

# Distance Education in Teaching About Chronic Wounds: Scoping Review Protocol

Educação à Distância no Ensino Sobre Feridas Crônicas: Protocolo de Revisão de Escopo

Educación a Distancia en la Enseñanza Sobre Heridas Crónicas: Protocolo de Revisión de Alcance

## RESUMO

**Objetivo:** Construir um protocolo de revisão de escopo para mapear as evidências científicas disponíveis sobre o uso da Educação a Distância (EaD) como estratégia de capacitação de profissionais de saúde no cuidado com feridas crônicas, com ênfase na qualidade, inclusão e acessibilidade.

**Método:** Protocolo de revisão de escopo desenvolvido conforme o JBI Manual for Evidence Synthesis e registrado na Open Science Framework.

A questão de pesquisa foi formulada com base no mnemônico População: Profissionais de saúde; Conceito: Educação a Distância para feridas crônicas; **Contexto:** Qualidade, acessibilidade e inclusão digital. As buscas serão realizadas nas plataformas: Scientific Electronic Library Online (SciELO), Literatura Latino-Americana e do Caribe em Ciências da Saúde (LILACS), Base de Dados de Enfermagem (BDENF), PubMed, Education Resources Information Center (ERIC) e Google Scholar. Após a exclusão das duplicatas com o uso do software EndNote, os estudos serão triados e selecionados por meio do Rayyan, obedecendo aos critérios de elegibilidade. A revisão será reportada conforme o Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR). Espera-se reunir e descrever as principais evidências científicas sobre EaD em feridas crônicas, destacando boas práticas e lacunas associadas à formação acessível e inclusiva.

**DESCRIPTORIOS:** Feridas crônicas; Educação a Distância; Capacitação profissional; Inclusão digital; Acessibilidade.

## ABSTRACT

**Objective:** To map the available scientific evidence on the use of Distance Education (DE) as a training strategy for healthcare professionals in the care of chronic wounds, with an emphasis on quality, inclusion, and accessibility. **Method:** Scoping review protocol developed according to the JBI Manual for Evidence Synthesis and registered in the Open Science Framework. The research question was formulated based on the mnemonic Population: healthcare professionals; **Concept:** Distance Education for chronic wounds; Context: quality, accessibility, and digital inclusion. Searches will be conducted in the following platforms: Scientific Electronic Library Online (SciELO), Latin American and Caribbean Literature in Health Sciences (LILACS), Nursing Database (BDENF), PubMed, Education Resources Information Center (ERIC), and Google Scholar. After removing duplicates using EndNote software, studies will be screened and selected through Rayyan, following eligibility criteria. The review will be reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR). It is expected to gather and describe the main scientific evidence on DE in chronic wounds, highlighting good practices and gaps related to accessible and inclusive training.

**DESCRIPTORS:** Chronic wounds; Distance education; Professional training; Digital inclusion; Accessibility.

## RESUMEN

**Objetivo:** Mapear las evidencias científicas disponibles sobre el uso de la Educación a Distancia (EaD) como estrategia de capacitación de profesionales de la salud en el cuidado de heridas crónicas, con énfasis en la calidad, la inclusión y la accesibilidad. **Método:** Protocolo de revisión de alcance desarrollado conforme al Manual del JBI para la Síntesis de Evidencia y registrado en el Open Science Framework. La pregunta de investigación fue formulada con base en el mnemónico Población: profesionales de la salud; Concepto: Educación a Distancia para heridas crónicas; **Contexto:** calidad, accesibilidad e inclusión digital. Las búsquedas se realizarán en las siguientes plataformas: Scientific Electronic Library Online (SciELO), Literatura Latinoamericana y del Caribe en Ciencias de la Salud (LILACS), Base de Datos de Enfermería (BDENF), PubMed, Education Resources Information Center (ERIC) y Google Scholar. Tras la eliminación de duplicados mediante el software EndNote, los estudios serán seleccionados mediante Rayyan, respetando los criterios de elegibilidad. La revisión será reportada conforme a las directrices PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews). Se espera reunir y describir las principales evidencias científicas sobre EaD en heridas crónicas, destacando buenas prácticas y brechas relacionadas con una formación accesible e inclusiva.

