

The role of team communication in adverse event reporting systems as a component of improving patient safety – A literature review

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A – Development of the concept and methodology of the study; B – Query – a review and analysis of the literature; C – Submission of the application to the appropriate Bioethics Committee; D – Collection of research material; E – Analysis of the research material; F – Preparation of draft version of manuscript; G – Critical analysis of manuscript draft version; H – Statistical analysis of the research material; I – Interpretation of the performed statistical analysis; K – Technical preparation of manuscript in accordance with the journal regulations; L – Supervision of the research and preparation of the manuscript

Abstract

Introduction. Patient safety is a key dimension of healthcare quality. Ineffective communication within clinical teams and limitations in the functioning of adverse event reporting systems are among the most common causes of preventable medical errors. Nurses, as healthcare professionals in direct and continuous contact with patients, play a crucial role in identifying risks and conveying clinical information.

Aim. The aim of this study was to identify and synthesise scientific evidence on the impact of team communication and adverse event reporting systems on patient safety within healthcare systems, with particular emphasis on the role of nurses as key participants in safety processes.

Material and methods. A scoping review of the literature was conducted in accordance with PRISMA-ScR guidelines. PubMed, Scopus and Google Scholar were searched for publications from 2021 to 2025. Peer-reviewed articles in Polish and English addressing communication in healthcare teams, adverse event reporting systems and patient safety were included in the analysis.

Results. Ineffective communication is a significant risk factor for adverse events. The use of structured communication models, such as SBAR, and training programmes based on TeamSTEPPS improves the quality of clinical information transfer and team collaboration. The effectiveness of adverse event reporting systems depends on organisational culture, institutional support and the absence of punitive consequences for reporting incidents.

Conclusions. Effective communication within healthcare teams and well-functioning adverse event reporting systems are essential components of patient safety. The reviewed literature indicates that structured communication tools, such as SBAR and TeamSTEPPS, improve information transfer and interdisciplinary collaboration. At the same time, the effectiveness of reporting systems depends on organisational culture, particularly the presence of non-punitive approaches to incident reporting. Strengthening communication competencies among healthcare professionals, especially nurses, may contribute to improving patient safety and reducing preventable adverse events.

Keywords: patient safety, nursing, communication, adverse event reporting, medical errors, safety culture.

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INTRODUCTION

Patient safety is one of the most important indicators of healthcare quality, and medical errors constitute a serious threat to patients' health and lives worldwide. According to the World Health Organization, it is estimated that approximately one in ten patients experiences an adverse event during hospitalisation, contributing to millions of cases of health-related harm each year, many of which are potentially preventable through improvements in communication and adverse event reporting systems [1].

Interpersonal communication and communication within clinical teams play a fundamental role in ensuring patient safety,

particularly in complex clinical environments characterised by a high risk of adverse events. Numerous studies have demonstrated that communication failures, both among healthcare professionals and between staff and patients, are among the most common causes of patient safety incidents [2].

Nurses, as frontline healthcare professionals, play a key role in identifying risks, conveying information and preventing potential medical errors. However, organisational systems and interpersonal barriers frequently limit effective communication. For example, research indicates that nurses often refrain from raising patient safety concerns due to fear of workplace reactions or professional hierarchy [3].

In response to these challenges, tools and strategies aimed at improving clinical communication have been developed. As a structured model for information exchange Situation–Background–Assessment–Recommendation (SBAR), has been widely adopted in many healthcare systems as a method of improving the quality of clinical information transfer and reducing errors during patient handovers between staff shifts [4].

Moreover, effective adverse event reporting systems are essential for building a culture of safety. Reporting adverse events enables analysis of the causes of errors and the implementation of corrective actions, which in itself constitutes one of the pillars of medical error prevention. However, some studies highlight barriers to reporting, including fear of consequences and the absence of clear reporting structures, which limit the potential benefits of these systems [5].

