

# Active Management of the Third Stage of Labour: Prevention and Treatment of Postpartum Hemorrhage

This Clinical Practice Guideline has been prepared by the Clinical Practice Obstetrics Committee and approved by the Executive and Council of the Society of Obstetricians and Gynaecologists of Canada.

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be relevant. Each full-text article was critically appraised with use of the Jadad Scale and the levels of evidence definitions of the Canadian Task Force on Preventive Health Care.

**Values:** The quality of evidence was rated with use of the criteria described by the Canadian Task Force on Preventive Health Care.

**Sponsor:** The Society of Obstetricians and Gynaecologists of Canada.

## Recommendations

### Prevention of Postpartum Hemorrhage

- Active management of the third stage of labour (AMTSL) reduces the risk of PPH and should be offered and recommended to all women. (I-A)
- Oxytocin (10 IU), administered intramuscularly, is the preferred medication and route for the prevention of PPH in low-risk vaginal deliveries. Care providers should administer this medication after delivery of the anterior shoulder. (I-A)
- Intravenous infusion of oxytocin (20 to 40 IU in 1000 mL, 150 mL per hour) is an acceptable alternative for AMTSL. (I-B)
- An IV bolus of oxytocin, 5 to 10 IU (given over 1 to 2 minutes), can be used for PPH prevention after vaginal birth but is not recommended at this time with elective Caesarean section. (II-B)
- Ergonovine can be used for prevention of PPH but may be considered second choice to oxytocin owing to the greater risk of maternal adverse effects and of the need for manual removal of a retained placenta. Ergonovine is contraindicated in patients with hypertension. (I-A)
- Carbetocin, 100 µg given as an IV bolus over 1 minute, should be used instead of continuous oxytocin infusion in elective Caesarean section for the prevention of PPH and to decrease the need for therapeutic uterotonics. (I-B)
- For women delivering vaginally with 1 risk factor for PPH, carbetocin 100 µg IM decreases the need for uterine massage to prevent PPH when compared with continuous infusion of oxytocin. (I-B)
- Ergonovine, 0.2 mg IM, and misoprostol, 600 to 800 µg given by the oral, sublingual, or rectal route, may be offered as alternatives in vaginal deliveries when oxytocin is not available. (II-1B)
- Whenever possible, delaying cord clamping by at least 60 seconds is preferred to clamping earlier in premature newborns (< 37 weeks' gestation) since there is less intraventricular hemorrhage and less need for transfusion in those with late clamping. (I-A)
- For term newborns, the possible increased risk of neonatal jaundice requiring phototherapy must be weighed against the

## Abstract

**Objective:** To review the clinical aspects of postpartum hemorrhage (PPH) and provide guidelines to assist clinicians in the prevention and management of PPH. These guidelines are an update from the previous Society of Obstetricians and Gynaecologists of Canada (SOGC) clinical practice guideline on PPH, published in April 2000.

**Evidence:** Medline, PubMed, the Cochrane Database of Systematic Reviews, ACP Journal Club, and BMJ Clinical Evidence were searched for relevant articles, with concentration on randomized controlled trials (RCTs), systematic reviews, and clinical practice guidelines published between 1995 and 2007. Each article was screened for relevance and the full text acquired if determined to

**Key Words:** Prevention, hemorrhage, obstetrics, obstetric hemorrhage

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**Table 1. Key to evidence statements and grading of recommendations, using the ranking of the Canadian Task Force on Preventive Health Care**

Quality of Evidence Assessment*	Classification of Recommendations†
I: Evidence obtained from at least one properly randomized controlled trial	A. There is good evidence to recommend the clinical preventive action
II-1: Evidence from well-designed controlled trials without randomization	B. There is fair evidence to recommend the clinical preventive action
II-2: Evidence from well-designed cohort (prospective or retrospective) or case-control studies, preferably from more than one centre or research group	C. The existing evidence is conflicting and does not allow to make a recommendation for or against use of the clinical preventive action; however, other factors may influence decision-making
II-3: Evidence obtained from comparisons between times or places with or without the intervention. Dramatic results in uncontrolled experiments (such as the results of treatment with penicillin in the 1940s) could also be included in this category	D. There is fair evidence to recommend against the clinical preventive action
III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees	E. There is good evidence to recommend against the clinical preventive action L. There is insufficient evidence (in quantity or quality) to make a recommendation; however, other factors may influence decision-making

\*The quality of evidence reported in these guidelines has been adapted from The Evaluation of Evidence criteria described in the Canadian Task Force on Preventive Health Care.<sup>54</sup>

†Recommendations included in these guidelines have been adapted from the Classification of Recommendations criteria described in the The Canadian Task Force on Preventive Health Care.<sup>54</sup>

physiological benefit of greater hemoglobin and iron levels up to 6 months of age conferred by delayed cord clamping. (I-C)

11. There is no evidence that, in an uncomplicated delivery without bleeding, interventions to accelerate delivery of the placenta before the traditional 30 to 45 minutes will reduce the risk of PPH. (II-2C)
12. Placental cord drainage cannot be recommended as a routine practice since the evidence for a reduction in the duration of the third stage of labour is limited to women who did not receive oxytocin as part of the management of the third stage. There is no evidence that this intervention prevents PPH. (II-1C)
13. Intraumbilical cord injection of misoprostol (800 µg) or oxytocin (10 to 30 IU) can be considered as an alternative intervention before manual removal of the placenta. (II-2C)

#### Treatment of PPH

14. For blood loss estimation, clinicians should use clinical markers (signs and symptoms) rather than a visual estimation. (III-B)
15. Management of ongoing PPH requires a multidisciplinary approach that involves maintaining hemodynamic stability while simultaneously identifying and treating the cause of blood loss. (III-C)
16. All obstetric units should have a regularly checked PPH emergency equipment tray containing appropriate equipment. (II-2B)
17. Evidence for the benefit of recombinant activated factor VII has been gathered from very few cases of massive PPH. Therefore this agent cannot be recommended as part of routine practice. (II-3L)
18. Uterine tamponade can be an efficient and effective intervention to temporarily control active PPH due to uterine atony that has not responded to medical therapy. (III-L)
19. Surgical techniques such as ligation of the internal iliac artery, compression sutures, and hysterectomy should be used for the

management of intractable PPH unresponsive to medical therapy. (III-B)

Recommendations were quantified using the evaluation of evidence guidelines developed by the Canadian Task Force on Preventive Health Care (Table 1).

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#### ABBREVIATIONS

- AMTSL active management of the third stage of labour  
 PPH postpartum hemorrhage  
 RCT randomized controlled trial