

PATIENT SAFETY IN HEALTHCARE SERVICES: PREVENTING ADVERSE EVENTS AND STRENGTHENING QUALITY OF CARE

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Abstract

Patient safety is an essential dimension of healthcare quality, particularly given the possibility of incidents and adverse events associated with care processes. This study is a qualitative, descriptive literature review aimed at analyzing strategies for preventing adverse events and strengthening patient safety and quality of care in healthcare services. The methodology was based on an analysis of scientific publications and

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technical and regulatory documents concerning patient safety, risk management, safety culture, and the prevention of avoidable harm. The results show that adverse events are associated with multiple factors involving organizational aspects, work processes, communication among professionals, patient identification, medication administration, infection prevention, and the performance of procedures. The strategies identified include implementing care protocols, reporting and analyzing incidents, providing continuing education for healthcare teams, promoting effective communication, and strengthening an institutional culture focused on learning and risk prevention. It is concluded that patient safety depends on continuous, systematic, and integrated actions capable of reducing risks and contributing to safer, more efficient, and patient-centered care.

Keywords: Adverse Events, Health Services, Patient Safety, Quality of Care, Risk Management.

INTRODUCTION

Patient safety has become one of the central concerns in the quality of healthcare services, since every care process involves risks that must be recognized, assessed, and reduced. Even when care is provided to promote recovery, relieve symptoms, or preserve life, failures in work processes may cause harm unrelated to the natural course of the disease. For this reason, discussing quality of care also entails understanding how services organize their practices to prevent incidents and adverse events.

Concern about harm associated with healthcare gained greater international visibility following the development of studies showing that some events occurring during care could be prevented through changes in care and organizational processes. In this context, safety came to be understood not merely as the responsibility of an individual professional, but as the result of interactions among people, technologies, working conditions, communication, protocols, management, and institutional culture.

The World Health Organization (WHO, 2021) recognizes patient safety as a fundamental component of care delivery at all levels and across all healthcare services. This perspective is based on the understanding that errors, risks, and preventable adverse events remain major challenges for health

systems and that reducing them depends on coordinated strategies involving managers, professionals, patients, and organizations.

In Brazil, patient safety became more firmly institutionalized with the establishment of the National Patient Safety Program (Programa Nacional de Segurança do Paciente, PNSP) through Ordinance No. 529 of April 1, 2013. The program was established to help improve the quality of healthcare in facilities throughout the country by promoting initiatives related to risk management, the implementation of Patient Safety Centers, the participation of patients and families, and the production and dissemination of knowledge on the subject (Brasil, 2013).

In the same year, the Brazilian Health Regulatory Agency published Collegiate Board Resolution No. 36/2013 (Resolução da Diretoria Colegiada, RDC No. 36/2013), which established patient-safety measures for healthcare services. The regulation defines patient safety as reducing the risk of unnecessary harm associated with healthcare to an acceptable minimum and establishes responsibilities concerning risk management, the creation of Patient Safety Centers, preparation of the Patient Safety Plan, and incident monitoring (ANVISA, 2013).

Understanding adverse events requires attention to the different stages of care. Patient-identification failures, problems in prescribing, dispensing, or administering medications, inadequate communication among professionals, healthcare-associated infections, falls, failures in surgical procedures, and problems associated with equipment use are examples of situations that may compromise safety. Prevention therefore does not depend on a single practice, but on organizing different barriers designed to prevent a failure from reaching the patient.

Safety protocols play an important role in this process by helping standardize practices considered essential. Within the National Patient Safety Program, prominent measures include correct patient identification, hand hygiene, surgical safety, safety in prescribing, using, and administering medications, fall prevention, and other practices intended to reduce care-related risks (Brasil, 2014).

The existence of protocols alone, however, does not guarantee safe care. Standards may have been formally implemented without being effectively incorporated into teams' daily routines. Work overload, insufficient communication, fragmentation of care, record-keeping failures, problems with continuity of care, and difficulties adhering to protocols may undermine the effectiveness of preventive measures.

In this regard, safety culture is an important component of quality of care. An organization committed to safety must create conditions in which risks and incidents can be recognized and discussed without limiting the analysis to the search for someone to blame. This does not mean eliminating professional accountability, but rather understanding that adverse events frequently result from a combination of factors and weaknesses within the care system.

In discussing the occurrence of errors in organizations, Reason (2000) contributed to the understanding that human failures should not be analyzed separately from the conditions under which work is performed. The systems approach shifts attention away from focusing exclusively on who committed a particular error and seeks to understand which barriers failed, which conditions contributed to its occurrence, and which changes may reduce the possibility of recurrence.

