



TOOLS FOR ASSESSING WOUND INFECTION: A SCOPING REVIEW PROTOCOL

FERRAMENTAS PARA AVALIAÇÃO DE INFECÇÃO EM FERIDAS: PROTOCOLO DE REVISÃO DE ESCOPO

Daniella Cristina Julio Lima¹
Graciele Oroski Paes¹

ORCID: 0000-0002-5950-3564
ORCID: 0000-0001-8814-5770

¹ Federal University of Rio de Janeiro, Anna Nery School of Nursing, RJ, Brazil

How to cite: Lima DCJ, Paes GO. Tools for assessing wound infection: a scoping review protocol. Online Braz J Nurs. 2025;24(Suppl 1):e20256818. <https://doi.org/10.17665/1676-4285.20256818>

RESUMO

Objetivo: Mapear as ferramentas disponíveis na literatura para avaliação de infecção em feridas. **Método:** O manuscrito seguirá as diretrizes do JBI e os *Preferred Reporting Items for Systematic Reviews and Meta-Analyses – Extension for Scoping Reviews*. Serão pesquisadas as bases de dados PubMed, Scopus, *Cumulative Index to Nursing and Allied Health Literature*, *Wounds International*, *Wounds UK*, *National Institute for Health and Care Excellence* e a Biblioteca Virtual de Saúde, além de literatura cinzenta via Google Scholar. A pergunta de revisão será baseada na estratégia população/conceito/contexto da seguinte forma: “Quais ferramentas estão disponíveis na literatura para avaliar infecção em feridas?” O protocolo abordará critérios de elegibilidade, estratégias de busca e o processo de seleção e extração de dados. Os resultados serão organizados em uma tabela com as principais informações extraídas dos manuscritos. A análise dos dados será baseada na literatura existente e a conclusão será formulada considerando os principais achados e as expectativas dos resultados.

Descritores: Cicatrização; Infecção dos ferimentos; Medição de risco; Técnicas e procedimentos diagnósticos; Enfermagem.

ABSTRACT

Objective: To map the tools available in the literature for assessing wound infection. **Method:** This protocol will follow the JBI guidelines and the *Preferred Reporting Items for Systematic Reviews and Meta-Analyses – Extension for Scoping Reviews (PRISMA-ScR)*. Searches will be conducted in PubMed, Scopus, CINAHL, Wounds International, Wounds UK, National Institute for Health and Care Excellence (NICE), and the Virtual Health Library (BVS), along with grey literature using Google Scholar. The review question will follow the population/concept/context strategy: “What tools are available in literature to assess wound infection?” The protocol will include eligibility criteria, search strategies, and the process for study selection and data extraction. Results will be presented in a table with key information from the included studies. Data analysis will be based on existing literature, and the conclusion will summarize the main findings and expected outcomes.

Descriptors: Wound healing; Wound infection; Risk assessment; Diagnostic techniques and procedures; Nursing.

Editors:

Rosimere Ferreira Santana (ORCID: 0000-0002-4593-3715)
Geilsa Soraia Cavalcanti Valente (ORCID: 0000-0003-4488-4912)
Maithê de Carvalho e Lemos Goulart (ORCID: 0000-0002-9726-5229)

Publisher:

Escola de Enfermagem Aurora de Afonso Costa – UFF
Rua Dr. Celestino, 74 – Centro, CEP: 24020-091 – Niterói, RJ, Brazil
Journal email: objn.cme@id.uff.br

Corresponding author:

Daniella Cristina Julio Lima
Email: daniellacristina.julio@yahoo.com.br

INTRODUCTION

Wound infections are a major clinical challenge because they can delay healing and increase the risk of serious complications such as sepsis and death. When the infection worsens, treatment may become more complex and prolonged, leading to higher costs and reduced quality of life for patients⁽¹⁻²⁾.

Early identification and effective management of infections are essential to prevent progression and reduce complications. Accurate wound assessment is key to optimizing treatment and improving clinical outcomes. Implementing effective assessment strategies is a critical step in wound care^(1, 3-4).

Due to the variety of wound etiologies, several tools have been developed to assess wound infections. These instruments support infection identification and clinical decision-making. However, they differ in effectiveness, applicability, and scientific foundation. Therefore, it is essential to critically assess each method and select the most appropriate one for the clinical context, ensuring its validity and effectiveness in managing infected wounds⁽⁵⁻⁷⁾.

