

Prevalence of medication use in the postpartum period: A narrative review of current trends and implications for midwifery practice

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ABSTRACT

INTRODUCTION The postpartum period is a critical phase for maternal recovery and infant care. The aim of this narrative review is to explore the prevalence and indications of medication use in the postpartum period.

METHODS This narrative review synthesized studies published in English over the past 20 years from electronic databases, including PubMed, Scopus, CINAHL, and the Cochrane Library, using key terms. Screening and data extraction were performed independently by two reviewers. Disagreements were resolved through discussion with a third reviewer. No formal quality assessment was performed.

RESULTS Postpartum medication use is common, with prevalence rates varying between 34% and 100%, depending on the study population and setting. Medications for the nervous system (21.6%-99.6%), anti-infectives (27.6%-99.3%), and hematopoietic drugs (1.4%-91.7%) are frequently prescribed to manage pain, prevent infections, and support recovery from blood loss or prevent thrombosis. Musculoskeletal medications (14.1%-87.4%), drugs for the alimentary tract and metabolism (5.9%-79.5%), and treatments for the genitourinary system and hormonal preparations (7%-69.2%) are also commonly used, with significant variability among studies. In contrast, cardiovascular (2%-22.4%) and respiratory medications (0.8%-15%) are less commonly prescribed. The reasons for medication use include immediate recovery needs and the management of acute conditions. Medications are also used to manage chronic conditions.

CONCLUSIONS Medication use is highly prevalent in the postpartum period worldwide. A balanced approach, combining pharmacologic and non-pharmacologic care, is essential for safe recovery. Midwives are vital in helping mothers make informed choices. Future research should aim to establish standardized medication guidelines and evaluate safety to support evidence-based postpartum care.

INTRODUCTION

The postpartum period is marked by significant physiological and emotional adjustments as a woman recovers from pregnancy and childbirth while also adapting to the demands of caring for a newborn. During this time, the mother's body undergoes numerous physical changes, including uterine involution, hormonal shifts, and the initiation of lactation, all of which can influence her health and well-being. These changes, along with the demands of newborn care, contribute to a period that is often challenging for many women, both physically and psychologically (Chauhan & Tadi, 2022).

In addition to normal physiological recovery, a variety of health issues can emerge or continue from pregnancy into the postpartum phase, necessitating medical interventions (Lopez-Gonzalez & Kopparapu, 2022). For example, perineal pain, uterine cramping, infections, and complications from cesarean sections are common postpartum concerns requiring pain management and sometimes antibiotics. Likewise, mental health challenges, notably postpartum depression and anxiety, frequently require pharmacological treatment (Saharoy et al., 2023). Furthermore, many women enter the postpartum period with pre-existing conditions, such as hypertension, diabetes, or thyroid disorders, which often require continued or adjusted medication to maintain maternal health during this critical phase (Walker et al., 2015).

The prevalence of medication use in the postpartum period reflects these diverse health needs, yet there are unique

considerations that differentiate postpartum medication management from other phases of life. Key among these is the potential impact on breastfeeding, as medications taken by the mother may pass into breast milk and, consequently, to the infant. This possibility raises concerns and often influences both the choice of medication and the dosage, making postpartum pharmacology complex (Saha et al., 2015; Tigka et al., 2023). Furthermore, midwives, who are frequently the primary caregivers for postpartum women, must be well-informed about safe medication use, understand the risk-benefit balance, and stay up-to-date with guidelines that ensure maternal and infant health (Tigka et al., 2023).

This narrative review aims to synthesize current evidence on the prevalence and types of medication use in the postpartum period, focusing on the indications that drive pharmacologic interventions. Although existing studies shed light on aspects of postpartum medication use (Saha et al., 2015), there remains a significant gap in the literature regarding comprehensive data across diverse populations. Additionally, limited research has addressed the high rates of polypharmacy in the postpartum period (de Waard et al., 2019; Tigka et al., 2023). By consolidating findings from diverse settings, this narrative review seeks to fill critical gaps in knowledge, inform future research priorities, and promote the development of evidence-based guidelines to optimize postpartum medication management. Through a deeper understanding of these issues, healthcare providers, especially midwives, can better support postpartum women, ensuring safe, informed, and holistic care that enhances maternal and infant health outcomes.