This perspective has important implications for healthcare services. When an incident is treated solely as an individual failure, the opportunity to identify vulnerabilities in the care process is lost. Conversely, structured incident investigation may enable routines to be reviewed, protocols to be improved, and barriers capable of preventing new occurrences to be implemented.

Communication among professionals is another fundamental element. Healthcare is provided by different professional groups and frequently entails transitions between departments, shifts, teams, and levels of care. Incomplete or inadequately communicated information may compromise continuity of care. Effective communication must therefore be understood as a safety measure rather than merely as an individual professional skill.

The participation of patients themselves and their families has also gained importance in contemporary safety policies. Informed patients can help verify information, communicate allergies,

clarify questions, and recognize situations requiring attention. The National Patient Safety Program expressly includes the involvement of patients and families among its objectives, reinforcing the need to move beyond a model in which users occupy an exclusively passive position in the care process (Brasil, 2013).

Incident reporting is another relevant instrument. Understanding the events occurring in healthcare services makes it possible to identify patterns, analyze contributing factors, and direct preventive measures. Accordingly, RDC No. 36/2013 assigns Patient Safety Centers functions related to analyzing data on incidents and adverse events, monitoring safety measures, and implementing barriers designed to prevent new incidents (ANVISA, 2013).

Reporting, however, must be linked to institutional learning. When professionals fear disproportionate consequences or believe that reporting a failure will not lead to change, underreporting may occur. Strengthening safety culture therefore requires environments in which incidents can be analyzed responsibly, preserving the necessary accountability while also seeking to understand causes and improve work processes.

At the international level, the **Global Patient Safety Action Plan 2021–2030**, prepared by the World Health Organization, reinforces the need to eliminate avoidable harm associated with healthcare and establish safety as a priority for health systems. The plan proposes an integrated approach involving public policies, organizations, professionals, patients, and families in building safer care (WHO, 2021).

The discussion of safety is also directly related to the concept of quality of care. Donabedian (1988), a leading figure in healthcare quality assessment studies, proposed analyzing care through the dimensions of structure, process, and outcome. This perspective remains relevant to understanding that quality does not depend exclusively on the final treatment outcome, but also on the conditions available and the way care is organized and delivered.

Within this context, the research problem is defined as follows: **What strategies can help prevent adverse events and strengthen patient safety and quality of care in healthcare services?**

The general objective is to **analyze strategies aimed at preventing adverse events and strengthening patient safety in healthcare services**. The specific objectives are to understand the principal concepts related to patient safety; identify factors associated with incidents and adverse events; discuss the importance of safety protocols and barriers; analyze the contribution of communication and safety culture; understand the relevance of incident reporting and analysis; and reflect on the participation of professionals, managers, patients, and families in building safer care practices.

This study is justified by the need to strengthen an understanding of patient safety that goes beyond holding individuals accountable for errors. Although technical competence and professional responsibility are indispensable, preventing adverse events also depends on organizational conditions, risk management, resource availability, communication quality, and the existence of processes capable of identifying vulnerabilities before they cause harm.

The topic has become even more relevant given the increasing complexity of healthcare. New technologies, medications, procedures, and forms of care organization expand therapeutic possibilities but also require greater attention to the risks involved. In this context, investing in safety means not only preventing harm but also improving processes, enhancing the work of healthcare teams, and strengthening trust among patients, professionals, and institutions.

Patient safety must therefore be understood as a shared responsibility and a permanent component of quality of care. Rather than reacting to events after they occur, healthcare services must develop the capacity to recognize risks, learn from incidents, and establish preventive barriers. Strengthening this perspective contributes to care that is more organized, responsible, effective, and centered on the needs of the people receiving it.

METHODOLOGY

RESEARCH DESIGN AND APPROACH

This study is a qualitative, descriptive literature review, supplemented by an analysis of technical and regulatory documents related to patient safety and quality of care in healthcare services.

A literature review was selected because of the need to compile and discuss knowledge already produced on adverse events, risk management, care protocols, safety culture, and strategies used to reduce harm associated with care. According to Gil (2008), bibliographic research uses previously developed materials, particularly books and scientific articles, allowing researchers to examine different existing contributions concerning a particular problem.

The qualitative approach enabled an interpretive analysis of the information identified, seeking to understand how different factors related to service organization, work processes, and professional practices affect the safety of care. According to Minayo (2014), qualitative research is particularly appropriate for analyzing complex phenomena because it considers relationships, meanings, practices, and contexts that cannot be understood through quantitative indicators alone.

