

Manuscript received May 10, 2026; revised July 3, 2026; accepted August, 2026; date of publication August 30, 2026

Digital Object Identifier (DOI): <https://doi.org/10.35882/ijahst.v6i4.627>

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How to cite: Nurlia L, Dicky Budiman, Lia Gardenia Partakusuma, and Andi Erlina, "Advancing Patient Safety and Family-Centered Care (PFCC) Through Structured Bedside Handover: A Systematic Review and Conceptual Development of the GRANTE Framework", International Journal of Advanced Health Science and Technology, Vol. 6 No. 4, pp. 304-313, August 2026.

Advancing Patient Safety and Family-Centered Care (PFCC) Through Structured Bedside Handover: A Systematic Review and Conceptual Development of the GRANTE Framework

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ABSTRACT Communication failures during nursing handover remain a major contributor to preventable adverse events, fragmented continuity of care, and suboptimal implementation of Patient and Family-Centered Care (PFCC). Although structured communication models such as SBAR, ISBAR, and I-PASS have improved information transfer, these frameworks primarily emphasize communication sequence and provide limited guidance for bedside clinical priority assessment. This study aimed to synthesize recent evidence regarding the effectiveness of bedside handover in enhancing patient safety and PFCC while identifying conceptual gaps that support the development of the GRANTE framework as a structured bedside priority-assessment tool. A systematic literature review with narrative synthesis was conducted following the PRISMA 2020, PRISMA-S, and SWiM reporting guidelines. Literature published between 2021 and 2026 was retrieved from PubMed, Web of Science, and Google Scholar, supplemented by manual reference screening. Of the 400 records initially identified, 18 studies met the predefined eligibility criteria and underwent methodological quality appraisal using the Joanna Briggs Institute (JBI) critical appraisal framework. The synthesized evidence consistently demonstrated that structured bedside handover improves communication quality, continuity of care, patient and family engagement, patient satisfaction, and patient safety. Existing handover frameworks effectively standardize communication; however, they inadequately address systematic bedside verification of critical clinical priorities, including neurological status, patient risks, attached medical devices, pain, ongoing therapy, and educational needs. To address this gap, the GRANTE framework comprising Glasgow Coma Scale, Risk, Attached Medical Devices, Numeric Pain Assessment, Therapy, and Education is proposed as a conceptual bedside priority-assessment guide that complements established communication models. Integrating structured communication with focused bedside clinical verification has the potential to strengthen patient safety and PFCC implementation. Nevertheless, further empirical studies are required to evaluate the feasibility, reliability, usability, and clinical effectiveness of the GRANTE framework across diverse healthcare settings before routine implementation can be recommended.

INDEX TERMS Bedside handover, Patient safety, Patient- and Family-Centered Care (PFCC), GRANTE framework, Structured nursing communication.

I. INTRODUCTION

Patient safety remains a global priority for healthcare systems because preventable adverse events continue to compromise the quality of care, increase healthcare costs, and contribute to avoidable morbidity and mortality [1]–[4]. One of the most vulnerable processes affecting patient safety is clinical handover, particularly nursing shift handover, during which responsibility and accountability for patient care are transferred between healthcare professionals [5], [6]. Incomplete, inaccurate, or inconsistent communication during handover may result in medication errors, delayed clinical interventions, duplicated procedures, and fragmented continuity of care [2], [7], [8]. The World Health

Organization recognizes ineffective communication among healthcare professionals as one of the leading causes of preventable patient harm, highlighting the necessity of standardized communication strategies to improve patient outcomes [1], [3]. Consequently, improving the quality of bedside handover has become an important strategy for strengthening patient safety while promoting continuity of nursing care.

In recent years, numerous structured handover methods have been developed to improve communication quality during patient transitions. Frameworks such as Situation–Background–Assessment–Recommendation (SBAR), Identify–Situation–Background–Assessment–Recommendation (ISBAR), I-

PASS, checklist-based handover, and standardized bedside reporting have consistently demonstrated positive effects on communication accuracy, nurse satisfaction, patient satisfaction, and reduction of communication-related errors [9]–[17]. Contemporary implementation studies further demonstrate that bedside handover enhances patient engagement by allowing patients and family members to participate actively in discussions regarding ongoing treatment, clarification of clinical information, and shared decision-making, thereby supporting the principles of Patient- and Family-Centered Care (PFCC) [10], [13], [18]–[21]. Furthermore, systematic reviews have shown that structured bedside handover contributes to greater transparency, improved interdisciplinary collaboration, and stronger patient safety culture across various healthcare settings [11], [15], [22].