In light of the available evidence, there is a clear need for a comprehensive review of the literature examining the impact of communication and error reporting systems on patient safety, with particular emphasis on the role of nurses as key contributors to these processes. The present review aims to identify the most important communication tools and strategies and to evaluate their effectiveness in preventing medical errors and improving patient safety.

AIM

The aim of the study was to identify and synthesise scientific evidence on the impact of team communication and adverse event reporting systems on patient safety within healthcare systems, with particular emphasis on the role of nurses as key participants in safety processes.

MATERIALS AND METHODS

Study design

A literature review was conducted in accordance with the PRISMA-ScR guidelines. The aim of the review was to identify the scope and nature of the available scientific evidence regarding the impact of team communication and adverse event reporting systems on patient safety.

Search strategy

The literature search was performed in the PubMed, Scopus and Google Scholar databases for publications from January 2021 to December 2025. A combination of keywords and Boolean operators was applied, including: patient safety, communication, nursing, adverse event reporting, medical errors, safety culture, SBAR, TeamSTEPPS.

Eligibility criteria

The analysis includes peer-reviewed scientific articles published in Polish or English that addresses communication within healthcare teams, adverse event reporting systems and their impact on patient safety were included in the analysis. Publications without access to the full text, studies of an exclusively educational nature without reference to clinical practice, and preliminary reports were excluded.

Study Selection Process

The inclusion criteria comprised of original research and review articles published in English or Polish, addressing communication, nursing, and patient safety, or evaluating

the effectiveness of communication frameworks (e.g., SBAR, TeamSTEPPS) and incident reporting systems. Exclusion criteria encompassed studies published prior to 2020, abstracts lacking full-text access, research confined solely to educational contexts without practical hospital application, and studies presenting preliminary or pilot findings. The literature review entailed a rigorous assessment of study quality, methodological approach, population characteristics, and conclusions pertaining to patient safety. The process of study selection is depicted in the PRISMA flow diagram (Figure 1).

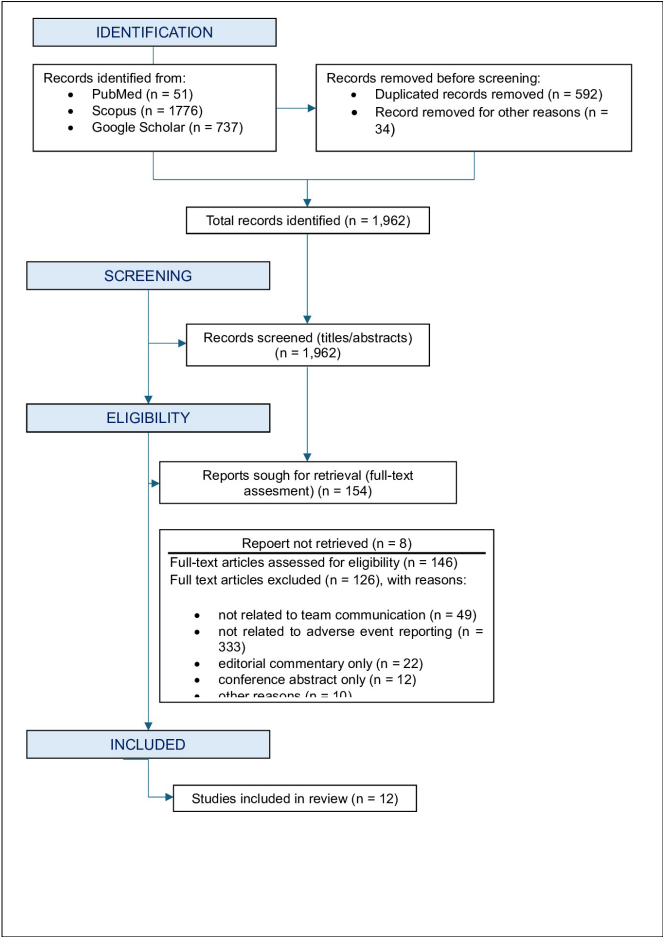


FIGURE 1. PRISMA flow diagram of the study selection process.

