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Current Evidence on the Clinical and Epidemiological Characteristics of ICU-Acquired Weakness in Latin America: A Scoping Review Protocol

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Fuentes-Aspe, R; Najum-Flores, J; González-Seguel, F; Seron, P.

Corresponding author:

Rocío Fuentes-Aspe

rocio.fuentes@ufrontera.cl

Author Affiliation:

Universidad de La Frontera.

ADMINISTRATIVE INFORMATION

Support - Universidad de La Frontera.

Review Stage at time of this submission - Data analysis.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 31 March 2025 and was last updated on 29 April 2025.

INTRODUCTION

Review question / Objective What are the clinical and epidemiological characteristics of ICU-acquired weakness (ICUAW) in intensive care unit patients in Latin America, according to the available evidence?

To address the main review question, sub-questions have been developed in alignment with the PCC framework and the objectives of the study. These address key aspects of ICUAW in Latin America, including incidence, patient characteristics, risk factors, hospitalization details, and evaluation methods. The sub-questions are:

What is the reported incidence and/or frequency of ICUAW in intensive care unit patients in Latin America, according to the available evidence?

What are the demographic and clinical characteristics of patients with ICUAW in Latin America, including age, sex, reasons for ICU admission, and comorbidities, as reported in the selected studies?

What are the reported hospitalization details of patients with ICUAW in Latin America, including

ICU length of stay, days on mechanical ventilation, complications, pharmacological treatments, and interventions received, according to the reviewed literature?

What risk factors associated with ICUAW have been identified in studies conducted in Latin America?

What methods have been used to diagnose ICUAW in Latin America, and what are the reported evaluation outcomes in the included studies?

What strategies or interventions for the management or prevention of ICUAW have been reported in studies conducted in Latin America?

The objective of this scoping review is to synthesize available evidence on clinical and epidemiological characteristics (Concept) of adult patients with ICU-acquired weakness hospitalized in intensive care units (Population) within Latin America (Context), identifying reported incidence, risk factors, diagnostic methods, and management strategies.

Background This scoping review aims to provide a comprehensive synthesis of available evidence

on ICUAW in Latin America, addressing aspects such as reported incidence, demographic and clinical characteristics of affected patients, hospitalization details, risk factors, diagnostic and evaluation methods, as well as the preventive and therapeutic strategies currently implemented. By mapping the available literature, this review will contribute to a better understanding of ICUAW in the region and serve as a foundation for future research and clinical guidelines tailored to Latin American healthcare contexts.

Rationale This scoping review aims to provide a comprehensive synthesis of available evidence on ICUAW in Latin America, addressing aspects such as reported incidence, demographic and clinical characteristics of affected patients, hospitalization details, risk factors, diagnostic and evaluation methods, as well as the preventive and therapeutic strategies currently implemented. By mapping the available literature, this review will contribute to a better understanding of ICUAW in the region and serve as a foundation for future research and clinical guidelines tailored to Latin American healthcare contexts.

METHODS

Strategy of data synthesis A systematic approach was following the JBI guidelines and in line with the Preferred Reporting Items for Systematic Reviews and MetaAnalyses extension for Scoping Reviews (PRISMA ScR). The databases searched included PubMed (MEDLINE), LILACS (BVS), EMBASE (Elsevier), CINAHL (EBSCOhost), Scopus, and Web of Science. Sources of unpublished studies and gray literature included Google Scholar, MedicLatina, Referencia Latina, SciELO, and Latin American critical care journals. This scoping review included primary research studies, such as observational studies (cohort, case-control, and cross-sectional studies), randomized controlled trials (RCTs), case series, and case reports.

Eligibility criteria

Participants

This review will include studies involving adults aged 18 years or older who have been hospitalized in intensive care units (ICUs) within Latin American countries. The included population comprised general ICU patients, excluding individuals with pre-existing neuromuscular or neurological conditions that could independently affect the musculoskeletal system (e.g., Guillain-Barré syndrome, myasthenia gravis, stroke, spinal cord injury).