Despite these advances, important limitations remain within existing communication frameworks. Most available models primarily standardize the sequence of information transfer rather than providing operational guidance regarding the clinical priorities that should be verified directly at the patient's bedside during shift transitions [12], [14], [16]. As a result, critical safety indicators including neurological status, patient risk factors, invasive medical devices, pain assessment, ongoing therapies, and patient or family education may be inconsistently evaluated despite the use of standardized communication tools. Recent implementation studies have also highlighted persistent barriers related to workload, environmental distractions, confidentiality concerns, and variability in nurses' adherence to bedside handover protocols, indicating that communication standardization alone may not sufficiently optimize patient safety outcomes [18], [20], [23], [24]. Therefore, there remains a need for a practical bedside assessment framework that complements existing communication models by emphasizing direct verification of clinically important patient safety elements.

To address this gap, this systematic literature review synthesizes recent evidence regarding the effectiveness of bedside handover in improving patient safety and PFCC while proposing the GRANTE framework as a conceptual bedside priority-assessment guide. GRANTE consists of six clinically relevant components: Glasgow Coma Scale (GCS), Risk identification, Attached-medical devices, Numeric pain assessment, Therapy being administered, and Education. Unlike existing communication-oriented frameworks, GRANTE emphasizes bedside clinical verification to support comprehensive patient assessment during nursing shift handover.

This study contributes to the existing literature in several ways. First, it provides an updated systematic synthesis of recent evidence (2021–2026) concerning the effectiveness of structured bedside handover on communication quality, patient safety, patient satisfaction, and PFCC implementation. Second, it identifies the conceptual limitations of current handover frameworks by demonstrating the lack of operational bedside clinical prioritization within existing communication models. Third, it proposes the GRANTE framework as a novel conceptual guide that integrates structured communication with bedside safety verification, thereby extending current approaches

toward more comprehensive, patient-centered nursing handover practices. These contributions are expected to support future implementation studies, nursing education, quality improvement initiatives, and the development of standardized bedside handover protocols.

The remainder of this article is organized as follows. Section II describes the systematic review methodology, including the literature search strategy, eligibility criteria, quality appraisal, and narrative synthesis procedures. Section III presents the synthesized findings from the included studies. Section IV discusses the implications of the findings, compares the proposed GRANTE framework with existing handover models, and outlines study limitations and future research directions. Finally, Section V concludes the review by summarizing the principal findings and discussing the potential contribution of the GRANTE framework to patient safety and Patient- and Family-Centered Care implementation.

II. METHOD

A. STUDY DESIGN

This study employed a systematic literature review (SLR) using a narrative synthesis approach to critically evaluate contemporary evidence regarding the effectiveness of bedside handover in improving patient safety and Patient- and Family-Centered Care (PFCC), while identifying evidence gaps supporting the conceptual development of the GRANTE framework. The review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) statement and the PRISMA-S extension for reporting literature searches to ensure methodological transparency and reproducibility [26], [27]. Because the included studies differed substantially in research design, intervention characteristics, outcome measures, and clinical settings, statistical pooling through meta-analysis was not considered appropriate. Therefore, evidence was synthesized narratively following the Synthesis Without Meta-analysis (SWiM) reporting guideline [28]. This review analyzed previously published studies only and did not involve prospective, retrospective, randomized, or experimental investigations conducted by the authors.

B. REVIEW QUESTION

The review question was formulated using the Population–Concept–Context (PCC) framework recommended for evidence synthesis studies [30]. The population comprised nurses and hospitalized patients involved in bedside handover during inpatient care. The concept focused on structured bedside handover, standardized communication frameworks, patient safety, and Patient- and Family-Centered Care. The context included inpatient healthcare facilities implementing nursing shift handover. The review aimed to answer the following question: How effective is structured bedside handover in improving patient safety and Patient- and Family-Centered Care, and what evidence supports the conceptual development of the GRANTE bedside priority-assessment framework?

C. LITERATURE SEARCH STRATEGY

A comprehensive electronic literature search was conducted using PubMed, Web of Science, and Google Scholar because these databases provide extensive coverage of nursing, medical, and healthcare quality research. Articles published between January 2021 and June 2026 were considered eligible for inclusion. The search was performed during June 2026. Manual screening of reference lists from eligible articles was additionally undertaken to identify relevant studies not retrieved during the electronic search.

Search terms were developed from Medical Subject Headings (MeSH) and free-text keywords combined using Boolean operators. The principal search strategy consisted of: ("bedside handover" OR "nursing bedside handover" OR "nursing handover" OR "shift report") AND ("patient safety" OR "Patient- and Family-Centered Care" OR PFCC OR "patient-centered care") AND (SBAR OR ISBAR OR I-PASS OR checklist OR "structured communication"). Search syntax was adapted according to each database while preserving equivalent concepts and keywords. The detailed search strategy, including the databases, search period, keywords, and search outcomes, is summarized in [TABLE 1](#).

