

Postpartum Hemorrhage

An AOM Clinical Practice Guideline Summary

This summary provides easy access to some of the most essential content of AOM CPG No. 17 – Postpartum Hemorrhage and is intended for use in conjunction with the full-length CPG. For a complete analysis of the research relevant to the midwife’s management of postpartum hemorrhage (PPH), along with all citations, refer to the full CPG, available at <http://bit.ly/AOMPPHCPG>

Definition of PPH

- Primary PPH (within 24 hours) is typically described as bleeding > 500 mL after vaginal birth and > 1000 mL after caesarean section (CS), while **severe** PPH is bleeding > 1000 mL after vaginal birth. (1,2) However, any amount of blood loss that results in signs and symptoms of hypovolemic shock or hemodynamic instability should be considered PPH. (3)

Incidence of PPH

- Primary PPH is estimated to occur in 2% to 6% of all births worldwide. (4,5) Secondary PPH occurs ≥ 24 hours postpartum and is estimated to occur in 1% to 3% of all births, but actual incidence is less certain. (6,7)
- In Hutton et al.’s study of home births and a matched sample of hospital births attended by Ontario midwives, PPH was documented in 2.5% of home and 3.0% of hospital births. (8)
- The overall rate of PPH increased from 5.1% to 6.2% in Canadian hospitals from 2003-2010, driven by a rise in incidence of atonic PPH. Similar trends have been observed in other high-resource countries. Researchers have not been able to identify a clear cause for recent population-level increases in PPH. (9,10)

Causes and complications of PPH

- The pathophysiology of PPH can be conceptualized by considering the 4 Ts: tone, tissue, trauma and

thrombin. As the majority of PPH cases are due to uterine atony (70%) this guideline focuses on this cause. However midwives should consider other possible causes of abnormal bleeding when approaching the management of PPH.

- Maternal deaths due to PPH are rare in Canada, occurring in approximately 30/100 000 cases of PPH diagnosed from 1991-2010. (10,11) Severe adverse outcomes are rare even in cases of PPH severe enough to warrant blood transfusion. Complications associated with PPH in women with uterine atony and blood transfusion include: hospital stay > 7 days, hysterectomy, coagulopathy, acute respiratory failure, acute renal failure and prolonged mechanical ventilation (≥ 96 hours). (12)

Risk factors associated with PPH

- Researchers have identified numerous antenatal and intrapartum factors associated with increased risk of PPH. Most factors are not strongly predictive of PPH and PPH often occurs in the absence of risk factors. It is not clear how presence of multiple risk factors affect overall risk of PPH.
- Research suggests that home or out-of-hospital birth is associated with a similar or reduced risk of PPH compared to hospital birth. Medical interventions that are more likely to occur in a hospital setting (induction, augmentation, operative delivery) may explain some of the differences observed between groups. (13,14)



Selected risk factors for severe postpartum hemorrhage from population-level studies

Stronger risk factors (OR ≥ 4)	Moderate risk factors (OR 2 to 4)	Weaker risk factors (OR < 2)
<p>Known before birth</p> <ul style="list-style-type: none"> • Placenta previa • Uterine fibroids <p>Known after birth</p> <ul style="list-style-type: none"> • Cervical laceration • High vaginal laceration • Retained placenta 	<p>Known before birth</p> <ul style="list-style-type: none"> • Parity ≥ 5 • Multifetal gestation • Chorioamnionitis • Hypertensive disorders of pregnancy • Placental abruption <p>Known after birth</p> <ul style="list-style-type: none"> • Perineal tear (3°/4°) • Operative delivery (forceps and/or vacuum) • Birthweight ≥ 4500 g • Caesarean section 	<p>Known before birth</p> <ul style="list-style-type: none"> • Polyhydramnios • Age < 20 • Previous caesarean section • Gestational age 32-36w • Age ≥ 40 • Induction of labour • Primiparity

Sources: (10,12,15-17)