Although there are various tools for different types of wounds and clinical settings, literature still lacks a comprehensive overview of the available tools for assessing wound infections. Infections increase hospital stay, raise treatment costs, heighten the risk of serious complications, and contribute to mortality — which highlights the clinical and care-related importance of this topic⁽¹⁻³⁾.

By mapping and critically analyzing the available tools, this scoping review aims to fill this gap, support clinical practice, and guide future research⁽⁷⁾. The objective of the study is to identify the tools described in the literature for assessing wound infection. This review is justified by the lack of a broad and systematic overview of these instruments, which highlights the need for this review.

METHOD

This review will follow the JBI guidelines for scoping reviews and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses – Extension for Scoping Reviews (PRISMA-ScR) checklist for methodological rigor, clarity, and organization⁽⁸⁾.

The protocol was registered on the Open Science Framework (OSF) under DOI 10.17605/OSF.IO/57C2E. Before drafting the protocol, a preliminary search was conducted on tools for assessing wound infection. No scoping reviews, systematic reviews, or registered studies were found on this topic in PROSPERO, OSF, or figshare.

Review question

The review question will follow the population/concept/context (PCC) strategy. The population refers to individuals with wounds; the concept refers to tools for assessing wound infection; and the context focuses on infected wounds.

Thus, the review question is: What tools are available in literature to assess wound infection?

No specific setting will be defined in order to include as many tools as possible described in the global literature,

regardless of the area of application.

Herein, “tools” include any constructs, technologies, or instruments designed to assess wound infections, such as checklists, classification systems, forms, scales, protocols, devices, and equipment.

Eligibility criteria

All full-text manuscripts that present tools for assessing wound infection will be included. No specific etiology will be defined in order to broaden the scope of the results.

The review will consider wounds that heal by secondary intention, including acute wounds (e.g., burns, surgical wounds, and lacerations) and chronic wounds (e.g., pressure injuries, vascular ulcers, and diabetic ulcers). Tumor wounds will be excluded due to their specific pathogenesis, which differs from other types of lesions.

To ensure the breadth and robustness of this scoping review, no restrictions will be applied regarding publication date or language. The selected databases include PubMed, Scopus, and CINAHL, along with wound care-specific sources such as Wounds International, Wounds UK, and NICE. The Virtual Health Library (BVS) will also be used due to its wide coverage of health and nursing publications. This selection ensures a broad and diverse search for studies.

The review will also include grey literature as recommended by JBI. Google Scholar will be used for this purpose, expanding the search and allowing the inclusion of relevant studies not indexed in traditional databases.

Search strategies

Searches will be developed and conducted in collaboration with a librarian, using combinations tailored to the specific requirements of each database. Descriptors will be combined using the Boolean operators “AND” and “OR”. No filters will be applied in order to include as many studies as possible (Figure 1)

Study selection

After defining the search strategies, searches will be carried out in the selected databases and repositories. The results will be imported into Mendeley, where duplicate records will be identified and removed.

Two reviewers will then screen titles and abstracts based on the eligibility criteria. Studies that do not meet the criteria will be excluded, while potentially relevant ones will be selected for full-text review.

Data extraction

Data extraction will take place after the full-text selection and analysis of the included articles. The entire process — including search, selection, eligibility, and inclusion — will be conducted independently by two reviewers. In case of disagreement, a third reviewer will be consulted to make the final decision.

Data will be presented in a flowchart following the PRISMA model recommended by JBI.

Search strategy	Source
(cicatrização) OR (cicatrização de feridas) OR (cicatrização de ferimentos) OR (wound healing) AND (estudo de avaliação) OR (estudos de avaliação) OR (evaluation study) OR (evaluation studies) OR (avaliação em enfermagem) OR (protocolos de enfermagem) OR (nursing assessment) OR (nursing protocols) AND (tool) OR (instruments) OR (ferramentas) OR (instrumentos) AND (infecção dos ferimentos) OR (infecção das feridas) OR (infecção da ferida) OR (infecção de feridas) OR (wound infection)	BVS
wound healing AND wound infection AND tool	CINAHL
Wound healing AND evaluation study OR evaluation studies OR nursing assessment OR nursing protocols AND wound infection AND tool	PubMed
wound healing AND wound infection AND tool AND nursing	Scopus
Wound infection, tool, wound healing, guidelines, consensus	Wounds International
Wound infection, tool, wound healing, guidelines, consensus	Wounds UK
wound healing AND wound infection AND tool AND nursing	NICE
"wound infection" AND "wound healing" AND "consensus document" OR "tools" AND "clinical practice"	Google Scholar