TABLE 1

Literature Selection

Stage	Number of Articles	Description
Identification	400	Initial articles from PubMed, Web of Science, and Google Scholar
Screening	390	After duplicate removal.
Initial exclusion	363	Excluded as irrelevant to bedside handover, patient safety, PFCC, or handover tools.
Eligibility	27	Full-text articles assessed for eligibility.
Included	18	Articles included in the review.

D. ELIGIBILITY CRITERIA

Eligibility criteria were determined before the literature search to minimize selection bias.

1. Inclusion criteria were:

- Primary quantitative, qualitative, or mixed-methods studies.
- Studies investigating bedside handover, nursing shift handover, or structured handover communication.
- Studies evaluating outcomes related to patient safety, communication quality, continuity of care, patient satisfaction, nurse satisfaction, patient participation, or PFCC.
- Articles published in peer-reviewed journals between 2021 and 2026.
- Full-text articles written in English or Indonesian.

2. Exclusion criteria were:

- Narrative reviews, systematic reviews, editorials, conference abstracts without full manuscripts, books, dissertations, and undergraduate theses.
- Articles lacking sufficient methodological information.
- Studies unrelated to bedside nursing handover.
- Duplicate publications.

- Articles with inaccessible full texts or incomplete outcome reporting.

The predefined inclusion and exclusion criteria applied throughout the screening process are summarized in [TABLE 2](#).

TABLE 2

Exclusion Reasons Table

No	Reason for Exclusion	Number of Articles
1	Not focused on bedside handover or nursing handover	3
2	Did not report patient safety, PFCC, or satisfaction outcomes	2
3	Review article, thesis, or non-primary study	2
4	Incomplete methodological information	1
5	Full text not accessible or insufficient data	1

E. STUDY SELECTION

The study selection process followed the PRISMA 2020 framework. Initially, 400 records were identified through database searching and manual reference searching. Duplicate publications were removed before title and abstract screening. Articles that did not address bedside handover, patient safety, PFCC, or structured nursing communication were excluded during preliminary screening.

Potentially eligible articles subsequently underwent full-text assessment using the predefined eligibility criteria. Each article was independently assessed by two reviewers. Any disagreement regarding study eligibility was resolved through discussion until consensus was achieved. Following the eligibility assessment, 18 studies fulfilled all inclusion criteria and were included in the final qualitative synthesis. The complete identification, screening, eligibility, and inclusion process is presented in the PRISMA flow diagram ([FIGURE 1](#)).

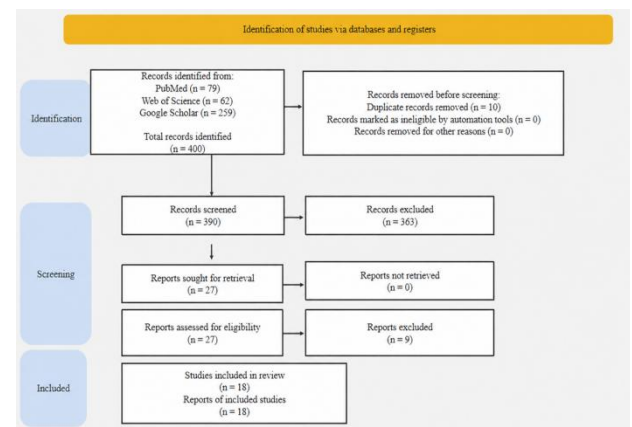


FIGURE 1. PRISMA Flow Diagram

F. QUALITY ASSESSMENT

Methodological quality was evaluated using the Joanna Briggs Institute (JBI) Critical Appraisal Tools, with the appraisal checklist selected according to each study design, including quasi-experimental, cross-sectional, mixed-methods, and intervention studies [30], [31]. The appraisal assessed methodological rigor based on participant selection, sampling procedures, intervention description, measurement validity, statistical analysis, management of confounding variables, and risk of bias.

Quality assessment was independently conducted by two reviewers. Disagreements were resolved through consensus

