Research Brief

WOMEN’S EXPERIENCE OF PERIPARTUM HYSTERECTOMY AND PROVISION OF CARE IN LOW- AND MIDDLE-INCOME COUNTRIES

A Scoping Review Brief

A PERIPARTUM HYSTERECTOMY, the removal of the uterus during pregnancy or up to 42 days postpartum, is a procedure a surgeon may perform in response to a life-threatening hemorrhage during or immediately after a cesarean or vaginal delivery.\(^1\) Hemorrhaging may arise due to a uterine rupture following obstructed labor or under conditions of placenta accreta spectrum (PAS) wherein the placenta does not detach spontaneously following childbirth.\(^2\) Peripartum hysterectomy requires trained surgical healthcare providers, the availability of functional blood transfusion services, and intensive care management. A poorly performed hysterectomy can lead to devastating intraoperative, perioperative, and postoperative consequences.\(^3\)

The lack of resources and trained personnel in low-income countries make peripartum hysterectomy particularly challenging to manage. The large number of home births as well as difficulty in reaching tertiary-level hospitals and in receiving appropriate care further affect the outcomes of mothers and of their babies in resource-poor countries.

This brief summarizes a scoping review focused on the provision and experience of care in the context of peripartum hysterectomy in low- and middle-income countries. These two components make up the “process” building block of the World Health Organization (WHO) quality of care framework.\(^4\) This brief also summarizes key facilitators and barriers to appropriate care (evidence-based, high-quality, timely, and at the appropriate levels) in facilities providing peripartum hysterectomy as well as recommendations to strengthen the provision of care and women’s experience of this procedure in low- and middle-income countries.

Quality of Care Framework for Maternal and Newborn Health

Since the World Health Organization (WHO) definition of quality of care within the context of maternal and newborn health is broad and multidimensional, WHO issued a framework to operationalize the concept. The process building block of the framework includes provision and experience of care.

Provision of care is comprised of:
1. Evidence-based practices for the management of complications
2. Actionable information systems
3. Functional referral systems

Experience of care is comprised of:
1. Effective communication
2. Respect and dignity
3. Emotional support

Competent and motivated human resources and essential physical resources are elements of provision and experience of care.
FINDINGS

The initial search yielded 2,991 articles across five electronic databases. Twenty studies (Table 1) resulted after removal of duplicates, abstract and full-text screening, and the addition of one study through snowballing. This includes 11 studies conducted in Africa, 8 in Asia and the Middle East, and 1 global study. Eleven studies documented emergency peripartum hysterectomies. The most frequently reported surgical details included the type of procedure, level of provider expertise, and percent of patients admitted to intensive care (Table 1). Fewer studies included estimated blood loss and operative time.

Table 1. Overview of Studies Included in the Scoping Review

<table>
<thead>
<tr>
<th>Lead Author</th>
<th>Year</th>
<th>Country</th>
<th>Emergency peripartum hysterectomy</th>
<th>Emergency or elective</th>
<th>&gt;1 patient experiencing near-miss event</th>
<th>Exclusively peripartum hysterectomy performed</th>
<th>Subtotal hysterectomy performed</th>
<th>Level of expertise of surgeon or anesthesiologist</th>
<th>Estimated blood loss reported</th>
<th>Operative time</th>
<th>Surgical complications</th>
<th>% of patients admitted to intensive care unit</th>
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<td>Nieto-Calvache</td>
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Half of the studies aimed to capture the frequency or prevalence, indications, risk factors, and/or outcomes of peripartum hysterectomy through cross-sectional designs. Approximately half of the studies explored emergency obstetric conditions for which peripartum hysterectomy is a treatment (e.g., PAS or uterine rupture) or aimed to characterize near-miss events or severe maternal morbidity. All the studies, however, featured descriptions of peripartum hysterectomy provision that were reviewed for the presence of practice or system factors representing quality of care as defined by the WHO framework adapted for peripartum hysterectomy (Table 2). However, only two studies mentioned the routine assessment of women at admission, which is an important element of quality of care as an evidence-based practice for the management of peripartum hysterectomy.

