PROTOCOL

Research terminology for chronic wound research: a scoping review protocol

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Abstract

Aim This scoping review aims to identify and map current primary studies relating to key terminology, definitions and measurement methods used in chronic wound research. The review of chronic wound research terminology from the studies will identify areas of consistency and inconsistency in definitions and measurement methods of key terms in chronic wound research.

Method This review will follow the Joanna Briggs Institute (JBI) methodology and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses for Scoping Reviews guidelines. The electronic databases: MEDLINE, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Embase, Cochrane Library, and the JBI Library will be searched using an agreed search strategy. Unpublished and grey literature sources will also be searched. Data from studies included will be extracted using a standardised form and the findings will be narratively synthesised.

Discussion This review will be the first stage of developing consensus on research terms by providing a detailed understanding of chronic wound research terminology, addressing inconsistencies in definitions and measures. By mapping range, use, and definitions of key terms, the findings aim to provide information from which to standardise terminology, enhance communication, and improve both research and clinical outcomes in wound care.

Keywords chronic wounds, research terminology, scoping review, wound care.

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Introduction

Health professionals rely on research evidence to guide their clinical practice to achieve optimal outcomes in the maintenance of health. Clinical practice guidelines are developed from a review and evaluation of the best research evidence available, ideally from meta-analyses of multiple high-quality studies within systematic reviews. In turn, the process of systematic reviews and meta-analyses is facilitated by research studies which use consistent outcome measures and standard terminology, which allows comparison of outcomes. The use of inconsistent terminology and outcome measures results in the inability to compare outcomes and thus a lack of conclusive evidence on a treatment or intervention.[1]

These issues are pertinent to chronic wound research. The results of a scoping review on methods for chronic wound research performed by Parker et al[2] in 2019 identified that there was an urgent need for standardised vocabulary within chronic wound research, well-defined outcome measures and methods of measurement, to allow comparison of results from studies. A primary outcome of wound research, for example, is whether the wound is healed or not. However, a 'healed wound' does not have a consistent definition, nor is it measured in a consistent way — sometimes using time to healing, various wound severity or healing progression tools, or simply "healed" or not.[3]

Limited research has been undertaken on outcome measures for some specific wound types. Consensus studies have

developed core outcome sets for venous leg ulcer research[4] and pressure injury prevention research.[1] In addition, a review has discussed methodology issues which note the need for consistent outcome definitions,[5] while another explored which outcome measures are most frequently used in pressure injury research.[3] Issues noted in these studies include inconsistent definitions and measures of wound healing,[3] identification of outcome measure instruments,[1] and significant inconsistency in definitions of pressure injury prevention outcomes.[1]

The robustness, usefulness and value of wound care research will be greatly enhanced if results of studies/trials are published using standard agreed terminology. The outcomes of future wound research will then have more complete, consistent and uniform elements, allowing for more meaningful pooling of studies and therefore higher quality evidence from systematic review and meta-analyses, which ultimately will provide better clinical care and improved patient outcomes.[2]

Knowledge of current definitions and understandings of chronic wound research terminology is needed prior to any consensus on standardised terminology for chronic wound research. Scoping reviews aim to identify and synthesise the range of evidence on a particular issue or question.[6] The aim of this protocol is to provide clear direction for a scoping review which aims to identify information on the range, use, and definitions of chronic wound research terminology.

The objectives to guide the conduct of the scoping review are:

(i) To identify studies reporting the key terminology, definitions, and measurement methods used in chronic wound research across diverse care settings and regions.

(ii) To describe the information sources and contexts of the identified studies that discuss the key terms, definitions, and measurement methods within chronic wound research.

(iii) To extract and synthesise data from the included studies to map the range, use, and definitions of key terms, as well as the measurement methods used in chronic wound research.

(iv) To identify areas of consistency and inconsistency in the definitions and measurement methods of key terms in chronic wound research.

Methods

A scoping review of the literature will be performed to identify current evidence on chronic wound research terminology from the literature, including original research, consensus documents, guideline recommendations, or standards currently in use.

This scoping review protocol is reported in accordance with the reporting guidance provided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist[7] and will be conducted using the Joanna Briggs Institute (JBI) scoping review methodology.[8]

Protocol and registration

This scoping review protocol has been prospectively registered in the Open Science Framework (https://osf.io/es7x9)

Eligibility criteria

The JBI methodology[8] advocates the use of the Population, Concept, Context (PCC) Framework to systematically define the elements under investigation and establish eligibility criteria for the study:

Population

The target population for this scoping review focuses on research studies and other documents addressing people with chronic wounds, including the assessment, management, or prevention of chronic wounds that meets the inclusion/exclusion criteria.