TABLE 3
Quality Appraisal

Author	Design	Bias Risk	JB1 Domain Met	Quality
Abdollahi et al. (2022)	Quasi-experimental	Moderate risk due to non-randomized intervention and limited control of confounders	6/9	Moderate
Alizadeh-Risani et al. (2024)	Semi-experimental	Moderate risk from small sample size and absence of random allocation	6/9	Moderate
Brown-Deveaux et al. (2022)	Pre-post quantitative study	Moderate risk due to lack of control group and possible Hawthorne effect	6/9	Moderate
Cakir & Cakir (2023)	Cross-sectional study	Moderate risk related to self-reported data and inability to infer causality	5/8	Moderate
Bressan et al. (2020)	Umbrella review	Moderate risk; possible heterogeneity across included reviews	9/11	High
Gheisari et al. (2024)	Experimental study	Low-to-moderate risk; intervention design strengthened internal validity but blinding was unclear	8/9	High
Ghosh et al. (2025)	Cross-sectional study	Moderate risk related to perception-based outcomes and potential response bias	5/8	Moderate
Ghosh et al. (2021)	One-group trial	Moderate-to-high risk due to lack of randomization and uncontrolled variables	6/9	Moderate
Husna et al. (2024)	Quasi-experimental study	Moderate risk from non-randomized sampling and limited external validity	6/9	Moderate
Abou Hashish et al. (2023)	Cross-sectional study	Moderate risk due to self-reported data and inability to infer causality	6/8	High
Jaber et al. (2022)	Cross-sectional study	Moderate risk because associations were observational and self-reported	5/8	Moderate
Li et al. (2022)	Experimental study	Low-to-moderate risk with relatively strong intervention design but limited reporting of allocation procedures	8/9	High
Norman et al. (2023)	Pre-post survey study	Moderate risk due to survey-based outcomes and absence of long-term evaluation	6/9	Moderate
Obaia et al. (2023)	Descriptive correlational study	Moderate risk because of observational design and potential confounding factors	5/8	Moderate
Wibrandt & Lippert (2020)	Systematic review	Low-to-moderate risk; heterogeneity of settings and interventions may affect comparability	9/11	High
Forde et al. (2020)	Mixed-methods study	Low-to-moderate risk; mixed-methods design strengthens interpretation but may have setting-specific limitations	8/10	High
Xin et al. (2025)	Quantitative intervention study	Moderate risk because of limited methodological detail and unclear randomization process	7/9	Moderate-High
Zhou et al. (2026)	Pre-post intervention study	Moderate risk due to absence of randomized comparison and single-setting implementation	7/9	Moderate-High

discussion. Studies were subsequently categorized as having high, moderate, or low methodological quality according to overall compliance with the JBI appraisal criteria. Quality assessment findings were considered during evidence synthesis but did not constitute exclusion criteria.

G. DATA EXTRACTION AND EVIDENCE SYNTHESIS

A standardized data extraction form was developed before commencing the review to ensure consistency throughout the

extraction process. The following variables were extracted from each eligible study:

1. Author and publication year;
2. Country of study;
3. Study design;
4. Study population and sample size;
5. Healthcare setting;
6. Structured handover intervention or communication framework;

7. Outcome variables;
8. Measurement instruments;
9. Data analysis methods; and
10. Principal findings.

Because considerable heterogeneity existed among the included studies with respect to intervention characteristics, research methodology, and reported outcomes, quantitative meta-analysis was not feasible. Consequently, findings were synthesized narratively according to the SWiM reporting recommendations [28]. Extracted evidence was grouped into predefined thematic categories consisting of communication standardization, patient safety outcomes, patient and family engagement, Patient- and Family-Centered Care implementation, and evidence supporting the conceptual development of the GRANTE framework. This thematic approach facilitated comparison of methodological similarities, identification of recurring findings, and recognition of research gaps across the included studies.

H. ETHICAL CONSIDERATIONS

This study analyzed data exclusively from previously published scientific literature and did not involve human participants, patient recruitment, clinical interventions, or access to confidential patient information. Therefore, institutional ethical approval and informed consent were not required. The review was conducted in accordance with internationally accepted principles for responsible evidence synthesis, including transparent reporting, objective study selection, standardized methodological appraisal, and reproducible literature search procedures [26], [30].

III. RESULTS

Quality appraisal indicated that most included studies were of moderate methodological quality. Common methodological limitations included non-randomized designs, small sample sizes, self-reported outcome measures, and limited long-term follow-up. However, several intervention-based studies demonstrated relatively strong methodological rigor and consistently reported positive effects of structured bedside handover on communication quality, patient safety, and patient satisfaction. A detailed summary of the methodological quality assessment for each included study is presented in [TABLE 3](#).

A total of 18 articles were analyzed. Most articles used quantitative approaches, such as quasi-experimental, pre-post intervention, cross-sectional, one-group experimental, and correlational designs. Most studies assessed the effectiveness of structured handover methods or tools on handover quality, patient safety, patient satisfaction, patient/family involvement, nurse communication, or patient safety culture. The general characteristics of the included studies, including the study design, country, sample characteristics, intervention, and principal findings, are presented in [TABLE 4](#).

A. SYNTHESIS OF FINDINGS

1. Communication standardization outcomes

Most articles show that bedside handover or structured handover can improve communication quality among nurses. The use of tools such as SBAR, ISBAR, I-PASS, mind maps, and checklists facilitates nurses in delivering

information more systematically, reduce variation among staff, and clarify responsibilities during shift changes. These findings emphasize that standardization is a significant element in maintaining continuity of care.

2. Patient safety outcomes

The reviewed literature indicates that bedside handover strengthens patient safety through direct verification of patient condition, reduction of missed information, and increased awareness of risks. Several studies reported decreased adverse events, reduced handover defects, and improved patient safety culture after the implementation of structured handover protocols.