The descriptive nature of the study made it possible to organize and present the main factors related to incidents and adverse events, as well as the strategies described in the literature for their prevention and management.

LITERATURE SEARCH

The literature search focused on identifying studies related to patient safety, quality of care, adverse events, healthcare incidents, safety culture, and risk management in healthcare services.

Publications available in scientific research databases and platforms were considered, including Scientific Electronic Library Online (SciELO), the Virtual Health Library (Biblioteca Virtual em Saúde, BVS), Latin American and Caribbean Health Sciences Literature (Literatura Latino-Americana e do Caribe em Ciências da Saúde, LILACS), PubMed/MEDLINE, and Google Scholar.

The searches were guided by the terms “segurança do paciente”, “eventos adversos”, “incidentes em saúde”, “qualidade da assistência”, “gestão de riscos”, “cultura de segurança”, “erros de medicação”, “comunicação em saúde” and “prevenção de eventos adversos”. Where necessary, the corresponding English terms were also used: “patient safety,” “adverse events,” “patient safety culture,” “risk management,” and “quality of care.”

The terms were used individually and in different combinations to encompass studies addressing both the causes of and contributing factors to adverse events and research focused on prevention strategies and the strengthening of patient safety.

PUBLICATION SELECTION CRITERIA

Priority was given to scientific articles, books, technical documents, legislation, and institutional publications directly related to patient safety and the prevention of adverse events in healthcare services.

Publications were included if they addressed at least one of the following dimensions: the occurrence and prevention of incidents; safety culture; risk management; care protocols; patient identification; medication safety; fall prevention; prevention of healthcare-associated infections; procedural safety; communication among professionals; incident reporting; patient participation; and quality of care.

Classic studies considered relevant to the conceptual framework were also retained, even when published in earlier periods. These included Donabedian’s contributions to healthcare quality assessment and Reason’s contributions to a systems-based understanding of errors.

Duplicate materials, texts unrelated directly to the study objectives, exclusively opinion-based publications, and content lacking adequate identification of authorship or provenance were excluded.

Selection was initially conducted by reading titles and abstracts. Materials considered pertinent were subsequently examined in full or through the sections directly related to the categories under investigation.

No fixed number of publications was established in advance, thereby avoiding attributing to the study a bibliographic sample that did not correspond to the process actually performed. Selection was guided by thematic relevance, consistency of information, and the sources' contribution to the proposed objectives.

DOCUMENTARY AND REGULATORY ANALYSIS

In addition to scientific publications, national and international official documents related to patient safety were analyzed.

In the Brazilian context, particular consideration was given to Ordinance No. 529 of April 1, 2013, which established the National Patient Safety Program, and Collegiate Board Resolution No. 36 of July 25, 2013, which established patient-safety measures for healthcare services.

Technical materials concerning the basic patient-safety protocols and documents produced by the Brazilian Health Regulatory Agency and the Ministry of Health were also considered.

At the international level, recommendations and documents from the World Health Organization (WHO) were analyzed, particularly the Global Patient Safety Action Plan 2021–2030, which presents international guidelines aimed at reducing avoidable harm associated with healthcare.

The documentary analysis sought to identify principles, responsibilities, preventive strategies, risk-management mechanisms, and guidance related to building an institutional safety culture.

DOCUMENTARY SAMPLE

Because this was bibliographic and documentary research, there was no direct participation by patients, family members, or healthcare professionals. Nor were interviews, questionnaires, service observations, or medical-record reviews conducted.

The documentary sample consisted of scientific articles, books, official documents, regulations, and institutional publications selected according to their relationship to the study subject.

Accordingly, the results presented do not correspond to an analysis of a specific institution but to an interpretive synthesis of the evidence and recommendations found in the selected sources.

INSTRUMENT FOR ORGANIZING INFORMATION

An analytical matrix developed according to the research objectives was used to systematize the information identified.

The materials were organized according to the following elements: authorship and year of publication; concept of patient safety; types of incidents and adverse events addressed; contributing factors; consequences for care; preventive strategies; care protocols; communication among professionals; safety culture; incident reporting and analysis; continuing education; patient participation; and management activities.

The matrix served an organizational and interpretive function, enabling comparisons among different sources and the identification of recurring aspects in the literature. It was not used to generate frequencies or statistical results.

ANALYTICAL TECHNIQUE

After the sources had been identified and organized, the selected material underwent exploratory, analytical, and interpretive reading.