**DESCRIPTORES:** Heridas crónicas; Educación a distancia; Capacitación profesional; Inclusión digital; Accesibilidad.

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## INTRODUCTION

Chronic wounds pose a significant challenge to healthcare systems worldwide, especially in the context of ongoing care for patients with chronic diseases, the elderly, bedridden individuals, or those with conditions that impair wound healing. These wounds re-

quire specialized care, evidence-based protocols, and multidisciplinary interventions for their prevention and effective treatment<sup>(1)</sup>. However, many healthcare professionals still have gaps in their technical and practical knowledge regarding the proper management of these wounds, which compromises the quality of care and patient safety<sup>(2)</sup>.

Given the growing demand for professional training, coupled with time constraints, travel difficulties, and unequal access to continuing education, Distance Learning (DL) has established itself as a strategic and

democratic alternative for developing competencies in the health field. The use of digital resources, interactive platforms, and active methodologies allows professionals to update their knowledge in a flexible, accessible manner that aligns with their work reality<sup>(3)</sup>.

However, for distance learning to fulfill its educational role effectively, it is necessary to consider the principles of inclusion and accessibility in all its aspects, from instructional design to the language used and the methods of assessment. Healthcare professionals living in remote regions, with visual or hearing impairments, or limited internet access, must also be provided with educational materials designed from an inclusive and universal perspective<sup>(4)</sup>. In this regard, it is urgent to invest in pedagogical approaches that combine technical excellence, accessible language, and respect for learner diversity.

The ongoing professional development of healthcare professionals is a key

factor in improving the quality of care provided, especially in highly complex areas such as the management of chronic wounds. However, there remains a disconnect between advances in scientific knowledge and the effective incorporation of this evidence into the daily practice of healthcare services, particularly in primary care, where inadequate management of wounds can lead to worsening clinical conditions, avoidable hospitalizations, and increased public costs<sup>(1-2)</sup>.

In this context, Distance Education (DE) presents itself as a viable and strategic alternative for promoting democratic access to knowledge. The flexibility of schedules, expanded geographical reach, and the possibility of integrating multimedia resources make DLE a powerful modality for professional training. However, it is necessary to ensure that these initiatives are grounded in principles of accessibility and inclusion, so as to serve professionals with different levels of digital literacy, physical or sensory disabilities, and unequal socio-technical conditions<sup>(4)</sup>.

The objective of this article was to develop a scoping review protocol to map and synthesize the evidence available in the literature on the use of Distance Education (DE) as a strategy for training healthcare professionals in the care of chronic wounds, with a focus on the quality, inclusion, and accessibility of educational resources.

## METHOD

This is a scoping review protocol based on the Joanna Briggs Institute (JBI)<sup>(5)</sup> and reported in accordance with the

Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR)<sup>(6)</sup>. The protocol will be registered on the Open Science Framework (OSF) platform.

## Review Question

What is the available evidence regarding the use of distance education in the training of healthcare professionals on chronic wounds, with a focus on the quality, accessibility, and inclusivity of educational resources?

Formulated based on the PCC mnemonic:

- **Population (P):** Healthcare professionals
- **Concept (C):** Distance learning on chronic wounds
- **Context (C):** Quality, accessibility, and digital inclusion in education

## Eligibility criteria

The eligibility criteria were established based on the alignment between the review's objective and the components of the PCC mnemonic (Population, Concept, and Context). These criteria aim to ensure that the included studies specifically address the application of Distance Education (DE) as a tool for training healthcare professionals in the care of chronic wounds, with an emphasis on the aspects of quality, accessibility, and inclusion of educational resources. Inclusion and exclusion parameters were defined for each component, as presented in the table below:

**Table 1 – Eligibility criteria for data collection, João Pessoa, Brazil, 2024.**

PCC	Inclusion Criteria	Exclusion Criteria
Population	Studies addressing healthcare professionals (nurses, physicians, nursing technicians, community health workers) involved in training on chronic wounds at any level of healthcare.	Studies focused exclusively on undergraduate students or lay audiences with no connection to professional healthcare practice.
Concept	Publications describing distance learning courses, programs, strategies, or technologies used in professional training on chronic wound care.	Studies that deal exclusively with in-person courses or acute wounds, or that do not address training or educational aspects.

Context	Studies that discuss pedagogical quality, digital accessibility, or social inclusion in the training processes offered through distance learning.	Studies that do not present a critical or analytical approach to the pedagogical resources used or that do not include the themes of accessibility and inclusion.
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Source: Research data, 2025.

## Types of Evidence Sources

This scoping review will include a wide range of evidence sources, with the aim of comprehensively mapping the scientific literature on the use of distance education (DE) as a training strategy in the care of chronic wounds. Given the exploratory nature of this scoping review, studies with different methodological designs will be included, provided they present empirical data that contribute to understanding the phenomenon under investigation. The diversity of sources aims to encompass different contexts, pedagogical approaches, and perspectives on accessibility and inclusion.