TABLE 4
Characteristics and Main Findings of the Articles

No	Author/Year	Design/Sample	Key Findings
1	Abdollahi et al. (2022)	Quasi-experimental; 70 handover positions	SBAR improved nurse satisfaction and patient satisfaction in the intervention group.
2	Alizadeh-Risani et al. (2024)	Semi-experimental; 31 emergency nurses	Modified bedside handover improved information transfer, shared understanding, handover quality, and nurse perception.
3	Brown-Deveaux et al. (2022)	Pre-post quantitative; 44 nurses	Redesigned evidence-based bedside handover improved patient experience and safety.
4	Cakir & Cakir (2023)	Cross-sectional; 192 nurses	Standardized shift handover forms were needed to maintain patient safety.
5	Bressan et al. (2020)	Umbrella review; 17 reviews	Nursing handover is closely related to patient safety, continuity of care, and communication quality.
6	Gheisari et al. (2024)	Experimental; 80 nurses	Clinical supervision improved self-efficacy and communication skills during ISBAR handover.
7	Ghosh et al. (2025)	Cross-sectional; 390 patients	Most patients valued involvement in bedside handover and reported positive perceptions.
8	Ghosh et al. (2021)	One-group trial; 2,696 handovers	Structured handover improved bedside handover process, patient satisfaction, and staff acceptance.
9	Husna et al. (2024)	Quasi-experimental; 128 patients	ISBAR3 improved nursing handover quality and patient satisfaction.
10	Abou Hashish et al. (2023)	Descriptive correlational study; 201 nurses	Handover quality in critical care is influenced by nurse-related, organizational, and communication determinants.
11	Jaber et al. (2022)	Cross-sectional; 90 nurses	Nurse satisfaction with bedside shift report was related to patient safety culture.
12	Li et al. (2022)	Experimental; 180 patients	SBAR combined with mind map reduced handover defects and adverse events.
13	Norman et al. (2023)	Pre-post survey; ED and transport staff	Standardized I-PASS handoff improved patient information understanding and staff satisfaction.
14	Obaia et al. (2023)	Descriptive correlational; 255 ICU nurses	Factors affecting handover quality were associated with patient safety problems.
15	Wibrandt & Lippert (2020)	Systematic review; 8 intervention studies	Bedside handover at shift change is influenced by communication practice, patient involvement, and ward-level workflow.
16	Forde et al. (2020)	Mixed-methods study; 30 bedside handover episodes	Handover from ICU to general ward is a vulnerable transition and structured handover may improve patient safety.
17	Xin et al. (2025)	Quantitative; 100 neurosurgical patients	Checklist-driven handover improved efficiency, patient safety, and quality improvement.
18	Zhou et al. (2026)	Pre-post intervention; 60 nurses	ISBAR bedside handover improved handover quality, nurse critical thinking, satisfaction, and reduced handover problems.

3. PFCC and patient engagement outcomes

Bedside handover has also been shown to increase the involvement of patients and families. Patients can listen to information about their condition and plan of care, ask questions, provide clarification, and feel safer because the communication process is carried out openly. These findings are consistent with the principles of PFCC, namely respect for patients and families, information sharing, participation, and collaboration in the care process.

4. Operational gap and conceptual implication for GRANTE

Although many studies used SBAR, ISBAR, and I-PASS, few articles emphasized a priority-assessment tool that is easy to remember and can be used directly by nurses during bedside handover in inpatient wards. Some tools focus on communication structure but do not specifically guide nurses to verify priority clinical aspects such as level of consciousness, patient risks, attached medical devices, pain, therapy, and education. This gap provides the basis for developing the GRANTE Tool. Recent studies from critical care, emergency care, and low-resource settings also emphasize standardized handover tools, training, and context-sensitive implementation as prerequisites for safer handover practice [33]-[36].

5. Tabel Comparative Framework

This comparison suggests that GRANTE has a distinct conceptual position among existing handover frameworks. While SBAR, ISBAR, and I-PASS primarily emphasize the structure and completeness of information transfer, GRANTE emphasizes what should be clinically verified at the bedside during nurse shift transitions. This distinction is important because bedside handover requires not only effective communication, but also real-time confirmation of patient condition, safety risks, attached devices, pain status, ongoing therapy, and patient-family understanding.

Therefore, GRANTE may serve as a complementary framework that connects structured communication with bedside safety verification and PFCC implementation. However, its proposed relevance remains exploratory, as GRANTE has not yet been tested through empirical implementation studies or psychometric validation. Future research should examine its feasibility, inter-rater reliability, user acceptability, and impact on patient safety and PFCC-related outcomes.