The fundamental concepts related to patient safety, incidents, adverse events, risks, and quality of care were first identified. Factors associated with failures in care processes and the strategies proposed for their prevention were then examined.

The interpretation considered the systems approach to errors discussed by Reason (2000), according to which incidents should not be understood exclusively in terms of individual failure; organizational conditions and the barriers present within the system must also be examined.

The discussion of quality of care was also related to Donabedian's contribution (1988), particularly the understanding of quality through the dimensions of structure, process, and outcome.

The scientific findings were subsequently compared with the guidance established in Brazilian and international patient-safety documents.

THEMATIC CATEGORIES OF ANALYSIS

Based on the reading and systematization of the materials, the results were organized into thematic categories that made it possible to group similar content and establish relationships among different aspects of care safety.

The following categories were established:

- a) adverse events and contributing factors: characteristics of incidents and conditions related to their occurrence;
- b) patient identification and procedural safety: measures intended to prevent mix-ups, incorrect procedures, and identification failures;
- c) medication safety: risks related to prescribing, dispensing, preparation, and administration;
- d) prevention of infections, falls, and other care-related harm: use of protocols and preventive barriers;
- e) effective communication and continuity of care: transmission of information among professionals, teams, departments, and levels of care;
- f) safety culture and systems approach to errors: institutional learning, appropriate accountability, and a reduction in exclusively punitive practices;
- g) incident reporting and analysis: use of incidents as a source of information for identifying risks and improving processes;
- h) continuing education and patient participation: training healthcare teams and involving patients and families in promoting safer practices.

These categories guided the development of the Results and Discussion section.

ANALYTICAL FRAMEWORK

The interpretation of the results was based on the understanding that patient safety depends on interactions among human, organizational, technological, and care-related factors.

Reason (2000) contributes to this perspective by showing that errors must be analyzed within the systems in which they occur. In complex services, different vulnerabilities may align and allow a failure to pass through existing protective barriers.

Donabedian's contribution (1988) made it possible to relate safety and quality of care to the structural conditions of services, the organization of processes, and the outcomes produced by care.

At the institutional level, the recommendations of the National Patient Safety Program, ANVISA, and the World Health Organization were used to discuss risk management, protocols, safety culture, patient participation, and learning from incidents.

Integrating these perspectives made it possible to analyze adverse-event prevention not merely as the technical responsibility of individual professionals, but as a component of the organization and quality of care systems.

ETHICAL CONSIDERATIONS AND LIMITATIONS

Because it used exclusively bibliographic materials and publicly accessible documents, this research involved no intervention or direct collection of data from human participants. The principles of academic integrity, respect for authorship, and responsible use of the information consulted were observed.

One limitation is that healthcare services have different levels of complexity, structures, resources, and care profiles. Strategies described as effective in one context may therefore require adaptation before being incorporated into other institutions.

It is also acknowledged that a literature review can identify and discuss safety strategies but cannot directly assess their implementation or effectiveness in a specific institution.

Despite these limitations, the methodological approach adopted made it possible to compile relevant scientific and regulatory foundations for understanding the main risks associated with care and discussing strategies aimed at preventing adverse events and strengthening quality and safety in healthcare services.

RESULTS AND DISCUSSION

The analysis of the selected literature and documents showed that patient safety depends on a set of factors extending beyond the technical performance of procedures. The principal findings indicate the need to integrate risk management, care protocols, effective communication, continuing education, incident reporting, and the strengthening of safety culture. In this regard, adverse events cannot be understood solely as consequences of individual failures, since they are often related to weaknesses in work processes and in the organization of services themselves.

The World Health Organization (WHO, 2023) recognizes medication-related errors, unsafe surgical procedures, healthcare-associated infections, diagnostic errors, falls, pressure injuries, patient-identification failures, and other incidents as important sources of avoidable harm. Although these events have different characteristics, they all require preventive mechanisms capable of identifying risks before they reach the patient.

The results were organized into eight principal areas: adverse events and contributing factors; safe patient identification; medication safety; prevention of infections, falls, and other harm; effective communication; safety culture; reporting and institutional learning; and continuing education and patient participation.

ADVERSE EVENTS AND CONTRIBUTING FACTORS

One of the principal findings was the multifactorial nature of adverse events. Although certain occurrences may involve directly observable human failures, their analysis should not end with identifying the professional involved. Working conditions, task organization, resource availability, communication, training, technologies, and the operation of safety barriers must also be considered.

