

# Acute Pain in Men with Trauma in the Intensive Care Unit: Scoping Review Protocol

Dor Aguda em Homens com Trauma na Unidade Terapia Intensiva: Protocolo de Revisão de Escopo  
Dolor Agudo en Hombres con Trauma en Cuidados Intensivos: Protocolo de Revisión de Escopo

## RESUMO

**Objetivo:** Mapear as evidências científicas acerca da dor aguda em homens com lesões traumáticas em Unidades de Terapia Intensiva. **Método:** Protocolo de *Scoping Review*, alicerçado no método proposto por *Joanna Briggs Institute*, norteado pela pergunta "O que há disponível acerca da dor aguda em pacientes adultos com lesões traumáticas na Terapia Intensiva?" Fontes de informação definidas: PubMed, Literatura Latino-Americana e do Caribe em Ciências da Saúde via Biblioteca Virtual em Saúde, *Web of Science*, Scopus, Embase, Cochrane, Catálogo de Teses e Dissertações CAPES, Repositórios Científicos de Acesso Aberto de Portugal. A seleção e avaliação final dos estudos serão conduzidas por dois revisores independentes, sendo as discrepâncias resolvidas por um terceiro. Os dados serão inseridos em instrumento adaptado, contendo informações sobre autores, título, ano de publicação, país de origem, objetivo, tipo de estudo, considerações relevantes, DOI e link de acesso. **Resultados:** Os resultados serão apresentados de forma narrativa, imagética e tabular. **DESCRIPTORES:** Dor aguda; Homens; Trauma; Unidade de Terapia Intensiva.

## ABSTRACT

**Objective:** To map the scientific evidence on acute pain in men with traumatic injuries in intensive care units. **Method:** Scoping Review protocol, based on the method proposed by the Joanna Briggs Institute, guided by the question "What is available on acute pain in adult patients with traumatic injuries in intensive care?" Defined information sources: PubMed, Latin American and Caribbean Literature in Health Sciences via the Virtual Health Library, Web of Science, Scopus, Embase, Cochrane, CAPES Catalog of Theses and Dissertations, and Portuguese Open Access Scientific Repositories. The selection and final evaluation of the studies will be conducted by two independent reviewers, with discrepancies resolved by a third reviewer. Data will be entered into an adapted instrument containing information on authors, title, year of publication, country of origin, objective, type of study, relevant considerations, DOI, and access link. **Results:** The results will be presented in narrative, visual and tabular form. **DESCRIPTORS:** Acute pain; Men; Trauma; Intensive Care Units.

## RESUMEN

**Objetivo:** Mapear la evidencia científica sobre el dolor agudo en hombres con lesiones traumáticas en unidades de cuidados intensivos. **Método:** Protocolo de revisión de alcance, basado en el método del Instituto Joanna Briggs, guiado por la pregunta: "¿Qué hay disponible sobre el dolor agudo en pacientes adultos con lesiones traumáticas en cuidados intensivos?". Las fuentes de información incluyen: PubMed, Literatura Latinoamericana y del Caribe en Ciencias de la Salud (BVS), Web of Science, Scopus, Embase, Cochrane, Catálogo de Tesis y Disertaciones de CAPES y Repositorios Científicos de Acceso Abierto de Portugal. La selección y evaluación final de los estudios será realizada por dos revisores independientes; discrepancias serán resueltas por un tercer revisor. Los datos extraídos incluirán autores, título, año, país, objetivo, tipo de estudio, consideraciones relevantes, DOI y enlace. **Resultados:** Los resultados se presentarán de forma narrativa, visual y tabular. **DESCRIPTORES:** Dolor Agudo; Hombres; Trauma; Unidades de Cuidados Intensivos.