METHODS

Study Design and Quality Assessment

This study used a narrative review design to synthesize literature on postpartum medication use and its implications for midwifery practice. This approach allowed for a broad exploration of findings, aiming to present a comprehensive overview of varied study types without formal quality assessment constraints. Instead, informal quality checks were applied throughout the narrative review process. Studies were selected based on their relevance to postpartum care and midwifery, with preference given to those with larger, more representative samples and rigorous study designs, such as cohort studies and systematic reviews. Where applicable, potential biases, including region-specific practices, were noted to contextualize findings. This method enabled a broad synthesis of current trends, emphasizing relevance over formal risk-of-bias metrics.

Eligibility criteria

Inclusion Criteria: Studies eligible for inclusion were observational studies (e.g., cross-sectional, cohort), randomized controlled trials (RCTs), and systematic reviews that addressed medication use during the postpartum period.

These included studies focusing on both pharmacologic and non-pharmacologic treatments for maternal conditions. The language was limited to English, ensuring accessibility and relevance to global health standards.

Exclusion Criteria: Studies published more than 20 years ago, non-English language publications, and studies focusing solely on pharmacotherapy unrelated to postpartum care were excluded.

Search Strategy

A comprehensive search of multiple electronic databases was conducted, including PubMed, Scopus, CINAHL, and the Cochrane Library, covering studies published from 2004 to 2024. The search strategy included specific key terms and Medical Subject Headings (MeSH) relevant to postpartum medication use. Terms used included combinations of “postpartum”, “medication use”, “medication intake”, “pharmacotherapy”, “breastfeeding”, and “prevalence”. The Boolean operators “AND”, “OR”, and “NOT” were applied to refine and combine search terms, ensuring that the search effectively captured studies focused on specific aspects of postpartum care. Using these operators enabled a more targeted yet comprehensive search across databases, enhancing the accuracy and relevance of the results.

Selection Process

Titles and abstracts were initially screened independently by two reviewers (M.T. and C.N.) to identify studies relevant to postpartum medication use. Full-text reviews were then conducted for articles meeting the eligibility criteria, and any disagreements in study selection were resolved by discussion or consultation with a third reviewer (K.L.). This screening ensured the inclusion of clinically relevant data.

Data Extraction and Synthesis

Data extraction was performed independently by two reviewers (M.T. and D.M.) to ensure consistency and minimize bias. Extracted information included study characteristics (e.g., design, sample size, and location), prevalence rates of specific medications, and the clinical indications for medication use. A standardized data extraction form was used to systematically collect information across studies, facilitating the comparison of findings.

Following extraction, data were synthesized narratively. Results were organized into key themes: overall prevalence of medication use, prevalence by Anatomical Therapeutic Chemical (ATC) classification categories, and clinical indications for medication use during the postpartum period. This thematic synthesis approach allowed for a structured interpretation of complex data across diverse studies.

RESULTS

This narrative review provides a comprehensive overview of medication use prevalence among postpartum women. The results are organized into key themes: (1) the overall

prevalence of medication use in the postpartum period, (2) the prevalence of medications according to the level 1 of Anatomical Therapeutic Chemical (ATC) classification system (WHO, 2024), and (3) the reasons for medication use in the postpartum period.

1. Overall prevalence of medication use in the postpartum period

The prevalence of medication use in the postpartum period varied significantly across studies. A systematic review by Saha et al. (2015) reported that the percentage of postpartum women using medications ranged widely from 34% to 100%, with the majority of studies indicating that more than 50% of women (regardless of breastfeeding status) required at least one medication. In studies that excluded medications administered during hospitalization, lower prevalence rates were reported, such as 79.6% from a prospective cohort study by Bérard and Sheehy (2014), 66% from a multi-national cross-sectional study by Ceulemans et al. (2022), and 84.2% from a cross-sectional study by de Waard et al. (2019). In Greece, Tigka et al. (2023) conducted a prospective cohort study that revealed that 100% of postpartum women reported using at least one medication beyond vitamins, with a median use of nine medications (IQR: 8–11), highlighting particularly high rates of postpartum medication use in this setting.