State of knowledge

Ineffective communication is a significant risk factor for medical errors and adverse events. Communication barriers include the absence of clearly defined procedures, professional hierarchy, and staff concerns regarding error reporting. Methods such as SBAR and TeamSTEPPS have been shown to substantially enhance the effectiveness of clinical information exchange, reducing errors during patient handovers between staff shifts [4,8,10]. Incident reporting systems contribute to the strengthening of a safety culture by enabling the analysis of error causes and the implementation of corrective measures. However, their effectiveness may be limited by staff apprehension about reporting consequences and the lack of a clearly structured reporting framework [5,11]. Training and education in communication and patient safety improve nurses’ competencies and the efficacy of reporting systems [6,12]. Organisational safety culture is strongly associated with staff satisfaction and the quality of care. An open and supportive environment encourages incident reporting and reduces the risk of error recurrence [7,13] (Table 1).

TABLE 1. Effectiveness of communication tools and reporting systems in nursing practice.

Author (Year)	Communication Tool/System	Population	Study Design	Key Findings
Soed et al. (2025)	SBAR	Nurses	Scoping review	SBAR enhances communication accuracy, standardises handovers, improves interdisciplinary collaboration, and supports patient safety culture [4].
Abdulla Awn et al. (2025)	Incident reporting system	Healthcare staff	Review	Main barriers: fear of consequences, lack of standardisation [5].
Jang et al. (2022)	Communication education programmes (SBAR, TeamSTEPPS, other tools)	Registered nurses in acute hospitals	Scoping review	Communication training is critical for patient safety [6].
Kuklińska J et al. (2022)	Patient Care Quality Assessment (PCQA)	Patients in public hospitals, Wrocław	Prospective study	Emphasises the development ing of staff soft skills through motivational programmes [7].
Efendi et al. (2025)	SBAR	Inpatient ward nurses	Cross-sectional quantitative study	SBAR improves communication effectiveness and patient safety [8].
Pazar et al. (2024)	SBAR	Paediatric surgery nurses	Semi-experimental	Enhanced collaboration, communication, and adverse event reporting [9].
Yun et al. (2023)	SBAR-based simulation programmes	Nursing students	Systematic review	Improves communication clarity among students [10].
Mehdi et al. (2025)	SBAR	Nurse anaesthetists	Qualitative literature review	SBAR significantly enhances communication and patient safety; and requires structured training and managerial support [11].
Ahsan et al. (2021)	TeamSTEPPS	Nurses	Quasi-experimental pre-post control	Sustained TeamSTEPPS implementation fosters effective team collaboration and communication [12].
Amiri et al. (2024)	TeamSTEPPS	Operating room staff	Quasi-experimental	Mobile TeamSTEPPS® training improves teamwork perception and staff efficiency [13].
Stychno et al. (2023)	SBAR, TeamSTEPPS, handover and team communication strategies	Medical staff	Literature review	Joint education via training, simulations, and team meetings builds trust, supports effective communication, and promotes organisational learning [16].
Coolen et al. (2025)	SBAR	Pediatric residents and nurses, non-acute academic hospital	Qualitative	SBAR is effective in emergencies and physician communication, but less suitable for routine intra-nursing communication [21].

Source: authors’ own work.

DISCUSSION

Review of the available literature confirms that effective communication within the healthcare team is a key determinant of patient safety. Communication errors remain one of the most frequent causes of adverse events, as demonstrated by numerous quantitative and qualitative studies [2,14,15]. These errors are partly attributable to ambiguous procedures, a lack of standardisation in information transfer, and professional hierarchies that may restrict nurses’ freedom to speak up in situations threatening patient safety.