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## INTRODUCTION

Acute pain is characterized by sudden onset and varying intensity, functioning as a warning sign or symptom of disease or threat to the body. It is an unpleasant symptom resulting from injury, surgery, illness, trauma, or painful medical procedures. It usually lasts from a few minutes to less than six months and tends to disappear when the underlying cause is treated or cured<sup>(1)</sup>.

The identification and management of pain is a complex and essential area in critical patient care, and is an activity carried out by the nursing team in conjunction with the multidisciplinary team. Nursing professionals are responsible for implementing procedures ranging from careful assessment of pain to the use of therapeutic approaches to alleviate the suffering of these patients<sup>(2)</sup>.

Acute pain is highly prevalent in trauma victims and is reported in approximately 70% of these cases. The mechanisms of pain in patients with traumatic injuries are complex and varied and may involve several physiological and psychological factors<sup>(3)</sup>. Ineffective pain management can contribute to dependence on prolonged mechanical ventilation, increased length of stay in the ICU, pulmonary complications, patient-ventilator asynchrony, and post-traumatic stress disorder<sup>(4-5)</sup>.

The challenge in combating pain begins with the difficulty of perceiving and/or identifying this symptom in people in critical health situations, so understanding the mechanisms involved in pain control becomes essential for the care of patients diagnosed with trauma admitted to the Intensive Care Unit (ICU)<sup>(2)</sup>.

Inadequate pain management in

the early stages of trauma is a recurring practice. This can be attributed to multiple factors, such as cultural barriers, professional and organizational failures, underuse or misuse of measurement and recording tools, as well as inadequate training in pain assessment and management<sup>(6)</sup>.

Another obstacle in addressing pain is understanding the mechanisms underlying gender-related differences. Understanding gender-specific differences in pain and therapy can lead to better pharmacological and non-pharmacological interventions. Scientific evidence indicates that both biological and psychosocial factors contribute to these differences, requiring a comprehensive approach to pain management that considers sex and gender<sup>(7-8)</sup>.

A study describing the clinical profile of men treated at an emergency care unit identified pain as the main clinical complaint, predominantly classified as moderate to severe, especially in cases of orthopedic conditions. These findings show that pain is a significant sign or symptom in the male population, indicating the need for qualified care for its management<sup>(9)</sup>.

Considering that traumatic events significantly affect the male population (78.82%) compared to the female population (21.06%), according to data from the Ministry of Health's Mortality Information System<sup>(10)</sup>, and that men also have a higher prevalence in clinical care<sup>(11)</sup>, acute pain in this population remains a topic that has been little explored in the scientific literature, although it represents a symptom of great relevance in this population.

Given this, it is necessary to map the extent, scope, and nature of this phenomenon. In addition to contributing to the systematization

of existing knowledge, this scope review will allow the identification of gaps in the literature, which may guide future research and support evidence-based care practices.

In this sense, this review aims to map the available scientific evidence on acute pain in men with traumatic injuries admitted to the ICU, identifying how this condition has been assessed, monitored, and managed in national and international scientific production.

### Review question:

To formulate the review question, we used the PCC mnemonic strategy<sup>(12)</sup>: population (adult patients with traumatic injuries), concept (acute pain), and context (Intensive Care Unit). Thus, the question formulated was: What is available about acute pain in adult patients with traumatic injuries in the Intensive Care Unit?

This formulation was carried out in conjunction with a specialized librarian, with the aim of expanding the potential for searching and retrieving scientific publications in the area involving the male population. This is due to the fact that, when using the descriptor 'men' instead of 'adult patients', there was a reduced retrieval of scientific publications related to the theme.

### Inclusion criteria:

According to the PCC mnemonic strategy 123, the population will include adult patients with traumatic injuries, excluding individuals under 18 years of age, with non-traumatic injuries, or with chronic conditions that interfere with the assessment of traumatic injuries. In the concept: Studies discussing acute pain in critically ill patients with trauma will be included, and studies focused on chronic pain, complex regional pain syndrome

(CRPS), or psychological disorders related to pain, as well as studies dealing only with injury prevention or late rehabilitation, without mention of acute pain, will be excluded. In the context: the current scope review will consider studies conducted in intensive care units and will exclude studies conducted in other care settings, such as emergency rooms, wards, outpatient clinics, or pre-hospital care, as well as studies conducted exclusively in pediatric or neonatal ICUs. In the article, the results will be presented from a gender-related perspective.