PREVENTION OF PPH

Management approaches to the third stage of labour

Physiologic management

- “**Physiologic management**” is often used interchangeably with “**expectant management**” in the context of obstetric research. Expectant management may describe the absence of active management rather than the coordinated activities employed by the midwife in providing physiological third-stage care to a woman who has chosen to forego active management of the third stage of labour. Newer research supports an evolving model of physiologic management based on support for physiologic birth and minimizing disruptions to physiologic hormonal systems, rather than the absence of the interventions that constitute active management. (18,19)
- Traditionally, **expectant management** has been characterized as a “hands-off” approach:
 - » A uterotonic agent is not administered prophylactically.
 - » Signs of placental separation are awaited.
 - » The umbilical cord is neither clamped nor cut until cord pulsation has ceased or the placenta has delivered.
- **Physiologic care**, as described by midwifery researchers, encompasses additional actions meant to promote the physiologic processes of the third stage during physiologic management. (21,22) While there is no consensus about what constitutes physiologic third-stage care, the following factors are often included in more expansive definitions:
 - » facilitating a comfortable, warm environment;
 - » encouraging an upright position to facilitate birth of placenta;
 - » refraining from fundal massage; and
 - » facilitating immediate skin-to-skin contact with newborn and early breastfeeding. (21,22)
- Health-care providers who do not routinely administer a prophylactic uterotonic but use controlled cord traction (CCT) (sometimes called the Brandt-Andrews manoeuvre) may consider their management style to be physiologic rather than active. According to the definitions used in relevant clinical trials, this approach falls into neither category.

Active management

- In 2003, an international joint policy statement developed by the International Confederation of Midwives (ICM) and the International Federation of Gynecologists and Obstetricians (FIGO) was endorsed by the Society of Obstetricians and Gynaecologists of Canada (SOGC). This statement describes the usual components of active management as:
 - » administration of uterotonic agents;
 - » controlled cord traction; and
 - » uterine massage after delivery of the placenta, as appropriate. (23)
- Based on the research exploring the efficacy of different aspects of the active management 'package' described above, the World Health Organization (WHO) **describes the use of a uterotonic as the primary intervention of active management and recommends delayed cord clamping.**

Effects of active management compared to physiologic management

Three randomized controlled trials (RCTs) have compared the effects of active management compared with expectant management of the third stage of labour.

- Available RCTs show a significant reduction in the following outcomes with active vs. expectant management when applied to ALL women, regardless of presence or absence of risk factors for PPH:
 - » blood loss > 1000 mL; and
 - » maternal blood transfusion. (24–26)
- This research does not show that active management of the third stage of labour reduces the likelihood of postpartum bleeding > 1000 mL in women at low risk of PPH (cephalic, singleton pregnancies in women without previous history of PPH or antepartum hemorrhage, parity < 5). (24,26)
- There has been considerable criticism of the design, implementation and findings of these 3 trials. Approximately half to two-thirds of study participants allocated to the physiologic management arm of 2 of the 3 RCTs received the full physiologic management package. (25,26) Researchers have questioned whether the midwives participating in this trial were given sufficient training in physiologic management; this may have made midwives reluctant to adhere to the

physiologic management protocol or apply it in a piecemeal (and possibly ineffective) way. (20,27)

Problems with the design and implementation of these studies limit confidence in their findings and it is unclear whether the observed decrease in risk of PPH associated with active management (for all levels of risk) actually represents a true effect.

- More midwifery research is needed to examine the effects of physiologic care in the third stage of labour.

Components of the active management package

Which uterotonic agent is most effective to prevent PPH?

- Research suggests that oxytocin is the most effective uterotonic overall for prevention of PPH and is associated with the fewest side-effects.
- Compared with misoprostol, oxytocin is more effective at reducing blood loss ≥ 500 mL or ≥ 1000 mL and has fewer side-effects (diarrhea, shivering and fever).

What is the best time to administer a prophylactic uterotonic?

- No studies were found comparing uterotonic administration with the anterior shoulder versus immediately or soon after birth, common times at which a uterotonic is administered prophylactically. A Cochrane review comparing uterotonic administration before and after expulsion of the **placenta** found no difference in any outcomes assessed, including blood loss (mean, > 500 mL or > 1000 mL), blood transfusion, incidence of retained placenta or hypotension. (28)
- Administering a uterotonic with the birth of the anterior shoulder (the timing specified in the original trials assessing the effectiveness of active management) could theoretically entrap an undiagnosed twin. Waiting until after birth to administer a prophylactic uterotonic reduces this risk and gives the midwife time to assess and palpate the fundus to exclude the presence of another baby after birth. (29)

What route (IM or IV) is most effective for administration of prophylactic oxytocin?

- One trial has been published comparing IM vs. IV administration of oxytocin for active management of the third stage. Rates of postpartum blood loss,

postpartum hemoglobin (Hb) and hematocrit, and need for additional uterotonics were similar among all groups in the study. (30)

How does timing of cord clamping affect PPH outcomes?