IV. DISCUSSION

A. INTERPRETATION OF THE FINDINGS

Across the reviewed studies, a consistent pattern emerged indicating that the effectiveness of bedside handover is strongly associated with communication standardization, direct clinical verification, and active patient participation. However, the magnitude of improvement varied depending on implementation fidelity, organizational context, nurse engagement, and the complexity of clinical settings. This suggests that bedside handover should not be viewed solely as a communication technique, but rather as a multidimensional patient safety intervention integrating communication, clinical assessment, teamwork, and patient-centered care principles.

The findings of this systematic literature review indicate The findings of this systematic literature review indicate that

bedside handover has a substantial contribution to improving to the quality and safety of nursing care. Bedside handover is not merely a routine activity performed at the end of a shift; it is a structured clinical communication process through which responsibility, accountability, and essential patient information are transferred from one nurse to another. The transition between shifts is a vulnerable point in inpatient care because incomplete or inaccurate information may lead to delayed interventions, inappropriate therapy, medication errors, failure to identify patient risks, or weak continuity of care. In this context, bedside handover provides an opportunity for direct verification of the patient's condition and helps ensure that the information communicated between nurses is consistent with the actual clinical situation at the bedside.

The reviewed studies show that structured handover practices can improve communication quality, strengthen information accuracy, and reduce variation among nurses. These findings are substantial because patient safety incidents frequently arise not only from a lack of clinical knowledge, but also from fragmented communication and unclear transfer of responsibility. When handover is performed at the bedside, outgoing and incoming nurses can jointly confirm the patient's identity, current condition, risks, medical devices, ongoing therapy, and immediate care priorities. This process reduces dependence on memory-based reporting and supports shared understanding between nurses. Therefore, bedside handover can be interpreted as both a communication intervention and a safety-verification mechanism.

From the perspective of Patient- and Family-Centered Care (PFCC), bedside handover also creates a meaningful space for patients and families to participate in the care process. Patients and families can listen to information about the patient's condition, ask questions, correct inaccurate information, and clarify care plans. This interaction changes the position of patients and families from passive recipients of care into partners in care. Such involvement is consistent with the core principles of PFCC, including respect, information sharing, participation, and collaboration. In inpatient settings, these principles are particularly relevant because patients and families often have significant contextual information about symptoms, preferences, concerns, and previous responses to therapy. Bedside handover allows this information to be incorporated into daily nursing care.

The findings further show that many studies used SBAR, ISBAR, I-PASS, or checklists as structured communication tools. These tools are valuable because they organize the sequence of information transfer and reduce ambiguity in nurse-to-nurse communication. However, communication format alone may not be sufficient if it does not explicitly guide nurses to assess priority clinical elements at the bedside. This is the conceptual position of the GRANTE Tool. GRANTE can help translate structured communication into focused bedside verification by directing nurses to assess Glasgow Coma Scale (GCS), Risk, Attached medical devices, Pain, Therapy being administered, and Education. A recent systematic review and meta-analysis of ISBAR also indicates that structured handover can strengthen interprofessional communication, reduce information gaps,

and support patient safety, which reinforces the conceptual relevance of GRANTE as a complementary assessment guide [37].

Conceptually, GRANTE may provide additional value by operationalizing bedside verification into clinically prioritized domains that are directly observable during shift transitions. Unlike communication-focused frameworks that primarily organize information exchange, GRANTE emphasizes real-time safety assessment at the patient bedside. This distinction may be particularly relevant in inpatient wards where rapid clinical changes, multiple invasive devices, and complex nursing interventions require structured bedside reassessment during every handover cycle.

B. COMPARISON WITH PREVIOUS STUDIES AND CONCEPTUAL RELEVANCE OF GRANTE

The results of this review are consistent with previous studies showing that structured handover improves the completeness and clarity of clinical information. Studies using SBAR and ISBAR reported improvements in handover quality, nurse communication, patient satisfaction, and attitudes toward patient safety. Similar findings were reported in studies that used I-PASS, mind maps, and checklist-based handover approaches. Across these studies, the common mechanism is standardization. When nurses use a standardized format, information is more likely to be delivered systematically, and significant content is less likely to be omitted. This supports the conclusion that standardization is a central element in improving handover practice.

Nevertheless, the reviewed literature also demonstrates a significant gap. Most structured handover tools are designed primarily as communication frameworks. SBAR, for example, guides nurses to communicate situation, background, assessment, and recommendation, while ISBAR adds identification at the beginning of the process. These structures are useful, but they do not always specify the clinical details that must be verified at the bedside. As a result, two nurses may follow the same communication structure while still differing in the completeness of bedside assessment. This limitation becomes significant in inpatient wards, where nurses must continuously monitor changing patient conditions, fall risk, allergies, pain, devices, therapy, and educational needs. A comparison between the existing structured handover frameworks and the proposed GRANTE framework is presented in [TABLE 5](#) to illustrate their

respective objectives, strengths, limitations, and clinical applicability.