## METHOD

This is a Scoping Review protocol. This type of review follows a systematic approach that aims to map the main concepts and evidence that support a field of research. This review will be developed in accordance with the evidence synthesis manual published by the Joanna Briggs Institute (JBI) (12). The protocol was registered on the Open Science Framework (OSF) platform (DOI: 10.17605/OSF.IO/DAJGM) and can be accessed via the link: <https://osf.io/dajgm/>.

### Sources of Evidence:

This scoping review will consider scientific research available in full, with different methodological designs, including quantitative and qualitative studies, theses, dissertations, and systematic reviews that address acute pain in adult patients with traumatic injuries admitted to the ICU. The search will be conducted in health databases, without language or time restrictions, in order to retrieve as many relevant publications as possible. Editorials, letters to the editor, comments, books, book chapters, and studies that do not directly address the pro-

posed theme or that do not present a specific focus on the defined population, concept, and context will be excluded.

### Sources of Information:

The following libraries/databases were defined as sources of information: Medical Literature Analysis and Retrieval System Online (MEDLINE) via PubMed, Web of Science (WoS), Scopus, Embase via Elsevier, Latin American and Caribbean Health Sciences Literature (LILACS), and the Virtual Health Library, through the journal portal of the Coordination for the Improvement of Higher Education Personnel (CAPES) via the federated community. In addition to these, studies were sought in the CAPES thesis and dissertation catalog and the Open Access Scientific Repositories of Portugal (RCAAP).

### Search strategy:

To develop the strategy, a simple search was performed in the MEDLINE database via PubMed and Scopus via Elsevier to identify keywords/descriptors that best correspond to the research topic. Controlled descriptors in health sciences (DeCS) were used, as well as Medical Subject Headings (MeSH). Regarding gray literature, the CAPES thesis and dissertation database was used. The identified descriptors were combined using the Boolean operators "AND" and "OR" to formulate the search strategy. The search was performed using descriptors organized according to the elements of the PCC group, combined with each other using the Boolean operator "AND," with the aim of crossing the terms of the different groups. For synonymous descriptors within the same group, the Boolean operator "OR" was used, thus expanding the scope of the search and use of Bool-

ean.

As a complementary measure and in accordance with the review's guidelines regarding time, location, and source, potential studies were sought in the references of the included articles, and review studies were also incorporated when considered relevant<sup>(11)</sup>. Only articles containing these terms were identified. Finally, the search strategy was defined with the help of a librarian experienced in review studies and validated by a specialist, using the descriptors/MESH ("Wounds and Injuries" OR "Injuries" OR "Trauma" OR "Traumatic Injury" OR "Traumatic Injuries" OR "Physical Trauma" OR "Gunshot Wound" OR "Traffic Accidents" OR "External Causes" OR "Cranio-cerebral Trauma" OR "Suicide Attempt") AND ("Acute Pain" OR "Pain Management" OR "Acute Pain Management") AND ("Intensive Care Units" OR "ICU" OR "Critical Care" OR "Critical Unit"). It should be emphasized that the search strategy will be adapted for each database, as can be seen in Figure 1. The reference list of all sources of evidence included in the full-text search will be included for later retrieval of studies.

Figure 1 – Search strategy in databases. Salvador, BA, Brazil, 2025.