- A Cochrane review of 15 studies comparing early (within 60 seconds) and late cord clamping suggests that timing of cord clamping has no effect on hemorrhage-related outcomes, including blood loss > 500 mL or 1000 mL or mean blood loss, maternal Hb levels, or need for blood transfusion, manual removal of the placenta, or therapeutic uteronic. An increasingly large body of evidence suggests that delayed cord clamping does not affect risk of PPH and has beneficial impacts on neonatal outcomes including improved long-term iron stores and hemoglobin concentration. (31)

What are the effects of uterine massage?

- Uterine massage does not appear to be an effective component of the active management package for prevention of PPH. It is important to differentiate use of uterine massage as part of a PPH prevention strategy and using uterine massage to expel uterine blood clots as an intervention in the *treatment* of PPH.
- One RCT noted no significant difference in outcomes (blood loss > 1000 mL or > 500 mL, maternal anemia, blood transfusion, therapeutic uterotonics, or manual removal of the placenta) when active management was used with or without uterine massage. (32) Similar findings were noted in 2 trials that involved uterine massage after delivery of the placenta. (33,34)

What are the effects of controlled cord traction?

- Controlled cord traction appears to be slightly beneficial for preventing PPH, both when used as part of an active management and as part of an expectant management approach (Brandt-Andrews manoeuvre).

Active management and controlled cord traction

- Three relevant randomized controlled trials have compared active management of the third stage of labour with and without controlled cord traction. In these 3 studies, the addition of controlled cord traction to active management was associated with a very slight reduction in risk of blood loss > 500 mL (RR 0.94, 95% CI 0.88-0.99) and a larger reduction in manual

removal of the placenta (RR 0.69, 95% CI 0.57-0.83). No significant differences in blood loss > 1000 mL, blood transfusion, or use of therapeutic uterotonics were noted. Active management with controlled cord traction was associated with a reduction in maternal pain during the third stage of labour (RR 0.78, CI 95% 0.61-0.99). (35-37) In the one study in which this outcome was assessed, there was an increased risk of cord rupture (RR 44.28, 95% CI 10.92-179.58); however, there was no difference in rates of manual removal of the placenta. (36)

Expectant management and controlled cord traction

- An observational study conducted in hospital settings where prophylactic uterotonics were not routinely used provides some information about the effectiveness of controlled cord traction in the context of expectant management. Researchers found lower rates of excess blood loss at study sites where controlled cord traction was routine. No complications related to controlled cord traction (such as uterine inversion or cord rupture) were noted in this study. (38)
- Use of controlled cord traction in the absence of a uteronic is similar to the way in which the Brandt-Andrews manoeuvre may be integrated into an otherwise physiologic or hands-off approach to the third stage of labour. Because limited research suggests controlled cord traction alone may slightly reduce blood loss, either full physiologic management or physiologic management plus Brandt-Andrews are reasonable variations to offer clients for third stage management.

Third-stage management and place of birth

- Observational studies led by midwife researchers from high- and moderate-income countries suggest that home or out-of-hospital birth is associated with a similar or reduced risk of PPH compared to hospital births. Because women who give birth at home may have different risk profiles than women who give birth in hospital, researchers try to design studies that consider groups with similar characteristics, or adjust their analyses to take known risk factors into account. Selection bias may nevertheless affect the association observed. Similarly, differences in outcomes in these studies between women who receive

active management and those who receive physiologic management may also be affected by selection bias.

- A New Zealand retrospective study examined the effects of place of birth and method of third-stage management on a group of women at low-risk of PPH. Rates of blood loss > 1000 mL were 1.3% overall and did not vary significantly based on place of birth (home, birth centre, secondary or tertiary hospital). Across birth settings, active management remained associated with a twofold increased risk of blood loss > 1000 mL compared to physiologic management after adjustment for demographic factors, mode of birth and other complications (adjusted RR 2.12, 95% CI 1.39–3.22). (39)
- A study comparing outcomes in a tertiary-level hospital and a nearby midwife-led birth unit in Australia found a higher incidence of blood loss \geq 500 mL in the hospital unit (11.2%) compared with the midwife-led unit (2.8%) for women at low risk of PPH. The midwife-led birth unit used a continuity of midwifery care model while the hospital was staffed by midwives on shift, with obstetricians on call. Most women who gave birth in the hospital unit (97%) received active management of the third stage of labour while most women in the midwife-led unit (86%) received “holistic psychophysiological” care. When rates of PPH were compared among women receiving active management in each setting, and women receiving physiologic care in each setting, no significant differences based on setting were noted. (40)
- A study of Ontario midwifery births (where the same midwives provided care in both home and hospital settings) showed an association between home birth and lower PPH rates (RR 0.82, 95% CI 0.70-0.96, $p=0.01$). However, PPH was not clearly defined and absolute incidence of PPH was low in both settings, 2.5% at home and 3.0% in hospital. (8)