Figure 1 - Search strategy. Rio de Janeiro, RJ, Brazil, 2024

Data presentation

Data extracted from the included manuscripts will be summarized narratively in line with the objectives of the scoping review. Key data will be organized in a table with the following details: year, title, source, type of tool, wound etiology (acute or chronic), country of origin, and infection-related features assessed.

The protocol is expected to be completed by February 2025.

Data analysis

The analysis will be descriptive, focusing on the characteristics of the tools used to assess wound infection. The information will be organized into tables and narrative descriptions to allow comparison between studies and identify knowledge gaps.

REFERENCES

1. Álef LDAA, Matias LDM, Freitas JMS, Costa MML, Andrade LL. Predictive factors for worsening chronic wounds [Internet]. *Rev Rene*. 2020 [cited 2024 Nov 21];21:e43615. Available from: https://www.revenf.bvs.br/scielo.php?script=sci_arttext&pid=S1517-38522020000100334&lng=pt&nrm=iso&tlng=en
2. Ratliff CR, Rovnyak V. Impact of complex wounds on health-related quality of life: a descriptive study. *J Wound Ostomy Continence Nurs*. 2021;48(6):504-509. <https://doi.org/10.1097/WON.00000000000000824>
3. Li S, Renick P, Senkowsky J, Nair A, Tang L. Diagnostics for wound infections. *Adv Wound Care (New Rochelle)*. 2021;10(6):317-327. <https://doi.org/10.1089/wound.2019.1103>
4. Azevedo MM, Lisboa C, Cobrado L, Pina-Vaz C, Rodrigues A. Hard-to-heal wounds, biofilm and wound healing: an intricate interrelationship. *Br J Nurs*. 2020;29(5):S6-S13. <https://doi.org/10.12968/bjon.2020.29.5.S6>
5. Nagle SM, Stevens KA, Wilbraham SC. Wound assessment. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jun 26 [cited 2024 Nov 21]. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK482198/>
6. Almeida NC, Borges MMS, Marcelino GR, Rocha PRS. The use of tools in the assessment of chronic lower limb wounds: an integrative review. *Rev enferm. UFPE on line*. 2023;17(1):e254453. <https://doi.org/10.5205/1981-8963.2023.254453>
7. International Wound Infection Institute. Wound infection in clinical practice: principles of best practice [Internet]. London: Wounds International; 2022 [cited 2024 Nov 21]. Available from: <https://woundsinternational.com/consensus-documents/wound-infection-in-clinical-practice-principles-of-best-practice/>
8. Peters MDJ, Godfrey C, McInerney P, Munn Z, Tricco AC, Khalil H. Scoping Reviews (2020 version). In: Aromataris E, Lockwood C, Porritt K, Pilla B, Jordan Z, editors. *JBIM manual for evidence synthesis*. Adelaide: JBI; 2024. <https://doi.org/10.46658/JBIMES-24-09>

The analysis will cover aspects such as clinical applicability, recent developments on the topic, year of creation, country of origin, features assessed, and types of tools (traditional, technological, or other). This approach will help identify the most used tools in clinical practice, providing a foundation for future research and improvements in care delivery.

Ethics and dissemination

This study does not require approval from a research ethics committee. The results will be published in a peer-reviewed open-access journal.

CONFLICT OF INTERESTS

The authors have declared that there is no conflict of interests.

AUTHORSHIP CONTRIBUTIONS

Project design: Lima DCJ.

Data collection: Lima DCJ.

Data analysis and interpretation: Lima DCJ, Paes GO.

Writing and/or critical review of the intellectual content: Lima DCJ, Paes GO.

Final approval of the version to be published: Lima DCJ, Paes GO.

Responsibility for the text in ensuring the accuracy and completeness of any part of the paper: Lima DCJ, Paes GO.



Copyright © 2025 Online Brazilian Journal of Nursing

This is an Open Access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.