

**NURSING CARE FOR SAFE HEMOCOMPONENT TRANSFUSION: SCOPING REVIEW PROTOCOL**

**CUIDADOS DE ENFERMAGEM PARA TRANSUSÃO DE HEMOCOMPONENTES SEGURA: PROTOCOLO DE REVISÃO DE ESCOPO**

**CUIDADOS DE ENFERMERÍA PARA LA TRANSFUSIÓN SEGURA DE HEMOCOMPONENTES: PROTOCOLO DE REVISIÓN DEL ALCANCE**

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**ABSTRACT**

**Objective:** To map in the literature the nursing care practices involved in ensuring safe blood component transfusion. **Methods:** This is a Scoping Review protocol that will be conducted according to the guidelines of the JBI Manual for Evidence Synthesis and the PRISMA-ScR (PRISMA extension for Scoping Reviews), both developed by the Joanna Briggs Institute (JBI). The research question is: What are the essential nursing care practices to ensure patient safety during blood component transfusion? The following databases will be consulted: Medline, CINAHL, Scopus, Embase (via Elsevier), Latin American and Caribbean Health Sciences Literature (LILACS), and Web of Science. The inclusion criteria will consider quantitative, qualitative, and mixed-methods studies; all types of reviews; opinion articles; grey literature; and primary studies related to the topic, published in Portuguese, English, or Spanish, with no date restriction. To identify duplicate studies, all retrieved titles will be exported to EndNote® software. Duplicate references will be identified and excluded, ensuring each study is considered only once. Subsequently, the Rayyan® software will be used for the screening process. Title and abstract screening will be performed in full by two independent reviewers. Any disagreements will be resolved by a third reviewer.

**Keywords:** Nursing Care; Blood Transfusion; Patient Safety.

**RESUMO**

**Objetivo:** Mapear na literatura os cuidados de enfermagem para uma transfusão de hemocomponentes segura. **Métodos:** trata-se de um protocolo de Revisão de Escopo que será conduzida conforme as orientações do JBI *Manual for Evidence Synthesis* e do PRISMA ScR (*PRISMA extension for Scoping Reviews*), desenvolvidos pelo Instituto Joanna Briggs (JBI). A questão de pesquisa será “Quais são os cuidados de enfermagem essenciais para garantir a segurança do paciente durante a transfusão de hemocomponentes?”. Serão consultadas as bases de dados: *Medline*, *CINAHL*, *Scopus* e *Embase* via *Elsevier*, Literatura Latino-americana e do Caribe em Ciências da Saúde (LILACS) e *Web of Science*. Serão considerados como critérios de inclusão estudos quantitativos, qualitativos, métodos mistos, todos os tipos de revisões, artigos de opinião e literatura cinzenta, estudos primários relacionados à temática, nos idiomas Português, Inglês e Espanhol e sem delimitação de recorte. Para identificação de trabalhos duplicados os títulos encontrados serão exportados para o *software* EndNote®, para a identificação e exclusão de estudos duplicados, sendo estes considerados uma única vez, sequencialmente será utilizado o *software* Rayyan®. A leitura dos títulos e resumos será feito de forma íntegra e será realizada por dois revisores de forma independente; onde os desacordos serão resolvidos por meio de um terceiro revisor.