Qualitative, quantitative, and mixed-methods studies will be included, as well as observational, descriptive, analytical, cohort, quasi-experimental, evaluative studies, and methodologically grounded experience reports. Studies focusing on the development or evaluation of digital educational technologies will also be considered, provided they are applied to the teaching of chronic wounds to healthcare professionals.

In addition to articles published in peer-reviewed journals, the review may include gray literature, such as dissertations, theses, technical documents, institutional reports, and other open-access publications, provided they meet the defined eligibility criteria. The studies must be available in full, published between 2013 and 2024, in Portuguese, English, or Spanish.

Theoretical essays, opinion pieces, editorials, and narrative reviews that do not present systematized empirical data will be excluded. The exclusion of these sources aims to ensure that the evidence identified is grounded in concrete data and methodologically structured analyses, providing insights applicable to educational practice and the formulation of professional health training policies.

## Search Strategy

The search strategy will be conducted comprehensively, with the aim of identifying relevant studies addressing the use of Distance Education (DE) in the training of health professionals in the care of chronic wounds, with a

focus on quality, inclusion, and accessibility. The search will be conducted in the following electronic databases: Scientific Electronic Library Online (SciELO), Latin American and Caribbean Health Sciences Literature (LILACS), Nursing Database (BDENF), PubMed, Education Resources Information Center (ERIC), and Google Scholar.

The inclusion of the Google Scholar database aims to expand access to gray literature and studies not indexed in traditional journals. Searches will be conducted in September 2025, using controlled and uncontrolled descriptors combined with Boolean operators (AND/OR), considering publications in Portuguese, English, and Spanish that are available in full and published between 2013 and 2024.

The search strategy will be adjusted according to the structure and indexing resources of each database. The main descriptors used will be: "chronic wounds," "distance education," "professional training," "health education," "digital inclusion," and "accessibility."

**Table 2 – Selected search strategy, João Pessoa; Brazil, 2024.**

Database	Search strategy
SciELO	All fields: ("chronic wounds" AND "distance learning") OR ("vocational training" AND "accessibility") OR ("health education" AND "digital inclusion")
LILACS	DeCS terms: ("chronic wounds" AND "distance education") AND ("health training" OR "distance learning") AND ("digital inclusion" OR "accessibility")
BDENF	Title, abstract, and subject: ("chronic wounds" AND "distance education") AND ("professional training" AND "accessibility" OR "digital inclusion")
PubMed	MeSH terms: ("Chronic Wounds"[MeSH] AND "Distance Education"[MeSH]) AND ("Health Education"[MeSH] OR "Professional Training") AND ("Accessibility"[MeSH] OR "Digital Inclusion")
ERIC	All fields: ("distance education" AND "chronic wounds") OR ("online learning" AND "accessibility") OR ("health professionals" AND "inclusive education")
Google Scholar	All fields: ("chronic wounds" AND "distance education" AND "accessibility") OR ("online training" AND "health professionals" AND "inclusion")

Source: Research data, 2025.

### Selection of evidence sources

The selection of evidence sources will be conducted systematically and rigorously to ensure the transparency and reliability of the study screening process. This step will be carried out in three distinct phases: reading of titles, analysis of abstracts, and, finally, full-text reading of potentially eligible studies. The selection will be based on previously established eligibility criteria, which are aligned with the PCC strategy and the objectives of this scoping review protocol.

Initially, all references retrieved from the databases will be organized using EndNote software, which will automatically remove duplicate records. Next, the unique records will be imported into Rayyan, an online platform designed to support systematic reviews, which enables collaborative and independent screening by the reviewers.

Two researchers will independently screen the studies, first analyzing the titles and abstracts according to the inclusion and exclusion criteria. Studies deemed potentially relevant will be selected for full-text review. In the event of disagreement among the reviewers regarding the inclusion or exclusion of a study, a discussion will be held to reach consensus. If the impasse persists,

a third reviewer will be consulted for a final decision.

During screening, studies will be classified as: “include,” “exclude,” or “undecided,” with all records accompanied by a justification for the decision made. This approach allows for traceability and reproducibility of the selection process. At the end of this stage, a flow diagram will be prepared in the PRISMA-ScR<sup>(7)</sup> format, which will illustrate the number of studies identified, screened, fully assessed, and included in the final synthesis, as well as the reasons for exclusion at each stage.