2. Prevalence of medications according to the level 1 of ATC classification system

The ATC classification system categorizes active substances based on the organ or system they target and their therapeutic, pharmacological, and chemical properties. This system is organized into five levels (WHO, 2024), enabling comparisons across various categories depending on the study's objectives. In most studies included in this narrative review, level 1 of the ATC classification system was used to classify medications administered to mothers during the postpartum period, allowing for consistent comparisons across studies (Table 1).

3. Reasons for medication use in the postpartum period

In the postpartum period, medication use is essential for supporting both immediate recovery needs and the management of acute and chronic conditions, ensuring the health and well-being of new mothers. For pain relief after vaginal delivery with perineal trauma, standard interventions include acetaminophen, non-steroidal anti-inflammatory drugs (NSAIDs), and cold therapy, such as ice or chemical cold packs (Luxey et al., 2024). After a cesarean section, a multimodal pain management approach — combining pharmacologic treatments (e.g., NSAIDs, laxatives) with nonpharmacologic options (e.g., abdominal binders, deep breathing exercises, movement) — is often effective, potentially reducing opioid requirements and lowering the risk of misuse and dependency (Ubom et al., 2023).

Additionally, medications are frequently necessary to manage acute postpartum conditions and complications, including postpartum hemorrhage, hypertension, infections, breast issues, constipation, urinary incontinence, and mental health concerns such as “baby blues” and postpartum depression (Gmelig Meyling et al., 2023; Yaya Tesema et al., 2023). For many women, medication use extends beyond immediate recovery to include chronic conditions like hypertension, obesity, diabetes, thyroid disorders, renal disease, and mood disorders (ACOG, 2018). Together, these diverse needs highlight the comprehensive nature of postpartum care, addressing both the immediate and ongoing health challenges that accompany motherhood.

DISCUSSION

The findings of this narrative review provide valuable insights into the prevalence and indications for medication use in the postpartum period, underscoring the complex medical needs that many women experience after childbirth. This study contributes novel perspectives by consolidating data across diverse settings and populations, highlighting both the extent of medication use and the specific conditions driving it during the postpartum phase.

Medication use is widespread in the postpartum period, with studies indicating that 34% to 100% of postpartum women use at least one medication in the weeks following delivery (Bérard and Sheehy, 2014; Ceulemans et al., 2022; de Waard et al., 2019; Saha et al., 2015; Tigka et al., 2023). The range varies largely due to differences in study designs, population characteristics, healthcare settings, and regional practices. The high prevalence aligns with the diverse health challenges women face during this phase, from managing childbirth-related pain to addressing mental health concerns and chronic health conditions. Notably, women who have cesarean deliveries exhibit higher rates of medication use, particularly for pain management, reflecting the greater physical recovery demands associated with surgical childbirth (Silveira et al., 2015). Medication usage rates are also expected to be higher in studies that include drugs administered during hospitalization compared to those that exclude them. Other contributing factors, such as older maternal age, pre-existing health conditions requiring ongoing treatment, and the high prevalence of polypharmacy in certain countries, also likely play a role in increased postpartum medication use.

The prevalence of medication use during the postpartum period is significant, highlighting the diverse health needs of new mothers. Medications for the nervous system (Ceulemans et al., 2022; Tigka et al., 2023), anti-infectives for systemic use (Bérard and Sheehy, 2014; Oshikoya et al., 2012; Tigka et al., 2023), and hematopoietic drugs (de Waard et al., 2019; Tigka et al., 2023) are among the most frequently prescribed, addressing pain, infection prevention or treatment, and recovery from blood loss or prevention of thrombosis. Musculoskeletal medications (Stultz et al.,

Table 1. Prevalence of medication use during the postpartum period according to the level 1 of the Anatomical Therapeutic Chemical (ATC) classification system.