Reason (2000) contributes to this understanding by distinguishing between an approach centered exclusively on the individual and an approach focused on the system. From a systems perspective, human errors are considered within the conditions under which work is performed. Prevention therefore also depends on creating barriers capable of preventing a failure from harming the patient.

This conception is particularly important in healthcare services, where different professionals, procedures, medications, equipment, and information are involved simultaneously. The greater the complexity of care, the greater the need for organized processes that reduce exclusive reliance on individual memory or attention.

The findings therefore reinforce that safety cannot be built solely through recommendations such as “pay closer attention” or “do not make mistakes.” Concrete vulnerabilities must be identified, and processes that contribute to the occurrence or recurrence of incidents must be modified.

CORRECT PATIENT IDENTIFICATION

Patient identification emerged as one of the fundamental barriers to safe care. Inadequate identification can affect different stages of care and lead to mix-ups involving medications, examinations, procedures, or other interventions intended for another person.

For this reason, verifying identity should not be regarded as an administrative formality. It is a direct component of the care process and must occur at the points defined by institutional protocols.

Brazilian patient-safety protocols include identification among their priority practices. RDC No. 36/2013 also establishes that the Patient Safety Plan must include strategies concerning correct identification (ANVISA, 2013).

The analysis shows that wristbands or other identification instruments represent only one part of the process. The effectiveness of this barrier depends on professionals performing the appropriate checks before care interventions and on the participation of patients themselves, whenever possible.

SAFETY IN PRESCRIBING, DISPENSING, AND ADMINISTERING MEDICATIONS

Medication use is a particularly sensitive area of patient safety. The process involves different stages, from prescribing to monitoring the clinical response, and failures may occur at any of them.

The WHO (2023) identifies medication-related harm as one of the major safety problems in health systems. This finding reinforces the need for barriers at every stage of the medication-use process.

Incomplete or unclear prescriptions, communication failures, medications with similar names or packaging, interruptions during preparation, a lack of verification, and problems during care transitions may increase risks.

In Brazil, the Protocol for Safety in the Prescription, Use, and Administration of Medications provides guidance on measures intended to reduce these failures. Verification procedures, appropriate identification, standardization, and particular attention to high-alert medications constitute part of these preventive strategies.

Protocols, however, should not be understood as checklists to be used mechanically. Their purpose is to create consistent barriers and reduce the possibility that an isolated failure will result in harm.

PREVENTION OF INFECTIONS, FALLS, AND OTHER CARE-RELATED HARM

The analysis also demonstrated the relevance of measures aimed at preventing healthcare-associated infections. Among basic practices, hand hygiene remains essential for reducing the transmission of microorganisms in healthcare services.

The Brazilian hand-hygiene protocol was developed to promote this practice and help prevent and control healthcare-associated infections. Despite its apparent simplicity, implementation requires the availability of supplies, appropriate infrastructure, training, monitoring, and team commitment.

Falls are another risk requiring individualized assessment. The national protocol provides guidance on risk assessment and implementing preventive measures compatible with each patient's needs. This shows that prevention should not be limited to applying the same measures indiscriminately to all individuals.

Measures to prevent pressure injuries, device-related complications, and other harm associated with stays in healthcare facilities must also be considered. In all these cases, risk assessment, care planning, and periodic reassessment are important elements.

Surgical safety follows a similar logic. Checklists seek to ensure that essential information is verified at critical points in the procedure, helping confirm the correct patient, procedure, and site, as well as other elements relevant to safety.

Table 1

Principal care-related risks and patient-safety strategies

Risk or dimension	Possible contributing factors	Preventive strategies
Incorrect identification	Insufficient verification, incomplete information, and identification failures	Use of appropriate identifiers and verification before procedures and medication administration
Medication errors	Inappropriate prescribing, communication failures, interruptions, and lack of verification	Protocols for safe prescribing, dispensing, preparation, and administration
Healthcare-associated infections	Failures in preventive practices and compliance with control measures	Hand hygiene, precautions, and infection-prevention protocols
Falls	Reduced mobility, clinical conditions, medications, and an unsafe environment	Risk assessment, a safe environment, and individualized measures
Pressure injuries	Immobility, clinical condition, and lack of appropriate preventive measures	Risk assessment, skin inspection, and preventive measures
Surgical procedures	Identification, communication, or verification failures	Checklist and safe-surgery protocol
Communication failures	Incomplete information, transitions, and lack of standardization	Structured communication and appropriate records
Recurring events	Underreporting and lack of causal analysis	Reporting, investigation, monitoring, and an improvement plan
Weak safety culture	Fear of reporting errors and an exclusive focus on punishment	Committed leadership, institutional learning, and balanced accountability
Failures related to work processes	Work overload, insufficient barriers, and poorly organized processes	Risk management, workflow review, and continuing education

Source: Prepared by the authors based on Reason (2000), Brasil (2013), ANVISA (2013), and WHO (2023).