Over half of the studies reported postpartum hemorrhage, PAS, and uterine rupture as indications for peripartum hysterectomy (Table 2). Only two studies reported sepsis as an indication for peripartum hysterectomy. For the 13 studies reporting postpartum hemorrhage as an indication, 5 describe attempting a first-line treatment.7,10,11,17,24 Although 11 studies reported uterine rupture as an indication, prevention and management details were lacking. Only one study described antibiotic administration for obstructed labor (whose complications, such as uterine rupture, may lead to peripartum hysterectomy and for which antibiotics can prevent infections for patients experiencing ruptured membranes);23 and only one study mentioned chronic lack of antibiotics.11 No study mentioned the timing of laparotomy following diagnosis of a rupture or effective use of the partograph to detect obstructed labor. Similarly, only two studies described prenatal diagnosis and appropriate management of PAS.20,24 Few studies reported on perinatal outcomes, reasons for maternal death, or key surgical details, such as mean operative time or estimated blood loss.

Few studies reported on effective communication, respect and dignity, or emotional support (Table 2). Only five studies described whether effective communication between patients and providers occurred, and two of those only reported on informed consent.7,21 The other three studies highlighted a lack of explanation from healthcare providers about the reason for surgery, how an absence of clear explanation contributed to patient fear and anxiety, and how patients did not fully understand the information communicated and/or were left with questions. One study reported mixed accounts wherein some patients were pleased with the quality of information provided while others did not feel that information was timely or adequate. The concept of respectful and dignified care was examined in three qualitative studies documenting patients who received and those who did not receive peripartum hysterectomy. Some patients described experiencing harsh treatment from providers and feeling judged and disrespected; however, some reported empathy and attention from providers contributing to a sense of comfort and safety. Two studies described patients receiving emotional support following hysterectomy: one study focusing on a tertiary hospital in Nigeria reported that all hysterectomy patients received counseling after the procedure and one study in Malaysia noted that family members who were able to join the patient during hospitalization provided support.

**Barriers**

Poor utilization and quality of antenatal care (ANC)6,9-11,14,17,18,21 and poor-quality intrapartum care emerged as barriers to patients receiving appropriate care.6,8,9,15,16,21,23 Poor quality of ANC may contribute to low rates of utilization of these services,5,6,15,16,19,21 resulting in failure to identify high-risk conditions,9,13,17,21 such as scarred uterus.9 In terms of low-quality intrapartum care, four studies reported protracted home childbirth, sometimes with a traditional birth attendant, with women delaying facility care-seeking, often until seriously ill.5,8,11,21 One study also reported poor quality of care during institutional childbirth (e.g., inappropriate patient monitoring, failure to use a labor monitoring tool or partograph, and ill-considered use of oxytocin) and high levels of uterine rupture and missed diagnoses of uterine rupture upon referral to higher-level care.9
Table 2. WHO Quality of Care Framework for Maternal and Newborn Health Elements Adapted for Peripartum Hysterectomy

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<th>Lead Author</th>
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<td></td>
<td>Evidence-based practices for management of conditions</td>
<td>Actionable information systems</td>
<td>Functional referral systems</td>
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<td></td>
<td>Routine assessment at admission</td>
<td>Indication reported: postpartum hemorrhage</td>
<td>Indication reported: uterine rupture</td>
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<td></td>
<td>Indication reported: sepsis</td>
<td>Perinatal outcomes missing</td>
<td>Reason for maternal death missing</td>
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<td></td>
<td>Surgical details missing</td>
<td>Blood transfusions and ICU admissions missing</td>
<td>Weakness in referral system reported</td>
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<td>Blood in referral from lower-level facilities</td>
<td>Delays in reaching facilities due to transport</td>
<td>Delays in reaching facilities due to transport</td>
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<td></td>
<td>Effective communication</td>
<td>Respect and dignity</td>
<td>Emotional support</td>
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<td></td>
<td>HR: Consultants or multi-disciplinary teams operating</td>
<td>HR: Non-specialists/residents doing surgery/anesthesia</td>
<td>Physical resources: cleaning practices</td>
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<td></td>
<td>Physical resources: availability of ICU beds</td>
<td>Physical resources: availability of imaging</td>
<td>Physical resources: availability of operating rooms</td>
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Legend: Included, Not included
Facilitators

Two studies identified a functional internal referral system that allows patients to receive immediate attention upon arrival as a facilitator to obtaining appropriate care, acting on the delays that patients may experience when seeking care.\textsuperscript{12,14} Several studies identified the availability of multidisciplinary teams to treat conditions such as PAS,\textsuperscript{20} the availability of consultants to perform surgeries and to supervise residents,\textsuperscript{5,9,12} and adequate infrastructure, such as blood transfusion services and intensive care unit beds\textsuperscript{7,8,9,10,12,15,16,18,20,21,23} as important facilitators to receiving quality care when patients reach the appropriate facility. Respectful care offered by providers rendered services more acceptable according to one qualitative study from Malaysia.\textsuperscript{14}

DISCUSSION

The literature revealed several themes related to the provision of care and experience of care of peripartum hysterectomy patients through the application of the WHO Quality of Care Framework. Several articles highlighted weaknesses with information systems and outcomes measurement, ineffective communication between patients and providers, and nonspecialists or residents providing surgery or anesthesia. Key deficits in quality of care were described across the continuum of care, including inadequate recognition of uterine scars during ANC as well as inappropriate monitoring and treatment during labor and delivery—such as limited to no use of labor monitoring tools.