Concept

The topic of interest for this scoping review is chronic wound research terminology. This includes key terms, definitions, and measures related to chronic wounds as detailed in data extraction items noted below.

Context

The context for this review is broad and includes any care setting where chronic wounds are assessed, managed, or prevented, such as primary care facilities, hospitals, community settings, or other public or private care environments, except for science laboratory studies.

Search strategy

Information sources

To ensure a comprehensive identification of literature relevant to this review, the search strategy was developed in collaboration with a health sciences librarian. The PCC Framework was used to guide the selection of relevant items for the search. Initial keywords were identified based on expert knowledge of the field. A preliminary search was conducted in MEDLINE (via EBSCO), CINAHL (via EBSCO), and Embase to retrieve relevant terms from titles, abstracts, and the thesaurus (such as MeSH terms). The systematic search will target literature published between 2015 and 2025 to ensure current and relevant outcomes, due to a large number of changes in terminology occurring in the wound care space, and will be conducted across the following electronic databases: MEDLINE (EBSCO), CINAHL (EBSCO), Embase, Cochrane Library, and the JBI Library. Boolean operators (AND, OR), truncation, wildcards, quotation marks, and proximity searches will be applied to adapt the search strategy for each database (see Table 1 for the detailed MEDLINE search strategy).

The same methodology will be employed to search for unpublished and grey literature sources. These include clinical trial registries (ANZCTR, ISRCTN, ClinicalTrials.gov), Nursing and Allied Health Premium (ProQuest), Global Index Medicus (WHO), OpenGrey, and Grey Literature Report. Professional organisations' websites will also be searched, including those from Wounds Australia, Wounds UK, Wounds International, Wounds Canada, the European Wound Management Association, the International Wound Infection Institute, the Wound Healing Society, and the World Union of Wound Healing Societies.

To ensure completeness, study protocols will be replaced by completed studies where available. Both English and non-English publications will be considered, with no language restrictions imposed, with the reviewer team having the contacts to achieve this.

Types of sources

All study types related to chronic wound research terminology, such as qualitative, quantitative, and mixed-methods studies, as well as systematic reviews, clincal trial protocols and registration, consensus documents, guidelines, or standards will be included. Studies involving human participants (of any age) who have or are at risk of a chronic wound, that address assessment, management and/or prevention of a chronic wound, without geographic limitation, will be included. Data addressing the range, use, and definitions of chronic wound terminology, along with methodologies and outcomes, will be reviewed. Grey literature, including reports, clinical practice guidelines, government documents, and publications from professional organisations (such as Wounds Australia, Wounds UK, Wounds International), will also be considered. Relevant data will be identified through searches of clinical trial registries (ANZCTR, ISRCTN, ClinicalTrials.gov) and grey literature repositories (for example the Global Index Medicus, OpenGrey). Additionally, the citation lists of all selected studies will be reviewed to identify further relevant articles.

However, case series, case studies, case reports, conference abstracts, or conference proceedings, commentaries, editorials, opinion papers, all reviews except systematic reviews, thesis/dissertations, quality improvement studies and studies unrelated to chronic wound research terminology will be excluded.

The search strategies will follow the PRESS[9] guidelines, include MeSH terms and they will be adapted to the structure of each database or site. Pilot testing will involve refining the strategies.

Key search terms will include:

1. chronic wound* OR hard-to-heal OR pressure injur* OR bed sore OR (leg or [lower limb] or venous or varicose or stasis or arterial or vascular or mixed or pressure or decubitus) ulcer* OR 'foot ulcer' OR 'diabetes-related ulcer' OR 'diabetic ulcer (in title, abstract, keywords)

2. defin* OR method* OR outcome OR measure* OR terminology (all text)

3. heal* OR non-heal* OR wound severity OR percent area reduction OR ulcer area reduction OR ulcer size reduction OR change in (ulcer or wound) (size or area or volume) OR recur* OR ulcer-free survival (in title, abstract, keywords)

4. (reference or index) ulcer OR (standard or usual or routine) care OR adverse event* (all text)

5. quality of life OR economic OR cost* (in title, abstract, keywords)

The search terms will be combined as #1 AND #2 AND (#3 OR #4 OR #5) for CINAHL, Medline, Cochrane and Embase. It will be refined for each database. For JBI and clinical trail registries, the search terms will be combined as #1 AND (#3 OR #5)

Table 1. Medline search strategy

Search ID	Search terms	Date searched: 31/01/2025
#1	"chronic wound*" OR "hard-to-heal" OR "pressure injury*" OR "bed sore" OR "leg ulcer" OR "lower limb ulcer" OR "venous ulcer" OR "varicose ulcer" OR "stasis ulcer" OR "arterial ulcer" OR "vascular ulcer" OR "mixed ulcer" OR "pressure ulcer" OR "decubitus ulcer" OR "diabetic ulcer" OR "diabetic-related ulcer"	in title, abstract, keywords
#2	defin* OR outcome OR measure* OR terminology	all text
#3	heal* OR wound severity OR percent area reduction OR ulcer area reduction OR ulcer size reduction OR changed (ulcer or wound) (size or area or volume) OR recur* OR ulcer-free survival	in title, abstract, keywords
#4	(reference or index) ulcer OR (standard or usual or routine) care	all text
#5	quality of life OR economic OR cost*	in title, abstract, keywords

The search terms were combined as #1 AND #2 AND (#3 OR #4 OR #5) in MEDLINE.