The table shows that different events may share similar organizational factors. Communication, process organization, training, and the operation of safety barriers recur across the categories, indicating that isolated actions are unlikely to be sufficient.

EFFECTIVE COMMUNICATION AND CONTINUITY OF CARE

Communication was identified as a cross-cutting element of safety. Information on diagnoses, allergies, medications, clinical changes, procedures, and risks must accompany patients throughout their care pathways.

This becomes particularly important during shift changes, transfers between departments, referrals, and transitions between different levels of care. When essential information is not communicated appropriately, subsequent decisions may be based on incomplete data.

Effective communication does not depend solely on an individual willingness to communicate. Healthcare services must establish organized methods for transmitting information, define essential content, and maintain appropriate records.

Patient participation may also contribute to this process. Whenever their condition permits, patients may provide an additional safety barrier by asking questions, reporting medications in use, communicating allergies, and participating in the verification of information.

SAFETY CULTURE AND THE SYSTEMS APPROACH TO ERRORS

Another relevant finding concerns the influence of institutional culture on how healthcare services address errors and incidents. When the first response to an occurrence is to find someone to blame, structural problems may remain unidentified.

Reason (2000) argues that complex organizations need to learn from failures and strengthen their defenses. Applied to healthcare services, this perspective entails analyzing not only who was involved in an incident, but also how the process was organized and which barriers failed to operate.

This does not mean eliminating professional accountability. Intentional conduct, knowing violations, and practices incompatible with safety standards must be properly assessed. Unintentional failures occurring within fragile systems, however, also require organizational responses.

A consistent safety culture seeks to balance accountability and learning. Professionals must recognize their participation in processes, while institutions must assume responsibility for improving the conditions under which care is delivered.

INCIDENT REPORTING AND INSTITUTIONAL LEARNING

The results indicated that incident reporting is valuable primarily when the information generated is used to promote change.

RDC No. 36/2013 provides for the identification, analysis, assessment, monitoring, and communication of risks, as well as the monitoring of healthcare-related incidents (ANVISA, 2013). Recording an occurrence therefore represents the beginning, rather than the end, of the risk-management process.

Once an incident has been identified, it is necessary to understand what happened, which factors contributed to its occurrence, and which measures may reduce the possibility of recurrence.

Underreporting poses a challenge in this process. When professionals associate incident reporting exclusively with punishment, they may resist documenting occurrences. Conversely, a reporting system that provides no analysis or feedback to teams may also lose credibility.

Institutional learning therefore depends on the capacity to transform reports into useful information for reviewing protocols, modifying workflows, strengthening barriers, and guiding educational initiatives.

CONTINUING EDUCATION AND TEAM DEVELOPMENT

Continuing education emerged as an essential component in ensuring that protocols and standards are effectively incorporated into daily practice.

Simply making a document available does not guarantee a change in practice. Professionals must understand why a particular measure exists, which risks it is intended to prevent, and how it should be carried out.

Training may address patient identification, medications, hand hygiene, fall prevention, communication, equipment use, surgical safety, and incident reporting. Education tends to be more meaningful, however, when it relates to problems actually observed within the service.

In this regard, incidents and near misses themselves may provide learning opportunities, provided that they are analyzed ethically and with a focus on process improvement.

Continuing education must also keep pace with changes in scientific evidence, technologies, protocols, and service characteristics. Patient safety is not knowledge acquired once and for all, but a practice requiring continuous updating.

PARTICIPATION OF PATIENTS AND FAMILIES

The analysis also revealed that patients and families may participate actively in promoting safety. This participation does not transfer responsibility for preventing errors to service users, but adds another barrier to the care process.

The National Patient Safety Program provides for the involvement of patients and families in safety initiatives. The WHO also recognizes patient engagement as a component of harm-reduction strategies.

In practice, this involves providing understandable information, allowing questions, explaining procedures, confirming data, and encouraging participation in decisions whenever possible.

For this participation to be effective, however, patients must not feel uncomfortable questioning a course of action or requesting confirmation of particular information. Person-centered care presupposes a relationship in which questions and concerns can be communicated safely.

PATIENT SAFETY AND QUALITY OF CARE

The findings demonstrate a direct relationship between safety and quality. A service cannot be considered high quality when avoidable risks are neither recognized nor appropriately managed.