However, many aspects of quality of care were missing from the literature. For example, although many articles reported the indications for peripartum hysterectomy—especially for postpartum hemorrhage, uterine rupture, and PAS—these articles lacked descriptions of first-line treatment, potentially because the studies in this review focused on describing peripartum hysterectomy prevalence, indications, and outcomes. As previously mentioned, only a few studies described experience of care. Indeed, many of the studies included in this review used cross-sectional designs and relied on record reviews, which may lack detailed information on quality of care. Therefore, the implications and results of this review should be interpreted with caution.

Due to the first two delays outlined in the Thaddeus and Maine three delays model (i.e., decision to seek care and delay in reaching care),\textsuperscript{25} patients may be reaching tertiary-level facilities in worse condition than if they sought care immediately. For example, one study from Nigeria noted that most women undergoing hysterectomy labored at home with traditional birth attendants, reaching the facility in hypovolemic shock.\textsuperscript{15} Similarly, a study in Pakistan reported that half of hysterectomy patients did not receive early referral to higher-level facilities.\textsuperscript{19} These factors influence the outcome of care provided.\textsuperscript{20} Only three studies reported a delay in receiving prompt treatment (i.e., surgery) in the facility where peripartum hysterectomy was performed, the third delay as categorized by Thaddeus and Maine.\textsuperscript{8,13,22} This may reflect unwillingness or inability to investigate in-hospital factors that hinder rapid access to high-quality peripartum hysterectomy. Still, the studies reported many factors that severely impact the provision of essential life-saving maternal and newborn care, especially at tertiary-level facilities. These include the dearth of technically competent human resources. For example, surgery and anesthesiology are often reportedly performed by residents or nonspecialists.\textsuperscript{6,7,9,10,16,23} Essential infrastructure, such as effective blood services or availability of antibiotics, is critical to assuring the appropriate management of obstetric conditions through peripartum hysterectomy. Therefore, the chronic lack of infrastructure at tertiary-level facilities, as some studies reported,\textsuperscript{6,9,11} only serves to amplify quality of care challenges.

The experience of care, reported qualitatively in three studies, pointed to poor patient-provider communication, including incomplete information being relayed and patients' feelings of judgment and disrespect. These are damaging in and of themselves, but also could deter future health service utilization.
RECOMMENDATIONS

Based on these findings, key recommendations for policymakers, implementers, and researchers include:

- Conduct further research of patients’ experiences undergoing peripartum hysterectomy to help develop effective communication strategies, ensure respectful practices, and offer appropriate emotional support to mitigate the psychological and social consequences that accompany the loss of future fertility and the possible long-term health sequelae of this major surgery.
- Improve the quality of ANC, particularly healthcare provider competencies in recognizing high-risk pregnancies that may benefit from early contact with higher levels of care (particularly patients with prior cesarean sections).
- Improve intrapartum care at peripheral facility levels and build healthcare provider capacities to rapidly detect and initiate management of obstetric complications, such as postpartum hemorrhage or obstructed labor, and to seek early referrals.
- Strengthen referral systems and establish appropriate referral protocols for patients with intractable hemorrhage, obstructed labor, or suspected PAS between non-tertiary and tertiary-level facilities.
- Enhance providers’ surgical capabilities at tertiary-level facilities to safely conduct peripartum hysterectomy, especially in cases of PAS, through on-site training, simulation, and remote supervision.
- In areas where there is a specialized workforce shortage, expand access to surgical care through task-shifting, with appropriate training and supervision of non-specialists or residents.27
- Support audits to assess the details of obstetric management prior to the hysterectomy, the decision-to-surgery interval, complications, and outcomes.
- Conduct qualitative research on barriers and facilitators for delivery of optimal peripartum hysterectomy, as previous studies have done for cesarean section.28

REFERENCES


**MOMENTUM Safe Surgery in Family Planning and Obstetrics**

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