Drug Category (ATC Level 1)	Included medicines in the drug category	Prevalence
Nervous System	anesthetics, analgesics, antiepileptics, psychotropics, psychoanaleptics	Ceulemans et al. (2022): 37% Lutz et al. (2020): 29% Oshikoya et al. (2012): 21.6% Tigka et al. (2023): 99.6%
Anti-infective for Systemic Use	antibiotics, anti-virals, immune serums and immunoglobulins, vaccines	Bérard and Sheehy (2014): 44.1% Oshikoya et al. (2012): 42.2% Pallavi et al. (2013): 27.6% Tigka et al. (2023): 99.3%
Blood and blood forming organs (Hematopoietic System)	antithrombotic agents, anti-anemia medicines	Ceulemans et al. (2022): 1.4% de Waard et al. (2019): 24.5% Lutz et al. (2020): 16.2% Tigka et al. (2023): 91.7%
Musculo-skeletal System	anti-inflammatory, anti-rheumatic, muscle relaxants	Ceulemans et al. (2022): 14% Lutz et al. (2020): 14.1% Stultz et al. (2007): 71% Tigka et al. (2023): 87.4%
Alimentary Tract and Metabolism	antacid, medicines for functional gastrointestinal disorders, anti-emetic and anti-nausea medicines, medicines for treatment of bile and liver diseases, laxatives, antidiarrhoeal, anti-inflammatory/anti-microbial bowel medicines, medicines used in diabetes mellitus, mineral supplements	Ceulemans et al. (2022): 6% Lutz et al. (2020): 5.9% Pallavi et al. (2013): 15% Tigka et al. (2023): 79.5%
Genito-urinary System and Sex Hormones	gynecological antiseptics, other gynecologicals, sex hormones, medicines for diseases of the urinary tract	Ceulemans et al. (2022): 7% Lutz et al. (2020): 22.6% Tigka et al. (2023): 69.2%
Systemic Hormonal Preparations, excluding sex hormones and insulins	corticosteroids for systemic administration, thyroid treatment	Ceulemans et al. (2022): 5.1% Fortinguerra et al. (2021): 35.8–44.2% Tigka et al. (2023): 25.3%
Cardiovascular System	antihypertensives, vasoprotectants, beta-adrenergic receptor blockers, calcium channel blockers, antihypertensive agents acting on the renin-angiotensin system, hypolipidemic agents	Al-Sawalha et al. (2016): 2% Chaves et al. (2011): 1.3% Fortinguerra et al. (2021): 16.2–22.4% Lutz et al. (2020): 2.4% Tigka et al. (2023): 4%
Respiratory System	nasal preparations, medicines for obstructive airway diseases, anti-cough and cold medicines, anti-histamines for systemic administration	Bérard and Sheehy (2014): 10.6% Ceulemans et al. (2022): 15% Lutz et al. (2020): 0.8% Tigka et al. (2023): 3.2%

2007; Tigka et al., 2023) and those for the alimentary tract and metabolism (Pallavi et al., 2013; Tigka et al., 2023) are also commonly used, underscoring the importance of pain management and metabolic support during recovery in the postpartum period. Additionally, medications for the genitourinary system and hormonal preparations (Lutz et al., 2020; Tigka et al., 2023), often related to postpartum hormonal regulation or contraception, are frequently prescribed. The high prevalence of ergometrine use in Greek postpartum women (69.2%) reflects its common prescription to support uterine involution (Tigka et al., 2023). Cardiovascular and respiratory system drugs are

less commonly used but remain critical for women with specific pre-existing or pregnancy-related conditions (Al-Sawalha et al., 2016; Chaves et al., 2011; Lutz et al., 2020; Tigka et al., 2023). This widespread use of medications in the postpartum period underscores the importance of comprehensive pharmaceutical care to support recovery and well-being, while also highlighting the need for careful medication management to avoid potential adverse effects, especially in breastfeeding mothers.

The extensive use of medications in postpartum care highlights the complex health needs of new mothers while also posing a significant challenge due to the risks

associated with polypharmacy. Many women require medications for pain, acute complications like hemorrhage or infections, and chronic conditions such as hypertension, diabetes, and mood disorders (Luxey et al., 2024; Ubom et al., 2023; ACOG, 2018). This frequent and varied medication use increases the risk of adverse interactions, side effects, and potential impacts on breastfeeding infants (Saha et al., 2015; Tigka et al., 2023). Encouragingly, multimodal pain management approaches following cesarean deliveries are gaining traction, combining pharmacologic and nonpharmacologic methods, such as abdominal binders, breathing exercises, and movement, to reduce opioid dependence and associated risks (Ubom et al., 2023). Achieving effective and safe postpartum care, thus requires a balance between essential pharmacologic treatments and supportive non-pharmacologic methods. Non-drug interventions — such as physical therapy, mental health counseling, and lifestyle adjustments — can reduce medication reliance while promoting recovery and supporting long-term health (Sadiq, 2023).