**Palavras-chave:** Cuidados de Enfermagem; Transfusão de Sangue; Segurança do Paciente.

**RESUMEN**

**Objetivo:** Mapear la atención de enfermería para la transfusión segura de componentes sanguíneos en la literatura. **Métodos:** Este es un protocolo de revisión de alcance que se llevará a cabo de acuerdo con las directrices del Manual para la Síntesis de Evidencia del JBI y PRISMA ScR (extensión PRISMA para Revisiones de Alcance), desarrollado por el Instituto Joanna Briggs (JBI). La pregunta de investigación fue: ¿Cuáles son las medidas esenciales de atención de enfermería para garantizar la seguridad del paciente durante la transfusión de componentes sanguíneos? Se consultarán las siguientes bases de datos: Medline, CINAHL, Scopus y Embase a través de Elsevier, Literatura Latinoamericana y del Caribe en Ciencias de la Salud (LILACS) y Web of Science. Los criterios de inclusión serán estudios cuantitativos y cualitativos, métodos mixtos, todo tipo de revisiones, artículos de opinión, literatura gris y estudios primarios relacionados con el tema, en portugués, inglés y español, sin un alcance específico. Para identificar estudios duplicados, los títulos encontrados se exportarán al *software* EndNote®. Los estudios duplicados se considerarán solo una vez y el *software* Rayyan® se utilizará secuencialmente. Los títulos y resúmenes serán leídos íntegramente por dos revisores de forma independiente; cualquier desacuerdo será resuelto por un tercer revisor.

**Palabras clave:** Atención de Enfermeira; Transfusión Sanguínea; Seguridad del Paciente.



## INTRODUCTION

Hemocomponent transfusion is defined as the transfer of blood and its derivatives from one individual to another and is a therapeutic modality used in the treatment of various pathologies, clinical and surgical conditions, as well as in urgent and emergency situations<sup>(1)</sup>. Because this is an irreversible procedure that entails risks and benefits for patients, trained and competent professionals are required to carry out the entire procedure and intervene in situations involving adverse events<sup>(2)</sup>.

Resolution No. 709/2022 of the Federal Nursing Council (*Conselho Federal de Enfermagem*)<sup>(3)</sup> establishes the guidelines required for practice within the hemotherapy process, with the aim of ensuring safe transfusion care. In this context, nursing plays an essential role in ensuring appropriate conduct of procedures, from verification of the medical prescription and correct patient identification through continuous monitoring during and after hemocomponent transfusion.

In addition, training and vigilance among nursing professionals enable early detection of signs of complications, ensuring a rapid and effective response. Thus, nursing practice is essential for quality, safety, and humanization of patient care throughout the entire transfusion process<sup>(4)</sup>.

In this context, nursing acts directly in care delivery and in risk management throughout the transfusion process, ensuring patient safety at every stage. By mapping the literature, the aim is

to identify essential nursing care that ensures safe transfusion.

A preliminary search was conducted in the Joanna Briggs Institute database and on the Open Science Framework (OSF), in Medline via PubMed, and in the Cochrane Library with the aim of identifying related protocols; however, no complete or ongoing studies addressing the same topic were found. Therefore, this study aims to map nursing care described in the literature that ensures safe hemocomponent transfusion.

## METHODS

### Type of study

This is a scoping review protocol that will be conducted in accordance with the JBI Manual for Evidence Synthesis and the PRISMA-ScR (PRISMA extension for Scoping Reviews) guidance developed by the Joanna Briggs Institute (JBI)<sup>(5-7)</sup>. The protocol has been registered in the Open Science Framework (OSF) under registration number Doi: 10.17605OSF.IO/NGYF7.

### Eligibility criteria

Inclusion criteria will comprise quantitative, qualitative, and mixed-methods studies, all types of reviews, opinion papers, grey literature, and primary studies related to the topic, published in Portuguese, English, or Spanish, with no time restriction, in order to allow comprehensive mapping of the evidence. Exclusion criteria will include monographs,

dissertations, theses, and studies that do not address the guiding research question.

### Types of sources

The following will be considered eligible sources for this review: qualitative, quantitative, and mixed-methods studies, reviews, opinion papers, primary studies, and grey literature.

### Search strategy

The search strategy will be based on the Population, Concept, and Context (PCC) mnemonic to guide data collection, using the following research question: “What nursing care is essential to ensure patient safety during hemocomponent transfusion?”. In this

framework, Population corresponds to Nursing Care, Concept represents Hemocomponent Transfusion, and Context corresponds to Patient Safety.