Donabedian's contribution (1988) helps explain this relationship by treating structure, process, and outcome as important dimensions of quality assessment. Inadequate structural conditions may compromise processes, while weak processes may increase the likelihood of undesirable outcomes.

Assessing safety therefore requires consideration not only of the final occurrence of adverse events but also of the conditions capable of producing them. Indicators, audits, analysis of reports, adherence to protocols, and practice assessments may help identify weaknesses before they result in harm.

Quality improvement must therefore be continuous. The absence of reported events should not automatically be interpreted as an absence of risks, particularly when communication and record-keeping systems are weak.

SYNTHESIS OF THE PRINCIPAL FINDINGS

The combined analysis shows that preventing adverse events depends on a combination of different strategies. Protocols are fundamental, but they must be accompanied by training, appropriate working conditions, communication, monitoring, and management participation.

Similarly, reporting systems are important but have little effect when the information does not return to teams in the form of learning and improvement. Continuing education also has limited reach when it is disconnected from concrete difficulties observed in care processes.

The results therefore indicate that patient safety must be treated as part of the organization of care rather than as an additional activity or the exclusive responsibility of one department. Patient Safety Centers, managers, and professionals have specific functions, but risk reduction depends on the participation of the different areas involved in care.

Another relevant point is that prevention does not mean assuming that all human failures can be eliminated. The objective is to organize systems capable of making errors less likely, identifying failures early, and preventing them from reaching patients whenever possible.

Strengthening quality of care is therefore related to healthcare services' capacity to recognize their vulnerabilities, learn from incidents, and translate that learning into concrete changes. An institution

committed to safety is not one that merely claims never to make mistakes, but one that develops mechanisms to identify risks, analyze occurrences, and continuously improve its care processes.

CONCLUSION

This study aimed to analyze strategies for preventing adverse events and strengthening patient safety and quality of care in healthcare services. Based on the scientific literature and documents analyzed, it was possible to understand that safety does not depend on a single measure or on the isolated actions of a particular professional, but on a set of integrated practices involving care delivery, management, the organization of work processes, and the participation of the different individuals involved in care.

The principal results showed that adverse events are multifactorial and may be related to failures in identification, medication use, procedures, infection and fall prevention, communication among professionals, continuity of care, and the organization of services. Prevention therefore requires creating barriers capable of recognizing risks and reducing the possibility that failures within the care process will result in patient harm.

Safety protocols proved important for standardizing practices and defining essential stages of care. Their formal existence, however, does not guarantee safe care. To produce results, protocols must be incorporated into professionals' routines, monitored by management, and periodically assessed according to the needs and characteristics of each service.

Effective communication also emerged as a fundamental element. The appropriate flow of information among professionals, departments, and levels of care contributes to continuity of care and reduces risks arising from incomplete or incorrect information. This becomes particularly relevant during shift changes, transfers, referrals, and other situations in which different teams participate in caring for the same patient.

Another important finding was the need to strengthen an institutional culture that recognizes incidents as opportunities for learning. Prevention cannot be based exclusively on seeking individuals to blame. Professional accountability remains necessary, but it must be accompanied by an analysis of the conditions that contributed to the event and identification of the barriers that failed to operate.

In this context, incident reporting is important when linked to analysis and process improvement. Recording an occurrence without investigating its circumstances or establishing preventive measures limits the contribution of reporting systems. The information generated must be communicated back to teams and support the review of care practices, protocols, and workflows.

Continuing education for professionals also proved indispensable to strengthening safety. Team development must keep pace with changes in scientific evidence, technologies, protocols, and work processes. Rather than isolated training sessions, continuous learning opportunities related to situations encountered in the daily operation of services must be developed.

The participation of patients and families represents another important contribution to safety. When they receive clear information and feel able to ask questions and communicate concerns, they can participate more actively in care. This participation does not transfer responsibility for preventing adverse events to patients, but adds another opportunity for verification and communication within the care process.

As a contribution, this study brings together different dimensions of patient safety from an integrated perspective, demonstrating that adverse-event prevention and quality of care are directly related. Safe identification, appropriate medication use, prevention of infections and falls, effective communication, continuing education, risk management, and learning from incidents should not operate as independent actions, but as parts of a single institutional safety policy.

