

Clinical management of postpartum hemorrhage by obstetric nurses: a scoping review protocol

Gerenciamento clínico da hemorragia pós-parto pelo enfermeiro obstetra: um protocolo de revisão de escopo

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ABSTRACT

Objective: To map the scientific evidence regarding the actions of obstetric nurses in the clinical management of postpartum hemorrhage. **Method:** This scoping review was developed according to the JBI Institute Reviewer's Manual for Scoping Reviews. The electronic databases CINAHL, Cochrane Library, EMBASE, Latin American and Caribbean Health Sciences Literature, MEDLINE/PubMed, SciELO, ScienceDirect, SCOPUS, Web of Science, and gray literature were searched. Included studies must address the research objective in Portuguese, Spanish, or English. In addition, full remote access to the studies via CAFE is required. Studies in editorial or letter format will be excluded. Selection will be based on the title and abstract of the materials found in the searches, independently assessed by two reviewers, with disagreements resolved by a third reviewer. Collected data will be organized and related through descriptive analysis. Results may be presented in tables or figures and discussed with support from literature, reflecting the fifth step of the selected methodology.

Descriptors: Postpartum Hemorrhage; Obstetric Nursing; Disease Management.

RESUMO

Objetivo: Mapear as evidências científicas sobre as ações dos enfermeiros obstétricos no gerenciamento clínico da hemorragia pós-parto. **Método:** Trata-se de uma revisão de escopo elaborada segundo as recomendações do *JBI Institute Manual do Revisor para Scoping Review*. As buscas serão realizadas nas bases de dados eletrônicas CINAHL, Cochrane Library, EMBASE, Literatura Latino-americana e do Caribe em Ciências da Saúde, MEDLINE/PubMed, SciELO, ScienceDirect, SCOPUS, Web of Science e na literatura cinzenta. Os estudos que serão incluídos precisarão responder ao objetivo desta pesquisa e estar nos idiomas Português, Espanhol ou Inglês. Além disso, é necessário ter disponibilidade dos estudos na íntegra através de acesso remoto pelo acesso da CAFE. Os estudos que não serão incluídos serão os em formato de editorial e carta ao editor. Haverá a seleção por meio da leitura do título e resumo dos materiais encontrados nas buscas, sendo assim avaliados de maneira independente por dois revisores e nos casos de divergências por um terceiro avaliador. Os dados coletados estarão organizados e relacionados segundo a análise descritiva. Os resultados poderão estar dispostos em tabelas ou quadros, e serão discutidos com suporte de literatura acerca da temática, retratando a quinta etapa do método escolhido.

Descritores: Hemorragia Pós-Parto; Enfermagem Obstétrica; Gerenciamento Clínico.

INTRODUCTION

The obstetric emergency with the highest maternal mortality rate worldwide is postpartum hemorrhage (PPH), which is a severe public health problem⁽¹⁾. Recent definitions characterize PPH as a clinical condition of greater-than-expected postpartum hemorrhage associated with signs and symptoms of hypovolemia, including intrapartum hemorrhage, regardless of mode of delivery⁽²⁻³⁾.

Postpartum hemorrhage can be classified as 1) primary (the most com-

mon, occurring within the first 24 hours) or 2) secondary (occurs between 24 hours and 12 weeks postpartum)⁽²⁻³⁾. Uterine atony, lacerations of the birth canal, uterine inversion, intracavitary remnants, and acquired or congenital coagulopathies are the most common causes of primary PPH⁽⁴⁻⁵⁾. On the other hand, hereditary coagulation disorders, retained placental tissue, postpartum infection, and gestational trophoblastic disease are more specific causes of secondary PPH⁽⁴⁻⁵⁾.

Uterine atony is the most common cause of postpartum hemorrhage, and its risk factors include prolonged second-stage labor, instrumental delivery, uterine overdistension in macrosomia, multiple gestation, and polyhydramnios, use of medications such as tocolytics and halogenated anesthetics, and chorioamnionitis⁽³⁾. However, in terms of risk factors, approximately 40% of women with established PPH have no risk factors, indicating that women should be considered susceptible to such an event even in the absence of these factors⁽²⁾.

Uterine atony occurs in 1% to 3% of deliveries, with a recurrence rate of 18%. However, when appropriate protocols are used to quantify blood loss, the incidence can increase to 10%⁽²⁾. Thus, the challenges related to a clear definition for the screening and clinical management of PPH by the multi-professional team through the use of protocols and supportive and interventional technologies are evident, considering that such complications are more related to the consequences of delays in identifying and accurately quantifying blood loss⁽⁶⁾.