On the basis of terms defined through the PCC acronym, a mapping of keywords and their respective descriptors was carried out. Searches in the LILACS and BDENF databases will use controlled and uncontrolled descriptors available in Health Sciences Descriptors (DeCS). Searches in MEDLINE, Web of Science, and Scopus will use controlled and uncontrolled descriptors from Medical Subject Headings (MeSH), and searches in CINAHL will use the Subject Headings index. Search terms will be combined using the Boolean operators “OR” and “AND”, as described in Chart 1.

**Chart 1** - Search strategies used in databases with Boolean descriptors “OR” and “AND”, Teresina, Piauí, Brasil, 2024.

| Database         | Descriptor combinations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BDENF and LILACS | ((mh:(enfermagem)) OR (mh:("Equipe de Enfermagem")) OR (mh:("Profissionais de Enfermagem")) OR ("Enfermeiras de Cabeceira") OR ("Enfermeiros de Cabeceira") OR (mh:("Cuidados de Enfermagem")) OR ("Assistência de Enfermagem") OR ("Atendimento de Enfermagem") OR ("Cuidado de Enfermagem") OR ("Gestão da Assistência de Enfermagem") OR ("Sistematização da Assistência de Enfermagem")) AND ((mh:("Transfusão de Sangue")) OR ("Transfusão Sanguínea") OR (mh:("Transfusão de Componentes Sanguíneos")))) AND ((mh:("Segurança do Paciente")) AND (db:("MEDLINE" OR "BDENF"))) |
| CINAHL           | "Nursing Care" OR "Nurse Practitioners" OR "nursing team" OR "Nursing" AND "Blood Component" OR "blood transfusion" OR "blood transfusions" OR "Transfusion, Blood" OR "Transfusions, Blood" OR "blood components" OR "Transfusions Component" OR "Transfusion, Blood Component" OR "Transfusions, Blood" OR "Transfusions, Blood Component" AND "patient safety" OR "Patient Safeties" OR "Safeties, Patient" OR "Safety, Patient"                                                                                                                                                 |
| EMBASE           | ((('nursing care'/exp OR 'nursing care' OR 'nurse practitioner'/exp OR 'nurse practitioner' OR 'team nursing'/exp OR 'team nursing' OR 'nursing'/exp OR 'nursing')) AND ('blood component therapy'/exp OR 'blood component therapy') OR 'blood transfusion'/exp OR 'blood transfusion' OR 'blood transfusion reaction'/exp OR 'blood transfusion reaction') AND ('patient safety'/exp OR 'patient safety')                                                                                                                                                                          |

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MEDLINE        | (((((("Nursing Care") OR ("Nursing") AND ("Blood Component Transfusion") OR ("Blood Transfusion") OR ("Blood Transfusions")) OR ("Transfusion, Blood")) OR ("Transfusions, Blood")) OR ("Blood Component Transfusions")) OR ("Component Transfusions, Blood")) OR ("Transfusions, Blood Component")) AND ("Patient Safety") OR ("Safety, Patient"))                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SCOPUS         | ( TITLE-ABS-KEY ( "Nursing Care" ) OR TITLE-ABS-KEY ( "Nurse Practitioners" ) OR TITLE-ABS-KEY ( "Nursing, Team" ) OR TITLE-ABS-KEY ( nursing ) AND TITLE-ABS-KEY ( "Blood Component Transfusion" ) OR TITLE-ABS-KEY ( "Blood Transfusion" ) OR TITLE-ABS-KEY ( "Blood Transfusions" ) OR TITLE-ABS-KEY ( "Transfusion, Blood" ) OR TITLE-ABS-KEY ( "Transfusions, Blood" ) OR TITLE-ABS-KEY ( "Blood Component Transfusions" ) OR TITLE-ABS-KEY ( "Component Transfusion, Blood" ) OR TITLE-ABS-KEY ( "Component Transfusions, Blood" ) OR TITLE-ABS-KEY ( "Transfusion, Blood Component" ) OR TITLE-ABS-KEY ( "Transfusions, Blood Component" ) AND TITLE-ABS-KEY ( "Patient Safety" ) OR TITLE-ABS-KEY ( "Patient Safeties" ) OR TITLE-ABS-KEY ( "Safeties, Patient" ) OR TITLE-ABS-KEY ( "Safety, Patient" ) ) |
| Web of Science | ((TS=("Nursing Care" (Topic) or "Nurse Practitioners" (Topic) or "Nursing, Team" (Topic) or Nursing (Topic))) AND TS=(((((TS=("Blood Component Transfusion")) OR TS=("Blood Transfusion")) OR TS=("Blood Transfusions")) OR TS=("Transfusion, Blood")) OR TS=("Transfusions, Blood")) OR TS=("Blood Component Transfusions")) OR TS=("Component Transfusion, Blood")) OR TS=("Component Transfusions, Blood")) OR TS=("Transfusion, Blood Component")) OR TS=("Transfusions, Blood Component")) AND TS((((TS=("Patient Safety")) OR TS=("Patient Safeties")) OR TS=("Safeties, Patient")) OR TS=("Safety, Patient"))                                                                                                                                                                                               |