TREATMENT OF PPH

Which uterotonic is most effective for treatment of primary PPH due to uterine atony?

- Despite the relatively frequent incidence of PPH, few trials have assessed pharmacologic agents for its treatment. Uterotonic agents vary by mechanism of

action, resulting in different effects on the uterus, and the underlying pathophysiology of the PPH may influence a midwife’s choice of agent for treatment.

- Research suggests oxytocin is more effective than misoprostol for the treatment of primary PPH due to uterine atony and causes fewer side-effects. (41-43)
- There appear to be no benefits to using misoprostol as an adjunct to conventional injectable uterotonics as a first-line treatment for PPH. No significant differences in blood loss-related outcomes were noted in meta-analysis of trials assessing misoprostol as an adjunct to standard uterotonics, compared to standard uterotonics alone. However, adjunct use of misoprostol was associated with an increased incidence of side-effects. (44-48)

Which second-line uterotonic is most effective for treatment of primary PPH due to uterine atony?

- There is no consensus on the most effective second-line uterotonic for the treatment of primary PPH due to uterine atony, when oxytocin has failed to stop bleeding. Because of this lack of evidence there is little to guide midwives in balancing the risks and benefits of each uterotonic while also considering the client’s specific clinical context. (49)
 - » Data from a large sample of births from the United States suggests that second-line uterotonic use is largely based on non-medical factors such as clinician preference, drug availability, cost, and community standards. (49)
 - » One small retrospective observational study suggests methylergonovine is a more effective second-line uterotonic than carboprost. (50)
 - » One small retrospective observational study of women requiring a second uterotonic following oxytocin for PPH who received either methylergonovine (control) or rectal misoprostol did not find any differences in rates of blood transfusion, need for third-line therapy, or surgical intervention. Participants did not differ significantly in age, parity or mode of delivery and had term pregnancies. Incidence and severity of side-effects were not reported. (51)

Non-pharmacologic treatment for PPH

Uterine massage

- There is no research on uterine massage for treatment of PPH. However, uterine massage is recommended by the WHO for treatment of PPH based on expert opinion taking into account the “low cost and safety of uterine massage” and extrapolated evidence from randomized controlled trials of uterine massage for the prevention of PPH. Uterine massage is also suggested as a first step in treatment for atonic PPH in the AOM emergency skills workbook, as long as the placenta has been delivered. (3)

Bimanual compression

- There are few published studies addressing the effectiveness of bimanual uterine compression on PPH outcomes. Various guidelines on emergency management of PPH recommend that compression of the uterus be maintained for 5 to 10 minutes, and some suggest that 30 to 60 minutes of sustained compression may be necessary to arrest bleeding. (52)

Uterine balloon tamponade

- An emerging body of literature suggests uterine balloon tamponade (UBT) is effective in the treatment of PPH unresponsive to uterotonic agents. (53-66) A range of both improvised and purpose-built devices have been tested. UBT has been reported to eliminate the need for surgery in 71% to 85% of women with severe PPH and allow time for transfer to facilities providing embolization, therefore avoiding surgery. (60,61)
- Available research has not identified major adverse effects associated with use of UBT, though isolated cases of infection or fever associated with UBT use have been reported. (64,65) Continued internal bleeding is possible with use of UBT, so close inspection of the genital tract as well as close monitoring of vital signs is important even when visible bleeding has stopped. (67)
- UBT is an effective, potentially life-saving intervention for severe PPH unresponsive to uterotonics, particularly in cases where prolonged transport times are anticipated.

