUM EDITORA. *[incomplete book data]*. 2026. p. 206–212.

MALKIEWIEZ, Michelle Mariah et al. Evaluation of patient safety culture and its correlation with reported safety incidents in a university hospital. 2025.

MENDES, Joana Filipa Rodrigues Baltazar. *Reporting incidents and adverse events in a pediatric department: health professionals' perceptions*. 2022. Master's Dissertation – NOVA University of Lisbon, Lisbon, 2022.

RIDOLFI, Luiz Fernando et al. Quality management in the Brazilian Unified Health System and its institutional determinants: contributions and challenges for public health governance. *International Journal of Health Management Review*, v. 12, n. 1, p. e434, 2026.

SANTOS, Daniela Cristina dos et al. Implementation of basic patient safety protocols: a quality improvement project. *Revista Gaúcha de Enfermagem*, v. 45, p. e20230312, 2024.