Concept

This review will consider studies addressing ICUAW by examining its epidemiological data, clinical evaluation, and associated outcomes. Eligible studies that have reported information on ICUAW frequency and/or incidence, sociodemographic characteristics such as age and sex, primary reasons for ICU admission, and relevant comorbidities will be included. Additionally, studies that have included data on risk and protective factors for ICUAW, details of ICU hospitalization such as length of stay, days on mechanical ventilation, and pharmacological treatments will be considered. Studies that have assessed ICUAW using validated clinical or functional evaluation methods, such as the Medical Research Council (MRC) scale or handgrip dynamometry, will also be considered. Furthermore, studies examining therapeutic and preventive strategies, including early mobilization protocols or pharmacological interventions, will be considered to understand their impact on ICUAW prevention and management.

Context

This review will include studies conducted in ICUs within Latin American countries, encompassing diverse cultural, geographical, and healthcare settings. The focus will be on populations from this region, considering their unique sociodemographic and healthcare characteristics that may influence ICUAW presentation and outcomes.

No restrictions will be placed on the type of ICU (e.g., general, surgical, mixed) as long as the study population is from a Latin American country. Studies conducted or published outside Latin America that specifically analyze ICU patients from the region will also be included, provided they contain relevant epidemiological or clinical data.

Types of sources

This scoping review will include a wide range of sources to comprehensively map the evidence on ICUAW in Latin America. Primary research studies such as observational studies (cohort, case-control, and cross-sectional studies), randomized controlled trials, case series, and case reports will be considered. Secondary research, such as systematic reviews, meta-analyses, and other evidence syntheses related to ICUAW, will also be included if they provide relevant epidemiological, clinical, or management data. Additionally, grey literature, including conference abstracts and theses, will be considered, provided they contain accessible and complete data pertinent to the objectives of this review.

Source of evidence screening and selection

Following the search, all identified records were collated and uploaded into Rayyan (Rayyan Systems Inc., Cambridge, MA, USA) for

independent screening and analysis. Titles and abstracts were screened by two independent reviewers.

Data management For data extraction, a custom database was created in Microsoft Excel, where information was systematically extracted by two independent researchers. A cross-checking process was conducted to ensure accuracy and consistency in data collection. The extraction process adhered to the Population, Concept, and Context (PCC) framework guiding this scoping review.

Reporting results / Analysis of the evidence A descriptive and narrative synthesis will be conducted to summarize key findings, ensuring that the evidence presented directly responds to the review objectives and research questions. Data will be synthesized qualitatively, considering potential heterogeneity across studies in terms of methodologies, study populations, and reported outcomes. According to the recommendations and following an analysis by the authors, this scoping review will not include a critical appraisal of the risk of bias or methodological quality of the studies.

Presentation of the results Findings will be presented in multiple tables to enhance clarity and systematic organization of results.

Language restriction None.

Country(ies) involved Chile.

Keywords Critical illness; Epidemiological trends; Intensive care outcomes; Neuromuscular complications; Rehabilitation strategies.

Contributions of each author

Author 1 - Rocío Fuentes-Aspe - Contributed to the conceptualization of the research, supervised the research process and methodology, conducted the literature search and data collection, validated the extracted data and resolved reviewer discrepancies, contributed to the interpretation of results, to writing and revising the protocol, review and approval of the final document.

Email: rocio.fuentes@ufrontera.cl

Author 2 - Jasim Najum-Flores - Contributed to the conceptualization of the research, conducted the literature search and data collection, contributed to the interpretation of results, contributed to writing and revising the protocol, contributed to the final review.

Email: jasim.najum@gmail.com

Author 3 - Felipe González-Seguel - Contributed to writing and revising the protocol, critically reviewed

and edited the manuscript for accuracy and clarity, contributed to the final review and approval of the document.

Email: feligonzalezs@udd.cl

Author 4 - Pamela Seron - Provided critical feedback on the study design and execution, supervised the research process and methodology, provided expert revisions and final approval for submission.

Email: pamela.seron@ufrontera.cl