Management of retained placenta

- Retained placenta affects 0.5% to 3% of births. (68)
- Current evidence does not support pharmacologic treatment for retained placenta when bleeding is controlled. (69)
- Evidence does not support the use of umbilical vein injection (UVI) with oxytocin or saline for the treatment of retained placenta. (70)
- More research is needed to evaluate the effects of antibiotic prophylaxis after manual removal of the placenta. (71) WHO recommends offering a single dose of ampicillin or first-generation cephalosporin after manual removal of placenta, based on indirect evidence from trials of antibiotic prophylaxis after CS, abortion and other observational studies. (5)

RECOVERY AND CARE FOLLOWING PPH

Bleeding in the postpartum period

- Research has not adequately described the duration and volume of normal lochia, and what amount of bleeding should be considered delayed PPH. (7)
- Low-quality research has found a strong association between delayed PPH and history of delayed PPH or primary PPH > 500 mL. (72)

Breastfeeding following PPH

- PPH may disrupt the opportunity for immediate skin-to-skin contact and early breastfeeding. PPH may increase the time from birth to breastfeeding initiation. (73,74)
- Limited and poor-quality research suggests there may be an association between the use of prophylactic uterotonics and lower rates of breastfeeding \geq 48 hours. More research is needed on the effect of intrapartum exposure to uterotonics on breastfeeding success and duration. (75,76)

Iron deficiency anemia following PPH

- Blood loss at delivery and prenatal iron status are the 2 most important predictors of postpartum anemia. (77,78) A retrospective, multi-centre study in the U.K. observed postpartum anemia (Hb < 100 g/L) rates of 45%, 65%, and 70% for blood losses of > 500 mL, 500-1000 mL, and > 1000 mL, respectively. (79)

PPH and future pregnancies

PPH recurrence in vaginal deliveries (Sweden 1997-2009)

Pregnancy history of PPH		PPH recurrence in vaginal deliveries			
		Any PPH		Recurrent PPH of same specific type	
First pregnancy	Type of previous PPH	%	RR (95%CI)	%	RR (95%CI)
No PPH		3.7	1.0		
PPH	Any	14.2	3.8 (3.6-4.0)		
	Retained placenta	18.3	4.9 (4.6-5.2)	12.0	10.4 (9.5-11.4)
	Atony	12.8	3.4 (3.2-3.7)	7.0	4.0 (3.6-4.4)
	Lacerations	12.6	3.4 (3.0-3.8)	1.7	7.8 (5.5-10.9)
	Severe (> 1000 mL)	18.8	5.0 (4.6-5.5)	4.2	9.1 (7.4-11.3)

Source: (80)

- Prior PPH significantly increases the risk for a subsequent PPH in a future pregnancy. (80-82)
- Approximately 1 in 7 women with a prior PPH and 1 in 4 with 2 prior incidents of PPH will experience another PPH > 1000 mL. (80)
- Relative risk of recurrence is highest for the same subtype of PPH, but risk is also increased for other etiologies.

Summary of recommendations

1. Midwives should consider any significant postpartum loss of blood that causes signs and symptoms of hypovolemic shock or hemodynamic instability to be a postpartum hemorrhage.

Strong recommendation; no evidence available.

2. Midwives should continue to visually estimate and document postpartum blood loss.

Weak recommendation; no evidence available.

These recommendations recognize that effects of blood loss vary by individual and support individualized care. They recognize midwives' ability to assess effects of blood loss. Documentation of blood loss permits retrospective assessment and informs immediate and ongoing client care. Accurate blood loss estimation contributes to midwifery data collection and research.

3. Identification of risk factors for PPH should occur in an ongoing manner throughout the course of antenatal and intrapartum care. Midwives should consider risk factors in an informed choice discussion about options for management of the third stage of labour and choice of birthplace.

Strong recommendation; moderate-quality evidence.

This recommendation recognizes continuity of care and the ability of the midwife to identify emerging risk factors for PPH.

4. The risks and benefits of physiologic management compared with active management should be discussed with all clients as part of an informed choice discussion. This discussion should address:

- how risk factors, if present, may increase the client's risk of PPH and impact considerations about choice of birthplace; and
- the client's values and preferences.

This discussion, including the client's choice, should be appropriately documented in the client's chart.

Strong recommendation; low-quality evidence.

This recommendation recognizes the client as the primary decision-maker. This recommendation recognizes that presence of one or more risk factors is not necessarily predictive of PPH, and that the original trials of active management may be interpreted differently in a low-risk population.

5. When active management is chosen for the prevention of PPH, midwives should:

- Use oxytocin as the uterotonic.
- Once pulsation stops, clamp and cut cord.
- Use controlled cord traction to deliver the placenta.

