







Implementation strategies for evidence-based nursing practice in hospital settings: A scoping review protocol

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ABSTRACT

Introduction: Evidence-based practice integrates the best available evidence with clinical expertise and patient preferences, ensuring high-quality, safe, and cost-effective care. Hospital environments—characterized by high complexity and multidisciplinary integration—pose unique challenges for nursing staff in applying evidence-based practice consistently. This protocol outlines a scoping review to map implementation strategies, barriers, and facilitators of evidence-based practice in hospital nursing.

Objectives: To map the strategies, barriers, and facilitators for implementing evidence-based practice by nurses within hospital settings over the past ten years.

Methodology: This protocol will follow the Joanna Briggs Institute framework and the PRISMA-ScR guidelines. Eligibility criteria will be defined by the PCC (Population: nurses; Concept: implementation of evidence-based practice; Context: hospital). A comprehensive search will be conducted in MEDLINE® (via PubMed®), CINAHL®, Scopus®, Web of Science®, and Cochrane Library®, with time limits from 2015 to 2025. Independent reviewers will screen titles, abstracts, and full texts, with exhaustive efforts to obtain full texts (e.g., contacting authors) before exclusion. Data extraction will be performed using a standardized tool; results will be presented descriptively. The protocol is registered in the Open Science Framework®.

Results: This review is expected to identify the range of implementation strategies used by nurses in hospitals, along with key barriers and facilitators, to inform the development of a hospital-specific evidence-based practice implementation model.

Conclusion: It is anticipated that this scoping review will provide an overview of current practices, highlight gaps in the literature, and offer guidance for designing interventions to promote evidence-based practice in hospital nursing.

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RESUMO

Introdução: A prática baseada em evidências integra as melhores evidências disponíveis com os conhecimentos clínicos e as preferências dos doentes, assegurando cuidados de elevada qualidade, seguros e económicos. Os ambientes hospitalares - caracterizados por elevada complexidade e integração multidisciplinar - colocam desafios únicos à equipa de enfermagem na aplicação consistente da prática baseada em evidências.

Objetivos: Mapear as estratégias, barreiras e facilitadores para a implementação da prática baseada em evidências por enfermeiros em ambientes hospitalares nos últimos dez anos.

Metodologia: Este protocolo seguirá a estrutura do Joanna Briggs Institute e as orientações PRISMA-ScR. Os critérios de elegibilidade serão definidos pelo PCC (População: enfermeiros; Conceito: implementação da PBE; Contexto: hospital). Será efectuada uma pesquisa exaustiva na MEDLINE® (via PubMed), CINAHL®, Scopus®, Web of Science® e Biblioteca Cochrane®, com limites temporais de 2015 a 2025. Revisores independentes examinarão títulos, resumos e textos completos, com esforços exaustivos para obter textos completos (por exemplo, contactando os autores) antes da exclusão. A extração de dados será realizada utilizando uma ferramenta padronizada; os resultados serão apresentados de forma descritiva. O protocolo está registado no Open Science Framework®.

Resultados: Espera-se que esta revisão identifique a gama de estratégias de implementação utilizadas pelos enfermeiros em hospitais, juntamente com as principais barreiras e facilitadores, para informar o desenvolvimento de um modelo de implementação da prática baseada em evidências específico para hospitais.

Conclusões: Prevê-se que esta revisão forneça uma visão geral das práticas atuais, destaque as lacunas na literatura e ofereça orientação para a conceção de intervenções para promover a prática baseada em evidências na enfermagem hospitalar.

Introduction

Evidence-based practice (EBP) is recognized as the gold standard for delivering high-quality, safe, and cost-effective healthcare by integrating the best available scientific evidence with clinical expertise and patient values.^{1,2} Resulting in better health outcomes and more efficient resource utilization.^{3,4} In complex hospital environments - where specialized units (Intensive Care Units, medical wards) demand rapid, evidence-informed decisions - this integration becomes even more crucial to optimize outcomes and resource utilization.²

EBP is defined as a structured process that combines scientific evidence, the clinical expertise of healthcare professionals, and patient preferences, while also considering the available institutional resources.⁵⁻⁷ However, EBP implementation continues to face significant obstacles, including professional resistance, insufficient resources, and challenges in translating scientific knowledge into routine clinical practice.^{8,9}

Within clinical nursing, EBP not only enhances patient safety and consistency in care delivery but also promotes professional development. It strengthens nurses' critical thinking, leadership, and decision-making skills while reducing practice variability.¹⁰⁻¹² Additionally, EBP is associated with reduced medical errors and patient mortality, contributing to higher standards of care and greater patient satisfaction.¹³

Despite recognition of EBP benefits, many hospital-based nurses report insufficient knowledge, skills, and confidence to apply EBP consistently.¹⁴ Implementing EBP involves a range of complex competencies, such as formulating clinical questions, critically appraising evidence, and integrating findings into patient care. This gap between "what the evidence says" and "what is practiced" remains a persistent challenge.¹⁵

Moreover, EBP and quality improvement are considered core competencies for all healthcare professionals - particularly nurses, as they are front-line providers of care. Understanding their current knowledge, attitudes, and skills

in these areas is essential to fostering professional growth and improving healthcare outcomes.¹⁶ Promoting EBP can also contribute to creating healthier work environments and increasing adherence to evidence-based interventions.