It is concluded that strengthening patient safety requires an ongoing commitment from professionals, managers, and healthcare institutions. Rather than reacting to adverse events after they occur, healthcare services must develop the capacity to anticipate risks, establish barriers, monitor

indicators, and transform identified weaknesses into opportunities for improvement. In this way, safety becomes effectively integrated into quality of care and contributes to care that is more responsible, organized, and centered on the needs of the people receiving it.

Future research should expand the investigation of the implementation of safety protocols at different levels of care, the difficulties professionals face when reporting incidents, the influence of organizational culture on safety, and the outcomes of continuing-education programs. Studies conducted directly within healthcare services may also help identify specific barriers and assess the effectiveness of strategies used to reduce adverse events.

REFERENCES

- Agência Nacional de Vigilância Sanitária (ANVISA). *Resolução da Diretoria Colegiada – RDC nº 36, de 25 de julho de 2013* [Collegiate Board Resolution – RDC No. 36 of July 25, 2013]. Institui ações para a segurança do paciente em serviços de saúde e dá outras providências [Establishes patient-safety measures for healthcare services and provides for other matters]. Brasília, DF: ANVISA, 2013.
- Brasil. Ministério da Saúde. *Portaria nº 529, de 1º de abril de 2013* [Ordinance No. 529 of April 1, 2013]. Institui o Programa Nacional de Segurança do Paciente (PNSP) [Establishes the National Patient Safety Program (PNSP)]. Brasília, DF: Ministério da Saúde, 2013.
- Brasil. Ministério da Saúde; Agência Nacional de Vigilância Sanitária; Fundação Oswaldo Cruz. *Anexo 01: Protocolo para a prática de higiene das mãos em serviços de saúde* [Annex 01: Protocol for hand-hygiene practices in healthcare services]. Brasília, DF: Ministério da Saúde, 2013.
- Brasil. Ministério da Saúde; Agência Nacional de Vigilância Sanitária; Fundação Oswaldo Cruz. *Anexo 02: Protocolo de prevenção de úlcera por pressão* [Annex 02: Pressure-ulcer prevention protocol]. Brasília, DF: Ministério da Saúde, 2013.

Brasil. Ministério da Saúde; Agência Nacional de Vigilância Sanitária; Fundação Oswaldo Cruz. *Anexo*

03: Protocolo de segurança na prescrição, uso e administração de medicamentos [Annex 03:

Protocol for safety in the prescription, use, and administration of medications]. Brasília, DF:

Ministério da Saúde, 2013.

Brasil. Ministério da Saúde; Agência Nacional de Vigilância Sanitária; Fundação Oswaldo Cruz. *Anexo*

04: Protocolo de identificação do paciente [Annex 04: Patient-identification protocol]. Brasília,

DF: Ministério da Saúde, 2013.

Brasil. Ministério da Saúde; Agência Nacional de Vigilância Sanitária; Fundação Oswaldo Cruz. *Anexo*

05: Protocolo de prevenção de quedas [Annex 05: Fall-prevention protocol]. Brasília, DF:

Ministério da Saúde, 2013.

Brasil. Ministério da Saúde; Agência Nacional de Vigilância Sanitária; Fundação Oswaldo Cruz. *Anexo*

06: Protocolo para cirurgia segura [Annex 06: Safe-surgery protocol]. Brasília, DF: Ministério da

Saúde, 2013.

De Vries, E. N.; Ramrattan, M. A.; Smorenburg, S. M.; Gouma, D. J.; Boermeester, M. A. The incidence

and nature of in-hospital adverse events: a systematic review. *Quality & Safety in Health Care*,

London, v. 17, n. 3, p. 216–223, 2008. DOI: 10.1136/qshc.2007.023622.

Donabedian, Avedis. The quality of care: how can it be assessed? *JAMA*, Chicago, v. 260, n. 12, p. 1743–

1748, 1988. DOI: 10.1001/jama.1988.03410120089033.

Gil, Antonio Carlos. *Métodos e técnicas de pesquisa social* [Methods and techniques of social research].

6. ed. São Paulo: Atlas, 2008.

Minayo, Maria Cecília de Souza. *O desafio do conhecimento: pesquisa qualitativa em saúde* [The

challenge of knowledge: qualitative research in health]. 14. ed. São Paulo: Hucitec, 2014.

Reason, James. Human error: models and management. *BMJ*, London, v. 320, n. 7237, p. 768–770, 2000.

DOI: 10.1136/bmj.320.7237.768.

World Health Organization (WHO). *Global patient safety action plan 2021–2030*: towards eliminating avoidable harm in health care. Geneva: World Health Organization, 2021.

World Health Organization (WHO). *Patient safety*. Geneva: World Health Organization, 2023.