In Greece, nearly all postpartum women are routinely prescribed a combination of analgesics, antibiotics and mineral supplements during their hospital stays, regardless of their mode of delivery (Tigka et al., 2023). This common practice of prescribing multiple medications reflects an approach aimed at mitigating health risks and preventing complications, but also underscores a strong trend toward polypharmacy. The widespread nature of this practice not only raises concerns about potential adverse effects and drug interactions, but also adds to healthcare costs. In fact, pharmaceutical expenditures in Greece continue to climb as a growing portion of the national healthcare budget, raising questions about sustainability (Pappa et al., 2011).

Overall, these findings underscore the need for an integrated, multidisciplinary approach to postpartum care, with midwives playing a vital role in promoting safe and effective medication use (An Bord Altranais, 2007). By remaining informed on the complexities of postpartum pharmacotherapy, midwives can better support maternal recovery, foster successful breastfeeding, and address women's unique physical and mental health needs during this period.

This narrative review has several limitations that should be considered when interpreting its findings. First, the reliance on literature published exclusively in English may introduce language bias, potentially overlooking relevant studies in other languages. Additionally, there is considerable variation in methodologies across studies, especially in defining the postpartum period and in measuring medication use, which could affect the generalizability of the findings. By excluding studies published more than 20 years ago, we also limit our perspective on historical trends in postpartum medication practices. Furthermore, a formal quality assessment of the included studies was not conducted, which may impact the robustness of the results. Lastly, differences in healthcare

systems and regional prescribing practices may further limit the applicability of findings across diverse populations.

This narrative review underscores the essential role midwives play in managing medication use during the postpartum period, particularly in pain relief, mental health support, and chronic condition management. As primary caregivers, midwives are uniquely positioned to guide women through safe medication choices, especially when breastfeeding, ensuring that mothers understand both the benefits and potential risks of pharmacologic interventions (Saha et al., 2015; Tigka et al., 2023). They also provide crucial support in recommending non-pharmacologic options, empowering women to reduce reliance on medications when appropriate (Ingram et al., 2022). With their expertise in holistic care, midwives address the comprehensive physical and emotional needs of new mothers, facilitating informed, personalized care that fosters recovery and promotes positive postpartum experiences (ICM, 2014). Through their active involvement, midwives not only enhance safe and effective postpartum care but also help to mitigate the risks of polypharmacy, providing compassionate support that prioritizes long-term health and well-being. This narrative review further implies that enhancing midwifery training in pharmacology and non-drug interventions could strengthen the impact of midwives in optimizing postpartum care, potentially reducing healthcare costs and improving maternal outcomes across diverse healthcare settings.

Future research should also focus on understanding the prevalence of medication use during the postpartum period and breastfeeding mothers. By examining how frequently specific medications are prescribed or self-administered by new mothers, we can gain a clearer picture of current practices and identify potential areas for enhancing safety guidelines. Such research would help inform healthcare providers and policymakers, enabling them to support evidence-based decisions and optimize maternal and infant health outcomes in the postpartum period.

CONCLUSIONS

The findings of this narrative review emphasize that while medications are essential for addressing issues such as pain, acute complications, and chronic conditions, the widespread use also introduces risks associated with polypharmacy and potential adverse effects on both mothers and breastfeeding infants. In response to these challenges, a balanced approach that integrates pharmacologic treatments with supportive non-pharmacologic methods is essential to ensure safe, holistic postpartum care. Midwives, equipped with knowledge of both medication management and alternative interventions, are uniquely positioned to guide new mothers through safe and effective recovery, fostering informed choices that prioritize both short-term and long-term health. Future research should aim to establish standardized guidelines on postpartum medication use, including focused studies on medication prevalence, safety, and long-term

health outcomes for mothers and infants. Such research is vital to inform evidence-based practices, allowing healthcare providers and policymakers to develop comprehensive strategies that enhance postpartum care quality, minimize risks, and support mothers in their recovery journey.

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CONFLICTS OF INTEREST

The authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest and none was reported.

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AUTHORS' CONTRIBUTIONS

All authors: research concept and design, writing of the manuscript, critical revision of the manuscript, and final approval of the manuscript. MT, CN and DM: collection and/or assembly of data, data analysis and interpretation. The primary author had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.