Obstetric nursing in the prenatal, delivery, and postpartum areas of health care should work with the multi-professional team, emphasizing the understanding and planning of using evidence-based technologies to minimize complications for both mother and child⁽⁴⁾. Care must be directed toward women's overall well-being, focusing on preventing complications, providing physical and emotional comfort, and ensuring humane and safe care⁽⁷⁾.

It is reasonable to conclude that consideration of the clinical condition is an integral part of the methods used to identify PPH, as all guidelines address the recognition of changes in the clinical picture as part of the classification of the severity of PPH⁽⁸⁾. Among the elements that need to be measured and clinically assessed are heart rate, blood pressure, respiratory rate, and even blood flow velocity⁽⁸⁾. All of these considerations fall within the purview of the nursing team during maternal assessment to ensure

early identification of PPH and prevent it from progressing to maternal death⁽⁹⁾.

Therefore, the nurse, a professional accompanying the pregnant woman during the pregnancy-postpartum period, must be continuously vigilant and knowledgeable about the primary procedures in the clinical management of PPH, including proper detection and treatment⁽⁹⁾.

Early recognition and appropriate treatment of PPH with prompt and coordinated interventions are imperative to reduce morbidity and maternal mortality due to this preventable cause⁽¹⁾. Preplanning and prior knowledge of interventions and protocols enable the care team to make a rapid and accurate assessment for appropriate clinical management of this condition, leading to better outcomes⁽⁶⁾.

Considering the need to strengthen the capacities and strategies implemented by obstetric nursing to improve skills for the control of hemorrhagic emergencies, coupled with the absence of completed or ongoing reviews on the subject in the literature, this research aims to map scientific evidence on the actions of obstetric nurses in the clinical management of PPH.

METHOD

This scoping review will be conducted according to the recommendations of the JBI Institute Reviewer's Manual for Scoping Review⁽¹⁰⁾. This type of study is justified because its methodological rigor allows the examination of the synthesis of scientific evidence on a specific health problem or phenomenon, facilitating a deeper understanding of such phenomena in databases and gray literature. This may lead to identifying data needed to support public health interventions^(9,11). The results of this review will be reported using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA ScR) checklist⁽¹²⁾. The review protocol has been registered⁽¹⁰⁾ in the Open Science Framework (OSF)⁽¹³⁾.

To ensure the reliability of the study methodology, the following steps will be undertaken: definition and alignment of the objective and research question; development and alignment of inclusion criteria with the objective and question; description of the planned approach to evidence search, selection, data extraction, and presentation; evidence search; evidence selection; evidence extraction; evidence analysis; evidence presentation; summary of the evidence concerning the purpose of the review, noting any implications of the conclusions⁽¹²⁾.

The PCC strategy was used to formulate the research question (P [population]: Labor, delivery, and

postpartum obstetric nurses; C [Concept]: Clinical Management; and C [Context]: Postpartum hemorrhage in normal and cesarean deliveries). The guiding question for the evidence search was: "What do obstetric nurses do in the clinical management of postpartum hemorrhage?"

In November 2022, a search was conducted on databases such as PUBMED, Cumulative Index to Nursing & Allied Health Literature (CINAHL), and OSF to identify similar studies. Upon completion of the search, no reviews or protocols were found on the topic or with the same subject of study, so the next steps were taken to consolidate the scoping review.

To identify descriptors and keywords, an initial search of the MEDLINE/PubMed and CINAHL portals was conducted to identify the most common descriptors and keywords related to the topic in

the titles and abstracts of the retrieved articles. A second search was then performed in the included databases using all identified keywords. The search strategy was developed with the assistance of a professional librarian using three controlled vocabularies in the health sciences: Medical Subject Headings (MeSH), *Descritores em Ciências da Saúde* (DeCS), and Emtree (from Embase). The objective was to identify different terms to describe each topic, thus obtaining a more comprehensive result in the databases. The Boolean operators "OR" and "AND" were used according to the specificity of each database.

The search strategy was developed using the Ecus model⁽¹⁴⁾, which includes the following stages: extraction, conversion, combination, construction, and exploitation (Figure 1).