This methodological process aims to ensure that the selected evidence accurately represents the scope under investigation, providing a solid foundation for the analysis and mapping of knowledge regarding distance learning applied to chronic wound care training, with a focus on accessibility and inclusion.

### Data extraction

The data extraction phase will be conducted in a systematic manner with the aim of gathering, organizing, and categorizing the relevant information extracted from the studies included in the review. To this end, a standardized data collection instrument, developed specifically for this protocol, will be

used to record the essential characteristics of each study and its contributions to the research’s thematic areas.

The instrument will include fields for: study identification (authors, year of publication, country of origin), type of methodological design, target population, type of distance learning used (platforms, methodologies, resources), aspects related to accessibility and digital inclusion, study objectives, main results, and identified gaps. Data collection will be conducted independently by two reviewers. After the initial data extraction, the data will be compared between the reviewers to verify consistency. In case of discrepancies, these will be discussed until consensus is reached, and a third reviewer may be consulted if necessary.

The data will be organized in an electronic database, and the results will be presented through charts, tables, and analytical descriptions. The extracted data will also be categorized according to the emerging themes of the analysis, in order to facilitate the synthesis and mapping of knowledge regarding the use of distance learning in chronic wound care training, considering the principles of pedagogical quality, social inclusion, and technological accessibility.

**Table 3 – Data collection instrument, João Pessoa, Brazil, 2024.**

Element	Description
Study identification	Authors, year of publication, article title, country of origin
Study type	Methodological design (qualitative, quantitative, mixed methods, review, etc.)
Population	Healthcare professionals involved, level of practice, institutional context
Distance learning strategy	Type of educational tool or technology used, methodology applied
Accessibility and inclusion	Accessibility features adopted, digital or social inclusion strategies
Objectives	Purpose of the educational intervention and scope of the training
Key results	Results, impact, evaluations, and recommendations
Identified gaps	Limitations noted, areas with insufficient evidence, or suggestions for future studies

Source: Research data, 2025.

### Data analysis and presentation

The analysis of the extracted data will

be conducted in a descriptive and thematic manner, with the aim of synthesizing the available knowledge on the use of Dis-

tance Education (DE) in training healthcare professionals in the management of chronic wounds, considering the pillars of

quality, accessibility, and inclusion. This stage will seek not only to describe the characteristics of the studies but also to identify patterns, recurrences, and gaps in the scientific literature on the topic.

The data organized using the data extraction tool will be grouped according to emerging thematic categories, such as: digital platforms and resources used, pedagogical strategies adopted, digital accessibility practices, inclusion of professionals with disabilities, evaluation of the effectiveness of DLE, and challenges reported in the implementation of training programs. This categorization will be performed

in an iterative and collaborative manner among the reviewers, based on a thorough review of the findings of the included studies.

The results will be presented using tables, charts, and graphs, which will provide a clear visualization of the distribution of studies, methodological characteristics, and the most frequently addressed topics. Thematic maps and narrative syntheses will be used to discuss the findings in relation to the review's objectives and the research question formulat-

ed.

The analysis process will not include a critical assessment of the methodological quality of the studies, as is standard for scoping reviews, but will highlight limitations or biases noted by the authors of the included publications themselves. The discussion will focus on identifying knowledge gaps, relevant contributions to professional practice, and recommendations for future research.

The final presentation of the results will be conducted in accordance with the PRISMA-ScR guidelines, including a flow diagram with the selection stages, a detailed description of the inclusion and exclusion strategies, and a descriptive synthesis of the mapped evidence.

## FINAL CONSIDERATIONS

The development of this scoping review protocol represents a fundamental step toward systematizing scientific knowledge on the use of Distance Education (DE) in training healthcare professionals in the care of chronic wounds. By proposing a rigorous mapping of available evidence, with a focus on pedagogical

quality, accessibility, and digital inclusion, the aim is to contribute to the strengthening of educational practices that are more equitable, effective, and aligned with the real needs of professionals in different practice settings.

Given the growing demand for continuing education and the expansion of technology-mediated educational modalities, it is essential that training processes take into account the social, cultural, and technological diversity of the individuals involved. It is hoped that the results of this review will provide relevant insights for planning more accessible, inclusive, and evidence-based distance learning courses and strategies, promoting the democratization of knowledge and the improvement of care quality in the management of chronic wounds.

The synthesis of evidence resulting from this protocol may also guide public policy, institutional investments, and future research aimed at developing innovative educational solutions that uphold the principles of equity, accessibility, and social justice in health education.

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