Fonte de Informação	Estratégia de Busca	Nº de resultados
<b>Pubmed</b>	<i>("Wounds and Injuries"[MeSH Terms] OR "Injuries"[Title/Abstract] OR "Trauma"[Title/Abstract] OR "Traumatic Injury"[Title/Abstract] OR "Traumatic Injuries"[Title/Abstract] OR "Physical Trauma"[Title/Abstract] OR "Gunshot Wound"[Title/Abstract] OR "Traffic Accidents"[Title/Abstract] OR "External Causes"[Title/Abstract] OR "Craniocerebral Trauma"[Title/Abstract] OR "Suicide Attempt"[Title/Abstract]) AND ("Acute Pain"[MeSH Terms] OR "Acute Pain"[Title/Abstract] OR "Pain Management"[Title/Abstract] OR "Acute Pain Management"[Title/Abstract]) AND ("Intensive Care Units"[MeSH Terms] OR "ICU"[Title/Abstract] OR "Critical Care"[Title/Abstract] OR "Intensive Care Unit"[Title/Abstract] OR "Critical Unit"[Title/Abstract])</i>	183
<b>Embase</b>	<i>('injury'/exp OR 'injuries':ti.ab.kw OR 'trauma':ti.ab.kw OR 'traumatic injury':ti.ab.kw OR 'traumatic injuries':ti.ab.kw OR 'physical trauma':ti.ab.kw OR 'gunshot wound':ti.ab.kw OR 'traffic accidents':ti.ab.kw OR 'external causes':ti.ab.kw OR 'craniocerebral trauma':ti.ab.kw OR 'suicide attempt':ti.ab.kw) AND ('pain'/exp OR 'acute pain':ti.ab.kw OR 'pain management':ti.ab.kw OR 'acute pain management':ti.ab.kw) AND ('intensive care unit'/exp OR 'icu':ti.ab.kw OR 'critical care':ti.ab.kw OR 'intensive care unit':ti.ab.kw OR 'critical unit':ti.ab.kw)</i>	135
<b>Cochrane</b>	<i>("Wounds and Injuries" OR "Injuries" OR "Trauma" OR "Traumatic Injury" OR "Traumatic Injuries" OR "Physical Trauma" OR "Gunshot Wound" OR "Traffic Accidents" OR "External Causes" OR "Craniocerebral Trauma" OR "Suicide Attempt") AND ("Acute Pain" OR "Pain Management" OR "Acute Pain Management") AND ("Intensive Care Units" OR "ICU" OR "Critical Care" OR "Critical Unit") in Title Abstract Keyword</i>	93
<b>Scopus</b>	<i>TITLE-ABS-KEY (( "Wounds and Injuries" OR "Injuries" OR "Trauma" OR "Traumatic Injury" OR "Traumatic Injuries" OR "Physical Trauma" OR "Gunshot Wound" OR "Traffic Accidents" OR "External Causes" OR "Craniocerebral Trauma" OR "Suicide Attempt" ) AND ( "Acute Pain" OR "Pain Management" OR "Acute Pain Management" ) AND ( "Intensive Care</i>	383