Problem	Clinical management of postpartum hemorrhage by obstetric nurses.		
Extraction	Obstetric nurse	Clinical management	Postpartum hemorrhage
Conversion	Enfermeiras Obstétricas; Nurse Midwives	Gerenciamento Clínico; Disease Management; Diagnóstico; Diagnosis	Hemorragia Pós-Parto; Postpartum Hemorrhage
Combination	Enfermeiras Obstétricas Enfermeira Obstetra Enfermeira Obstetriz Enfermeira Parteira Enfermeiras Parteiros Enfermeiro Obstetra Enfermeiro Obstétrico Enfermeiro Parteiro Enfermeiros Obstetras Enfermeiros Obstétricos Enfermeiros Parteiros Nurse Midwives Nurse Midwife Nurse-Midwife Nurse-Midwives	Gerenciamento Clínico Administração Clínica Gerenciamento da Doença Diagnósticos Detecção Disease Management Disease Managements Management Diagnosis Diagnose Diagnoses Detection	Hemorragia Pós-Parto Hemorragia Puerperal Postpartum Hemorrhage Delayed Postpartum Hemorrhage Immediate Postpartum Hemorrhage
Search building	"Enfermeiras Obstétricas" OR "Enfermeira Obstetra" OR "Enfermeira Obstetriz" OR "Enfermeira Obstétrica" OR "Enfermeira Parteira" OR "Enfermeiras Parteiros" OR "Enfermeiro Obstetra" OR "Enfermeiro Obstétrico" OR "Enfermeiro Parteiro" OR "Enfermeiros Obstetras" OR "Enfermeiros Obstétricos" OR "Enfermeiros Parteiros" "Nurse Midwives" OR "Nurse Midwife" OR "Nurse-Midwife" OR "Nurse-Midwives"	"Gerenciamento Clínico" OR "Administração Clínica" OR "Gerenciamento da Doença" OR Diagnósticos OR Detecção "Disease Management" OR "disease Managements" OR Management OR Diagnosis OR Diagnose OR Diagnoses OR Detection	"Hemorragia Pós-Parto" OR "Hemorragia Puerperal" "Postpartum Hemorrhage" OR "Delayed Postpartum Hemorrhage" OR "Immediate Postpartum Hemorrhage"

Use	<p style="text-align: center;">- For national databases:</p> <p>#1 - ("Enfermeiras Obstétricas" OR "Enfermeira Obstetra" OR "Enfermeira Obstetriz" OR "Enfermeira Obstétrica" OR "Enfermeira Parteira" OR "Enfermeiras Partejas" OR "Enfermeiro Obstetra" OR "Enfermeiro Obstétrico" OR "Enfermeiro Parteiro" OR "Enfermeiros Obstetras" OR "Enfermeiros Obstétricos" OR "Enfermeiros Parteiros") AND ("Gerenciamento Clínico" OR "Administração Clínica" OR "Gerenciamento da Doença" OR Diagnósticos OR Detecção) AND ("Hemorragia Pós-Parto" OR "Hemorragia Puerperal");</p> <p>#2 - ("Enfermeiras Obstétricas") AND ("Hemorragia Pós-Parto")</p> <p style="text-align: center;">- For international databases:</p> <p>#1 - ("Nurse midwives" OR "Nurse midwife" OR "Nurse-midwife" OR "Nurse-midwives") AND ("Disease Management" OR "Disease Managements" OR Management OR Diagnosis OR Diagnose OR Diagnoses OR Detection) AND ("Postpartum hemorrhage" OR "Delayed Postpartum Hemorrhage" OR "Immediate Postpartum Hemorrhage");</p> <p>#2 - ("Postpartum hemorrhage" OR "Delayed Postpartum Hemorrhage" OR "Immediate Postpartum Hemorrhage") AND ("Nurse Midwives" OR "Nurse Midwife" OR "Nurse-Midwife" OR "Nurse-Midwives").</p>
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Figure 1 - Stages for building the search strategy. Santa Cruz, RN, 2023

The searches will be performed in the following databases, which will be accessed through the portal of the Coordination for the Improvement of Higher Education Personnel (*Coordenação de Aperfeiçoamento de Pessoal de Nível Superior* [CAPES]) Periodicals, through the Federated Academic Community (*Comunidade Acadêmica Federada* [CAFe]), using the access of the Federal University of Rio Grande do Norte (UFRN): CINAHL with Full Text (EBSCO), Cochrane Library, EMBASE (Elsevier), Latin American and Caribbean Health Sciences Literature (LILACS), MEDLINE/PubMed (through the National Library of Medicine), SciELO, ScienceDirect (Elsevier), SCOPUS (Elsevier), Web of Science – Core Collection (Clarivate Analytics). The gray literature will be retrieved