The GRANTE Tool is proposed to address this practical gap. GCS helps nurses identify changes in the patient's level of consciousness and supports early recognition of neurological deterioration. Risk directs nurses to identify fall risk, allergy risk, infection risk, risk of clinical deterioration, or other safety concerns. Attached medical devices ensure that intravenous lines, oxygen therapy, urinary catheters, nasogastric tubes, drains, and other devices are checked directly and monitored consistently. Pain assessment supports patient comfort and timely intervention. Therapy assessment ensures that medications, fluids, oxygen, and physician instructions are implemented according to the care plan. Education reinforces PFCC because it makes patient and family information needs an explicit part of the handover process.

To improve the operational clarity of the proposed framework, GRANTE can be translated into a preliminary bedside verification checklist. This checklist is intended to guide nurses in identifying priority clinical and PFCC-related elements during bedside handover. The proposed checklist is presented in [TABLE 6](#).

TABLE 6
Proposed GRANTE Bedside Verification Checklist

GRANTE Component	Bedside Verification Activity
G – Glasgow Coma Scale	Verify consciousness level
R – Risk	Identify falls/allergy/infection risk
A – Attached medical devices	Check IV lines/catheters
N – Numeric pain scale / Pain	Assess pain level
T – Therapy	Verify medications/fluids
E – Education	Confirm patient-family understanding

This checklist remains preliminary and requires further empirical testing to evaluate its feasibility, usability, reliability, and effectiveness in clinical nursing practice. Thus, GRANTE should not be positioned as a replacement for SBAR or ISBAR. Instead, GRANTE can complement these tools. SBAR and ISBAR organize how information is communicated, whereas GRANTE clarifies what priority clinical content should be assessed and verified at the bedside. This distinction is significant for implementation. A handover process may be well structured linguistically, but still incomplete clinically if bedside verification is not performed. Conversely, bedside assessment may be performed, but poorly communicated if there is no clear communication structure. Combining a structured communication format with a priority-assessment guide may provide a more comprehensive approach to safe and patient-centered handover.

Compared with SBAR, ISBAR, and I-PASS, the GRANTE framework places stronger emphasis on direct bedside clinical verification and PFCC-oriented assessment. Existing communication frameworks primarily structure the sequence of information exchange, whereas GRANTE attempts to operationalize specific bedside safety priorities that require immediate verification during nurse shift transitions.

This distinction may provide practical advantages in inpatient settings where patient condition, attached devices, pain status, and educational needs frequently change during

TABLE 5
Comparative Framework

Framework	Primary Focus	Strength	Limitation	Relevance to PFCC
SBAR	Communication structure	Standardized communication	Limited bedside verification	Moderate
ISBAR	Identification + communication	Reduces ambiguity	Less operational bedside assessment	Moderate
I-PASS	Handover completeness	Strong transition structure	More physician-oriented	Moderate
GRANTE	Bedside priority assessment	Direct safety verification + PFCC integration	Requires validation	High

hospitalization. However, unlike SBAR and I-PASS, GRANTE has not yet undergone empirical implementation testing or psychometric validation. Therefore, its clinical utility, usability, and effectiveness should currently be interpreted as conceptual and exploratory rather than evidence-based.

C. LIMITATIONS, IMPLICATIONS, AND FUTURE DIRECTIONS

Although this review included searches across PubMed, Web of Science, and Google Scholar, additional relevant studies indexed in databases such as Scopus, CINAHL, and ProQuest may still have been missed. Second, the included articles varied in design, setting, population, sample size, instruments, and outcome indicators. This heterogeneity limits the ability to make direct comparisons across studies and prevents generalization to all hospital contexts. Third, this review used narrative synthesis rather than meta-analysis because the included studies reported different interventions, methods, and outcomes. As a result, this article does not provide pooled effect estimates or statistical measures of intervention effectiveness.

Another limitation is that the GRANTE Tool itself has not yet been empirically tested in the included studies. The tool is developed conceptually based on evidence about bedside handover, structured communication, patient safety, and PFCC. Therefore, its practical effectiveness still needs to be evaluated through primary research. Future studies should test GRANTE in inpatient wards using quasi-experimental, mixed-methods, or implementation research designs. Such studies may compare bedside handover using SBAR or ISBAR alone with bedside handover using SBAR/ISBAR combined with GRANTE. Relevant outcomes may include handover completeness, documentation quality, patient safety incidents, patient and family satisfaction, nurse compliance, and perceived usability.

Despite these limitations, the findings have significant implications for nursing practice and hospital quality improvement. First, GRANTE can be developed as a simple checklist to support complete and consistent bedside handover. Second, GRANTE can be integrated into electronic medical records or nursing documentation systems so that handover results can be traced, audited, and used for quality monitoring. Third, the education component of GRANTE strengthens PFCC by ensuring that patients and families receive relevant information and have opportunities to participate in care discussions. Fourth, GRANTE can be used as a basis for nurse training, clinical supervision, and handover audit programs. Overall, the development of GRANTE may contribute to a more systematic, complete, and patient-centered bedside handover process by connecting structured communication with priority clinical assessment.