	<i>Units" OR "ICU" OR "Critical Care" OR "Critical Unit" )</i>	
<b>Web of Science</b>	<i>("Wounds and Injuries" OR "Injuries" OR "Trauma" OR "Traumatic Injury" OR "Traumatic Injuries" OR "Physical Trauma" OR "Gunshot Wound" OR "Traffic Accidents" OR "External Causes" OR "Cranio cerebral Trauma" OR "Suicide Attempt") AND ("Acute Pain" OR "Pain Management" OR "Acute Pain Management") AND ("Intensive Care Units" OR "ICU" OR "Critical Care" OR "Critical Unit") (Topic) and Review Article or Article (Document Types)</i>	118
<b>Lilacs</b>	<i>(TW: "Ferimentos e Lesões" OR "Lesões" OR "Trauma" OR "Lesão Traumática" OR "Lesões Traumáticas" OR "Trauma Físico" OR "Ferimento por arma de fogo" OR "Acidentes de Trânsito" OR "Causas Externas" OR "Traumatismos Cranio cerebrais" OR "Tentativa de Suicídio" OR "Heridas y Lesiones" OR "Lesiones" OR "Trauma" OR "Lesión Traumática" OR "Lesiones Traumáticas" OR "Trauma Físico" OR "Herida de Bala" OR "Accidentes de Tráfico" OR "Causas Externas" OR "Traumatismo Craneoencefálico" OR "Intento de Suicidio" OR "Wounds and Injuries" OR "Injuries" OR "Trauma" OR "Traumatic Injury" OR "Traumatic Injuries" OR "Physical Trauma" OR "Gunshot Wound" OR "Traffic Accidents" OR "External Causes" OR "Cranio cerebral Trauma" OR "Suicide Attempt") AND (TW: "Dor Aguda" OR "Manejo da Dor" OR "Controle da Dor" OR "Tratamento da Dor Aguda" OR "Dolor Agudo" OR "Manejo del Dolor" OR</i>	11
<b>Web of Science</b>	<i>("Wounds and Injuries" OR "Injuries" OR "Trauma" OR "Traumatic Injury" OR "Traumatic Injuries" OR "Physical Trauma" OR "Gunshot Wound" OR "Traffic Accidents" OR "External Causes" OR "Cranio cerebral Trauma" OR "Suicide Attempt") AND ("Acute Pain" OR "Pain Management" OR "Acute Pain Management") AND ("Intensive Care Units" OR "ICU" OR "Critical Care" OR "Critical Unit") (Topic) and Review Article or Article (Document Types)</i>	118
<b>Lilacs</b>	<i>(TW: "Ferimentos e Lesões" OR "Lesões" OR "Trauma" OR "Lesão Traumática" OR "Lesões Traumáticas" OR "Trauma Físico" OR "Ferimento por arma de fogo" OR "Acidentes de Trânsito" OR "Causas Externas" OR "Traumatismos Cranio cerebrais" OR "Tentativa de Suicídio" OR "Heridas y Lesiones" OR "Lesiones" OR "Trauma" OR "Lesión Traumática" OR "Lesiones Traumáticas" OR "Trauma Físico" OR "Herida de Bala" OR "Accidentes de Tráfico" OR "Causas Externas" OR "Traumatismo Craneoencefálico" OR "Intento de Suicidio" OR "Wounds and Injuries" OR "Injuries" OR "Trauma" OR "Traumatic Injury" OR "Traumatic Injuries" OR "Physical Trauma" OR "Gunshot Wound" OR "Traffic Accidents" OR "External Causes" OR "Cranio cerebral Trauma" OR "Suicide Attempt") AND (TW: "Dor Aguda" OR "Manejo da Dor" OR "Controle da Dor" OR "Tratamento da Dor Aguda" OR "Dolor Agudo" OR "Manejo del Dolor" OR</i>	11
	<i>"Control del Dolor" OR "Tratamiento del Dolor Agudo" OR "Acute Pain" OR "Pain Management"</i>	

OR "Acute Pain Management") AND (TW: "Unidade de Terapia Intensiva" OR "UTI" OR "Cuidados Críticos" OR "Unidade Crítica" OR "Unidad de Cuidados Intensivos" OR "UCI" OR "Cuidados Críticos" OR "Unidad Crítica" OR "Intensive Care Units" OR "ICU" OR "Critical Care" OR "Critical Unit")

**Study selection:**

For the synthesis and analysis of data, the data reduction method will be used<sup>(13)</sup>, which allows the grouping of scientific evidence. After conducting the search, all identified citations will be gathered and uploaded to Rayyan® developed by the Qatar Computing Research Institute (QCRI)<sup>(14)</sup> with the aim of removing duplicate studies. Subsequently, according to the proposed guidelines<sup>(12)</sup>, the exported studies will undergo screening, where their titles and abstracts will be evaluated and selected based on previously established exclusion and inclusion criteria. The selected studies will undergo a complete evaluation for data extraction. This process will be conducted by two reviewers independently and blindly, and to resolve conflicts, a third reviewer will be called upon to judge the existence of "maybes" during the study selection phase, considering a parameter for inclusion greater than 70% of agreement. The reasons for excluding sources of evidence in the full text that do not meet the inclusion criteria will be recorded.