through searches in the Digital Library of Theses and Dissertations (BTDT), Catalog of Theses and Dissertations of CAPES, Scientific Open Access Repository of Portugal (RAACP), Theses Canada, ProQuest Dissertations & Theses Global (PQDT), and Trove of the National Library of Australia, consulting the virtual page of the Brazilian Federation of Gynecology and Obstetrics Associations (*Federação Brasileira das Associações de Ginecologia e Obstetrícia* [FEBRASGO]), and the first 10 pages resulting from the search in Google Scholar. Due to the peculiarities of the databases and repositories, the strategies used will be adapted when necessary. In addition, similarities in overlap will be maintained, and the "free full text" filter will be applied when available (Figure 2).

DATABASES	SEARCH STRATEGY
<p style="text-align: center;">MEDLINE/PubMed</p> <p>A preliminary search using the title/abstract search field and the free full-text filter on January 12, 2023 returned 676 results.</p>	<p>("Nurse Midwives"[Title/Abstract]) OR ("Nurse Midwife"[Title/Abstract]) OR ("Nurse-midwife"[Title/Abstract]) OR ("Nursemidwives"[Title/Abstract]) AND ("Disease Management"[Title/Abstract]) OR ("Disease Managements"[Title/Abstract]) OR (Management[Title/Abstract]) OR (Diagnosis[Title/Abstract]) OR (Diagnose[Title/Abstract]) OR (Diagnoses[Title/Abstract]) OR (Detection[Title/Abstract]) AND ("Postpartum hemorrhage"[Title/Abstract]) OR ("Delayed Postpartum Hemorrhage"[Title/Abstract]) OR ("Immediate Postpartum Hemorrhage"[Title/Abstract])</p>
<p style="text-align: center;">CINAHL</p> <p>With strategy #1, without selecting a search field and using the full-text filter, there were 26 results. Strategy #2, without selecting a search field and using the full-text filter, returned 53 results. The preliminary search was performed on January 12, 2023.</p>	<p>#1 - ('Nurse Midwives' OR 'Nurse Midwife' OR 'Nurse-Midwife' OR 'Nurse-Midwives') AND ('Disease Management' OR 'Disease Managements' OR Management OR Diagnosis OR Diagnose OR Diagnoses OR Detection) AND ('Postpartum Hemorrhage' OR 'Delayed Postpartum Hemorrhage' OR 'Immediate Postpartum Hemorrhage')</p> <p>#2 - ('Nurse Midwives' OR 'Nurse Midwife' OR 'Nurse-Midwife' OR 'Nurse Midwives') AND ('Postpartum Hemorrhage' OR 'Postpartum Hemorrhage' OR 'Delayed Postpartum Hemorrhage' OR 'Immediate Postpartum Hemorrhage')</p>

Figure 2 - Search strategies for use in databases. Santa Cruz, RN, 2023

The eligibility criteria are that the studies included are in line with the research objective and guiding question and are in Portuguese, Spanish, or English. In addition, full remote access to the studies through the CAFE system is required. Studies in editorial and letter format will be excluded. It is important to note that due to the wide range of material in the scientific literature, there will be no temporal restrictions according to the proposed methodology for this type of study. Duplicate studies will be analyzed only once. The proposed approach suggests that two researchers initially analyze studies independently based on the title and abstract, using the eligibility criteria above. Two independent researchers will also perform the full-text review leading to data extraction. In case of disagreement, group discussions with a third researcher are proposed to reach a consensus.

The entire decision framework established in the scoping review will be presented in a flowchart, including the search results, the number of exclusions for duplicate citations, the stages of study selection by title/abstract and full text, and the final number of included studies. A dia-

gram based on the PRISMA guidelines will be developed to present this framework.

For data extraction, two researchers will create a spreadsheet in Microsoft Office Excel, including the following variables: document type, year of publication, journal, country of origin, language, objective, study type, level of evidence (classified according to the Joanna Briggs Institute⁽¹⁰⁾, sample, and literature evidence on the actions of obstetric nurses in the clinical management of postpartum hemorrhage.

All extracted data will be organized and related according to descriptive analysis. The results may be presented in tables or graphs and discussed using scientific literature, marking the final stage of the study. A letter of the alphabet followed by an Arabic number will differentiate the studies. Ethics considerations will not be necessary since the materials used consist of secondary data and are in the public domain. However, the copyright of all materials used will be respected.

CONFLICT OF INTERESTS

The authors have declared that there is no conflict of interests.

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