Several implementation challenges should also be considered before integrating GRANTE into routine bedside handover practice. Time constraints, nurse workload, varying communication skills, concerns regarding patient confidentiality, resistance to workflow change, and differences in digital infrastructure may influence implementation feasibility across hospital settings. Successful adoption would likely require institutional

support, staff training, supervision mechanisms, and integration into standardized nursing documentation systems or electronic medical records.

From an implementation science perspective, the sustainability of bedside handover interventions depends on organizational readiness, leadership commitment, interdisciplinary collaboration, workload management, and safety culture. Even well-designed handover tools may fail to improve patient outcomes when implementation fidelity is weak or when bedside verification is inconsistently integrated into routine nursing workflow. Therefore, future implementation strategies should incorporate staff training, clinical supervision, audit-feedback mechanisms, and continuous quality improvement approaches to strengthen adherence and long-term adoption.

This review may also be affected by publication bias and language bias because only English- and Indonesian-language articles were included. In addition, heterogeneity across study designs, outcome indicators, interventions, and measurement instruments limited direct comparability between studies and precluded quantitative meta-analysis. Reviewer subjectivity during narrative synthesis may also have influenced thematic interpretation despite efforts to maintain methodological rigor through structured appraisal procedures.

The GRANTE framework may represent a shift from communication-oriented handover toward clinically prioritized bedside safety verification, potentially bridging the gap between standardized information transfer and operational patient safety assessment in inpatient nursing care.

V. CONCLUSION

This systematic literature review aimed to synthesize recent evidence regarding the effectiveness of bedside handover in improving patient safety and Patient- and Family-Centered Care (PFCC) while identifying conceptual gaps that support the development of the proposed GRANTE framework as a structured bedside priority-assessment guide. Using a systematic review methodology based on the PRISMA 2020 guidelines, an initial 400 records were identified through comprehensive database searching and manual reference screening. After duplicate removal, title and abstract screening, and full-text eligibility assessment, 18 studies met the predefined inclusion criteria and were included in the final qualitative synthesis. The reviewed evidence consistently demonstrated that structured bedside handover enhances communication quality, continuity of care, patient and family engagement, patient satisfaction, and overall patient safety by reducing communication errors and improving the accuracy of information transfer during nursing shift transitions. Existing communication frameworks, including SBAR, ISBAR, and I-PASS, were found to effectively standardize the sequence of information exchange; however, they provide limited operational guidance for systematic bedside verification of priority clinical elements. Based on these findings, the GRANTE framework comprising Glasgow Coma Scale, Risk identification, Attached medical devices, Numeric pain assessment, Therapy, and Education is proposed as a complementary bedside assessment guide that integrates

structured communication with direct clinical verification and PFCC principles. Unlike existing communication-oriented models, GRANTE emphasizes real-time assessment of critical patient safety priorities at the bedside, thereby offering a conceptual approach to strengthening nursing handover practices. Nevertheless, the framework remains conceptual because it has not yet undergone empirical implementation or psychometric validation. Therefore, future studies should evaluate the feasibility, usability, acceptability, reliability, validity, and clinical effectiveness of GRANTE using quasi-experimental, mixed-methods, and implementation research designs across diverse inpatient settings. Comparative studies examining conventional SBAR or ISBAR handover against integrated SBAR/ISBAR-GRANTE approaches are also recommended to determine their effects on handover completeness, nursing documentation quality, patient safety incidents, patient and family satisfaction, nurse compliance, and overall quality of care. Such investigations are expected to provide robust evidence supporting the adoption of GRANTE as an evidence-based framework for standardized bedside handover and safer patient-centered nursing practice.

ACKNOWLEDGEMENTS

The authors express sincere gratitude to Universitas YARSI and all parties who provided academic support and guidance during the preparation of this systematic literature review.

FUNDING

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

DATA AVAILABILITY

The data supporting this systematic literature review are derived from published articles included in the literature synthesis.

AUTHOR CONTRIBUTION

Nurlia L. conceptualized the study, conducted the literature search and screening, performed the narrative synthesis, and prepared the manuscript. Dicky Budiman contributed as co-author by supporting manuscript review, refinement of scientific content, and final manuscript preparation. All authors reviewed and approved the final version of the manuscript. Lia Gardenia Partakusuma and Andi Erlina served as academic supervisors and provided methodological guidance, critical review, and intellectual input throughout the manuscript development.

DECLARATIONS

ETHICAL APPROVAL

Ethical approval was not required because this study used a systematic literature review design and analyzed previously published studies.

CONSENT FOR PUBLICATION PARTICIPANTS

Not applicable.

COMPETING INTERESTS

The authors declare no competing interests.

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