Given the growing complexity of healthcare systems and the global demand for high-quality nursing care, the role of nurses in leading the implementation of EBP is increasingly strategic. With competencies in communication, teamwork, education, and evidence translation, nurses are well-positioned to drive sustainable improvements in care delivery.^{17,18}

Nevertheless, significant challenges persist. Institutional barriers - such as lack of organizational support, limited time, and weak integration between academia and practice - continue to hinder EBP adoption.¹⁹ On an individual level, insufficient training, negative attitudes toward research, and resistance to change are frequently cited.²⁰ In the Portuguese context, nursing leaders have acknowledged similar limitations but also identified opportunities to strengthen an organizational culture that supports EBP.²¹

Understanding how EBP is implemented in hospital settings is crucial for developing targeted strategies that support its integration and long-term sustainability. A deeper exploration of these dynamics can inform policies that promote evidence-based care and ultimately improve patient outcomes.

Therefore, this study seeks to answer the following research question: *What are the strategies, barriers, and facilitators for implementing evidence-based practices in hospital nursing care?*

The objective is to map the strategies, barriers, and facilitators for implementing EBP by nurses within hospital settings over the past ten years. By clarifying the current landscape, this work aims to inform and support the development of effective strategies that foster a culture of evidence-based care and enhance the quality and efficiency of nursing interventions.

Methodology

This protocol will be conducted according to the Joanna Briggs Institute (JBI) framework for scoping reviews and reported following PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews) standards. The protocol for the review will be registered prospectively on OSF (doi: 10.17605/OSF.IO/M36AU), ensuring transparency and methodological rigor throughout the process.^{22,23}

Study design

A scoping review is the most appropriate approach, as the aim is to comprehensively map the available evidence on the implementation of EBP by nurses in hospital settings,

identify strategies, barriers, facilitators, and existing gaps in the literature. The methodology follows the JBI framework, which comprises the following stages: definition of the objective and review question, development of inclusion criteria based on the PCC mnemonic (Population, Concept, Context), systematic search strategy, study selection, data extraction, analysis, and presentation of results.²²

Eligibility criteria

Inclusion criteria will be defined according to the PCC structure:

- Population (P): Nurses;
- Concept (C): Implementation of EBP in nursing care;
- Context (C): Hospital settings.

Eligible sources will include primary qualitative, quantitative, and mixed-method studies; systematic reviews; guidelines; and relevant grey literature, published in English, Portuguese, or Spanish between January 1, 2015 and June 30, 2025.

Search strategy

A three-phase search strategy will be employed:

1. initial search will be conducted in MEDLINE® (via PubMed) and CINAHL® to identify keywords and indexing terms;
2. comprehensive search using refined keywords and Boolean operators tailored for each database using the following example for MEDLINE®: ("evidence-based practice"[MeSH Terms] OR "evidence-based practice" OR EBP OR "evidence-based nursing") AND (implement*[Title/Abstract] OR adopt*[Title/Abstract] OR strategi*[Title/Abstract]) AND (nurs*[Title/Abstract]) Limits: 2015–2025; English, Portuguese, Spanish;
3. manual screening of reference lists from included studies to identify additional relevant publications.

Databases searched will include MEDLINE®, CINAHL®, MedicLatina®, Cochrane Library®, Scopus®, and Web of Science®. Gray literature will be searched through OpenGrey® and RCAAP®.

The context filter "hospital" will be applied during full-text screening rather than the initial search to avoid excluding studies in specialized units that do not explicitly mention "hospital". Time limits ensure a focus on contemporary practices.

Study selection

All search results will be imported into Rayyan QCRI®, a web-based tool for systematic reviews. Duplicate entries will be removed, and two independent reviewers will screen

titles and abstracts based on the inclusion criteria. Full-text review will be subsequently conducted. Disagreements will be resolved through discussion or consultation with a third reviewer. A PRISMA-ScR flow diagram will be used to document the selection process.

Data extraction

Data from the selected studies will be extracted using a standardized tool developed by the research team. Extracted elements will include:

- study characteristics (authors, title, publication year, country);
- study design and objectives;
- type and description of EBP strategies implemented;
- barriers and facilitators identified;
- outcomes reported;
- contextual and methodological aspects.

Pilot testing of the extraction tool will be conducted on a subset of studies to ensure reliability and consistency.

Data analysis and presentation

The extracted data will be synthesized descriptively and presented in tabular and narrative formats. The analysis will focus on identifying thematic categories related to implementation strategies, professional and institutional barriers, facilitators, and observed impacts on clinical nursing practice. No formal quality appraisal of the included studies will be conducted, in line with the nature and objectives of scoping reviews.

Conclusion

This protocol outlines a rigorous scoping review that systematically maps evidence-based nursing practice implementation in hospital contexts.

It is expected that the following study will allow us to identify the EBP strategies most used in the hospital context, identify the main challenges, barriers and facilitators, and allow us to structure and create an EBP model applicable in the hospital context.

Furthermore, it provides a foundation for future research by highlighting key gaps in the current body of knowledge.

Ultimately, this review underscores the importance of organizational commitment, interdisciplinary collaboration, and ongoing professional development as essential components in promoting the successful and sustained implementation of evidence-based nursing in hospital environments.

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