Source: Developed by the authors, 2024

## Data selection

After database searches, titles retrieved will be exported to EndNote® software for identification and exclusion of duplicate studies, which will be considered only once. Subsequently, Rayyan® software will be used to ensure a more transparent selection process and to facilitate identification and selection of articles eligible for the proposed study<sup>(8)</sup>.

Titles and abstracts will be screened independently by two reviewers; disagreements

will be resolved by a third reviewer. Study selection will be presented in the PRISMA 2020 flow diagram for new systematic reviews that include searches of databases, registers, and other sources, as proposed by Page *et al.*<sup>(9)</sup>.

## Data extraction

Data extracted from studies included in the scoping review will be entered into a data-charting instrument developed by the authors, as shown in Chart 2.

**Chart 2** - Instrument for data charting of included studies, Teresina, Piauí, Brazil, 2024.

Main Author / Year of Publication / Study Setting

|                                             |
|---------------------------------------------|
| <b>Publication Venue</b>                    |
| <b>Study Design / Population and Sample</b> |
| <b>Study Objective</b>                      |
| <b>Type of Evidence / Level of Evidence</b> |
| <b>Study Results</b>                        |

Source: Developed by the authors, 2024

An additional instrument developed by the authors will be used to synthesize the main evidence related to the phenomenon of interest, as shown in Chart 3.

**Chart 3** – Instrument for synthesis of reported evidence, Teresina, Piauí, Brasil, 2024.

|                               |
|-------------------------------|
| <b>Author(s)</b>              |
| <b>Main evidence reported</b> |

Source: Developed by the authors, 2024

## EXPECTED RESULTS

Based on the selected studies, the findings will be organized into thematic categories in order to provide a more structured description and discussion of the results. As a potential implication, identifying essential nursing care in the hemocomponent transfusion process may serve as a basis for guidance on the safe performance of this procedure and

strengthen professionals' knowledge about transfusion practice.

Thus, this study is expected to contribute evidence that strengthens patient safety in hemotherapy and to stimulate the emergence of new areas of research in nursing, as well as the development of manuals and protocols that are important for patient safety.

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## Data availability statement:

No dataset was generated in this study. The information presented is described in the body of the article.

## Conflict of interest statement:

None to declare.

## Authorship criteria (author contributions):

Study conception and/or design – Costa, J.C.; Oliveira, G. C.; GANDA, F. T.; AVELINO, F.V.S.D. Data collection, analysis, and interpretation – Costa, J.C.; Oliveira, G. C.; GANDA, F. T.; AVELINO, F.V.S.D. Drafting and/or critical revision of the manuscript – Costa, J.C.; Oliveira, G. C.; GANDA, F. T.; AVELINO, F.V.S.D. Approval of the final version to be published – Costa, J.C.; Oliveira, G. C.; GANDA, F. T.; AVELINO, F.V.S.D.

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