Remove method* from string #2 and adverse event* from string 4 in MEDLINE and Embase

Limiters: published date 20150101–20250131, human, research articles.

Study/source of evidence selection

All results from the searches will be imported into EndNote X20 and Covidence® (Veritas Health Innovation, Melbourne, Australia), a software recommended by Cochrane and the JBI for its efficiency in data selection and extraction. Covidence® will be used to remove duplicates and streamline the review process.

Two levels of screening will be applied to identify articles for inclusion: (i) title and abstract screening and (ii) full-text screening. Results will be screened for eligibility according to inclusion and exclusion criteria independently by two of the author team. Conflicts will be reviewed by a third researcher with expertise in the subject matter.

Full texts of the included articles will be used for data extraction, and studies that do not meet the inclusion criteria will be excluded. Reasons for exclusion will be documented and presented in a PRISMA-ScR flow diagram. The full process, including the search results, screening, and data extraction, will be systematically documented in the scoping review and visualised using the PRISMA-ScR flowchart.

Data charting process

Data charting forms will be created in Covidence. Data will be independently extracted by one researcher and checked against the original articles by a second researcher to ensure the validity of extracted information. Data extracted from the documents will include: (i) study characteristics — authors, year of publication, country of the first author of the published paper OR country/ies where the study was conducted, (ii) type of article: based on research design of the paper, (iii) aims, (iv) type/s of chronic wounds, (v) participant groups, definitions of key terminology, measuring methods or tools used for key terminology (such as healed, recurrence, QOL).

Data extraction items

Key terms will include definitions and/or methods of measuring — chronic wounds, hard-to-heal wounds, ulcers, pressure injuries/bed sores, healing, ulcer size reduction/percent reduction, absolute change in wound size, healed, time to healing, wound severity/stage, wound recurrence, ulcer-free survival, reference ulcer, wound-related adverse events, wound-related quality of life (QOL), standard/basic/usual care and cost-effectiveness wound research terminology.

Collating, summarising and reporting results

A narrative report will be produced from a synthesis of the extracted data around the following results:

- definitions in use in research studies of chronic or hard-to-heal wounds: ulcer, wound severity, healed, healing, progress in healing, wound recurrence, quality of life, standard/usual care, costs, cost-effectiveness
- methods and/or measures of key terminology in chronic wound research, as appropriate
- recommendations for chronic wound research terminology from professional guidelines or consensus documents

These results will be described, summarised and synthesised in relation to the scoping review objectives.

Discussion

This scoping review aims to address the recommendations from Parker et al's 2019[5] study that identified gaps in the literature and produced recommendations to support future wound management research. This included the need for language to be standardised in a way that allows for comparison of studies. This was highlighted by varying terminology. The terms chronic, delayed healing, non-healing, standard care, basic care and conventional care were all examples of varying terminology used interchangeably across studies; however, they are not always used with identical meanings.

This scoping review will be the first stage of developing consensus of terms by providing a detailed understanding of chronic wound research terminology in use, addressing inconsistencies in definitions and measures. By mapping the range, use, and definitions of key terms, the findings aim to provide background information to standardise terminology, enhance communication, and improve both research and clinical outcomes in wound care.

The results will guide future research, support the development of guidelines, and inform educational and policy initiatives. By identifying critical gaps, this review will contribute to a unified approach to chronic wound terminology, promoting better collaboration among researchers, clinicians, and policymakers. In addition, this scoping review lays the foundation for standardised terminology in chronic wound care, promoting clarity and consistency that benefits both practice and research.

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Conflict of interest

The authors do not declare any conflict of interest related to this study.

Ethics statement

Protocols for scoping reviews do not involve primary data collection or direct interaction with human subjects.

Therefore, ethical approval was not required. The review will adhere to guidelines for conducting scoping reviews.

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Author contribution

The authors confirm contribution to the paper as follows: study conception: CP, KF and SP. All authors contributed to study design, protocol submission and draft manuscript preparation. All authors reviewed this protocol and approved the final version of the manuscript.

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