Strong recommendation; moderate-quality evidence.

This recommendation recognizes a large body of research recognizing the effectiveness of oxytocin at preventing blood loss with minimal side-effects compared to other uterotonics for active management, the neonatal benefits of delayed cord-clamping, and the modest clinical benefit of controlled cord traction.

6. When physiologic management is chosen, midwives should:

- Await signs of placental separation and monitor for excessive blood loss.
- Refrain from clamping or cutting the umbilical cord until pulsation stops or the placenta has delivered.
- Allow the placenta to be born spontaneously with maternal effort or gravity.
- Encourage immediate skin-to-skin contact with infant, early breastfeeding and other measures that may encourage the release and uptake of oxytocin.

Strong recommendation; low-quality evidence.

This recommendation recognizes the physiology of normal birth. More research is needed to identify the most effective aspects of physiologic care in the third stage of labour.

7. Midwives may offer controlled cord traction to clients choosing physiologic management.

Weak recommendation; very low-quality evidence.

This recommendation recognizes observational data that associates a reduction in PPH > 700 mL with the use of controlled cord traction without a prophylactic uterotonic as well as randomized trials that show a slight reduction in blood loss > 500 mL, duration of the third stage, and manual removal of the placenta with use of controlled cord traction during active management of the third stage.

8. Uterine massage is not recommended for the prevention of PPH. Postpartum assessment of fundal tone is recommended.

Strong recommendation; low-quality evidence.

This recommendation recognizes the importance of identifying uterine atony. Available research does not support the routine use of uterine massage after prophylactic oxytocin has been administered. There is no evidence available on the use of uterine massage where no prophylactic uterotonic has been administered.

9. Midwives should use oxytocin as the first-line uterotonic for the treatment of PPH due to uterine atony.

Strong recommendation; moderate-quality evidence.

No high-quality research has shown superior efficacy of any uterotonic drug vs oxytocin in settings where it is available. The CMO requires that midwives carry at least 2 uterotonics: oxytocin plus 1 additional drug. The comparative effectiveness of uterotonics for treatment of PPH is identified as a research gap.

10. Available research does not clearly support the use of one particular uterotonic over another for second-line treatment of primary PPH due to uterine atony (ergot alkaloids, prostaglandins and carbetocin). Midwives should choose their second-line uterotonic based on clinical context.

Strong recommendation; very low-quality evidence.

Access to each drug may vary by community. In the absence of clear evidence, midwives should use their clinical experience, community standards, and the clinical context of the client and birth to guide second-line uterotonic use.

11. Midwives should consider the use of uterine balloon tamponade for PPH that is unresponsive to uterotonics, and where transport to hospital is necessary.

Weak recommendation; very low-quality evidence.

This recommendation recognizes the growing body of literature supporting the use of UBT at all care levels and for all obstetric providers. It acknowledges that midwives attend births in the community and that use of UBT for intractable uterine atony is a potentially life-saving measure. It also recognizes the need for midwives to access the training and equipment needed to safely and effectively use UBT devices, when appropriate, for PPH unresponsive to other interventions.

12. For clients who refuse blood and blood products, midwives should discuss possible increased risks of morbidity and mortality following severe PPH. Midwives should develop or facilitate a plan of care in the event of severe PPH, where blood or blood products would normally be recommended.

Strong recommendation; very low-quality evidence.

This recommendation recognizes the degree of potential risk for clients who refuse blood products. It also values the importance of respectful care and interprofessional collaboration to provide client access to options available in the community.

13. Midwives should review with all clients:

- Normal postpartum blood loss in the immediate postpartum period (within the first 24 hours).
- How to estimate postpartum blood loss and recognize signs and symptoms that may be indicative of shock or hemodynamic instability.
- How to contact the midwife and access urgent care when necessary.

Strong recommendation; no evidence available.

This recommendation is based on expert opinion. It recognizes the skill of midwives in providing health information to clients and normalizes care provided in the community setting.

14. Midwives should offer oral iron supplementation to clients with Hb < 100 g/L ideally measured at ≥ 48 hours postpartum, or to clients who have experienced PPH and who have signs and symptoms of iron deficiency anemia.

Weak recommendation; low-quality evidence.

This recommendation recognizes the lack of high-quality evidence on the clinical effectiveness of treating postpartum iron deficiency anemia.

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