The implementation of structured tools, such as Situation–Background–Assessment–Recommendation (SBAR), has been shown to improve the quality of communication during patient handovers and in the reporting of adverse events [4,10]. SBAR provides a consistent framework for information transfer, reducing the risk of omitting critical clinical data. Research indicates that following the introduction of SBAR, results in a significant reduction in errors arising from incomplete or inaccurate information, confirming its value in clinical practice [4,10,16].

Another important tool is TeamSTEPPS, which supports interdisciplinary collaboration, enhances communication skills and fosters a proactive staff approach to hazard identification. TeamSTEPPS facilitates the development of briefing, debriefing and effective response skills in critical situations, directly contributing to a reduction in adverse events. The literature emphasises that integrating TeamSTEPPS into daily ward routines promotes a safety culture in which staff feel confident to report errors and suggest improvements [17].

Despite the documented benefits of communication tools, the literature also highlights significant barriers in clinical practice. Commonly reported obstacles include fear of the consequences of reporting adverse events, such as risk of punishment, criticism, or negative evaluation by supervisors [3,5,18]. A lack of clear reporting structures and standards further impedes staff understanding of how to report incidents effectively [6,12]. Inadequate organisational support, time constraints and workload pressures prevent nurses from fully participating in reporting processes and team communication [19].

In this context, the literature indicates that the effectiveness of incident reporting systems is closely linked to organisational culture. Institutions with an open safety culture, where errors are treated as learning opportunities rather than reasons for punishment, achieve better outcomes in reducing adverse events. In such environments, staff are more likely to report potential hazards, and feedback allows for procedural and clinical practice improvements.

Discussion on the role of nurses emphasises that they are a critical link in the patient safety system. Their close contact with patients enables rapid hazard identification and timely communication with the healthcare team. Education and training in communication, including practical exercises using SBAR and TeamSTEPPS methods, enhance nurses’ confidence in reporting issues and participating in preventive actions [2,6,20].

Furthermore, the literature underlines the importance of integrating communication tools with adverse event reporting systems. Communication tools alone, without appropriate organisational support, are insufficient to ensure patient safety. Effective implementation requires combining these tools with

training, clearly defined reporting procedures, and regular monitoring of outcomes coupled with corrective actions [2,10,20].

CONCLUSIONS

Effective communication within healthcare teams and well-functioning adverse event reporting systems constitute essential components of patient safety. The analysed literature indicates that structured communication tools, such as SBAR and TeamSTEPPS, improve the quality of information exchange, strengthen interdisciplinary collaboration, and support more effective teamwork in clinical settings.

The effectiveness of adverse event reporting systems is strongly influenced by organisational culture and institutional support. In particular, non-punitive approaches to reporting incidents encourage healthcare professionals to report errors and potential risks, which enables organisations to identify system weaknesses and implement corrective actions.

Education and training in communication, incident reporting and hazard recognition play an important role in strengthening patient safety practices. Nurses, due to their continuous contact with patients and active participation in clinical information exchange, represent a key group involved in identifying risks and preventing adverse events.

However, barriers such as fear of reporting consequences, the lack of standard procedures, and workload pressures continue to limit the effectiveness of communication tools and reporting systems. Therefore, the integration of structured communication strategies with supportive organisational policies and safety culture should be considered an important element of healthcare quality and risk management systems.

Implications for Practice and Healthcare Systems

Based on the analysed literature, several key directions for organisational action in healthcare systems can be identified. Standardisation of communication processes through the implementation of structured information transfer tools is essential. Equally important is the development of a safety culture based on non-punitive reporting of adverse events, which supports organisational learning and continuous improvement in the quality of care.

The integration of communication tools with adverse event reporting systems enables more effective identification of the causes of errors and the implementation of corrective actions at the organisational level. In addition, systematic training of healthcare personnel in team communication, incident reporting and interdisciplinary collaboration is crucial.

These measures may contribute to the improvement of the quality of healthcare, reducing the incidence of adverse events, and the strengthening of the effectiveness of healthcare organisations.

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