After identification, the articles will undergo a screening process through subject analysis, which will include reading the title, abstract, and analysis according to inclusion and exclusion criteria; at the end, there will be references eligible for full-text reading. In addition, for a cohesive analysis of the data, the main characteristics of the studies will be examined and arranged in a table, thus enabling the organization, gathering, and synthesis of information.

The identification and selection flow of studies will be presented fol-

lowing the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Review (PRISMA-ScR) flowchart<sup>(15)</sup>. The results will be accompanied by a narrative summary and according to the thematic categories relevant to the research. As this is a review of publicly available data, approval by the Research Ethics Committee (REB) was not required.

**Data extraction:**

The authors developed an instrument/form for data collection/ex-

traction, adapted from the JBI<sup>(12)</sup>, in order to organize the main information related to the studies, such as: type of study, year of publication, country of origin, objective, relevant considerations, pain from a gender-related perspective, DOI, and access link. The studies will be classified according to the level of evidence and degree of recommendation of the JBI<sup>(12)</sup> (Figure 2). In case of discrepancies during data extraction, they will be resolved through consensus or evaluation by a fourth reviewer.

Figure 2. Data Extraction Tool. Salvador, BA, Brazil, 2025.

INSTRUMENTO DE EXTRAÇÃO DE DADOS							
<b>TÍTULO:</b> Dor aguda em homens com trauma na unidade de terapia intensiva: protocolo de revisão de escopo							
<b>OBJETIVO:</b> Mapear as evidências científicas disponíveis sobre a dor aguda em homens adultos com lesões traumáticas internados em Unidades de Terapia Intensiva (UTI)							
<b>QUESTÃO DE PESQUISA:</b> O que há disponível acerca da dor aguda em pacientes adultos com lesões traumáticas na Unidade de Terapia Intensiva?							
<b>CRITÉRIO DE INCLUSÃO:</b>				<b>CRITÉRIO DE EXCLUSÃO:</b>			
<p><b>P:</b> Pacientes adultos com lesões traumáticas</p> <p><b>C:</b> Dor aguda</p> <p><b>C:</b> Unidade de Terapia Intensiva</p>				<ul style="list-style-type: none"> <li>• Indivíduos menores de 18 anos, com lesões não traumáticas, ou com condições crônicas que interferiram na avaliação das lesões traumáticas.</li> <li>• Estudos focados em dor crônica, síndrome dolorosa regional complexa (SDRC), ou transtornos psicológicos relacionados à dor e estudos que tratam apenas da prevenção de lesões ou de reabilitação tardia, sem menção à dor aguda.</li> <li>• Estudos realizados em outros contextos assistenciais, como pronto-socorro, enfermarias, ambulatórios ou atendimento pré-hospitalar, além de estudos realizados exclusivamente em UTI pediátrica ou neonatal.</li> </ul>			
EXTRAÇÃO DE DADOS							
Autores	Título	Pais/ano de Publicação	Objetivo do estudo	Tipo de Estudo	Considerações relevantes	Dor pela perspectiva relacionada ao gênero.	DOI/ Link de acesso

Fonte: JBI *Manual for Evidence Synthesis* adaptado de Peters et al., 2024.

**RESULTS**

**Analysis and presentation**

After coding procedures, the data will be organized according to similarities and differences, then compiled in Excel for Windows® version 2016 and validated through double-checking, minimizing possible er-

rors. The results will be presented as a map of the data extracted from the articles included in diagrammatic or tabular format and/or in a descriptive format aligned with the objective of the scope review.

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