

Table 13: Summary of Recommendations in Included Guidelines

Recommendations	Strength of Evidence and Recommendations
Leduc et al. 2018, Canada ²⁹ Society of Obstetricians and Gynaecologists of Canada	
“6. Carbetocin, 100 µg given as an IV bolus over 1 minute, should be used instead of continuous oxytocin infusion in elective Cesarean section for the prevention of PPH and to decrease the need for therapeutic uterotonics” (p. e842)	I-B (Evidence obtained from at least one properly randomized controlled trial; There is fair evidence to recommend the clinical preventive action)

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<p><i>“7. 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” (p. e842)</i></p>	<p>I-B (Evidence obtained from at least one properly randomized controlled trial; There is fair evidence to recommend the clinical preventive action)</p>
<p>Lier et al. 2018, German⁴ German, Austrian and Swiss Societies of Gynaecology and Obstetrics German Society of Anaesthesiology and Intensive Care Medicine Society of Thrombosis and Haemostasis Research</p>	
<p>First-line uterotonics: including oxytocin and carbetocin</p>	
<p><i>“If first-line uterotonics are not available or effective, sulprostone should be used immediately. Continuous haemodynamic monitoring is recommended” (p. 129)</i></p>	<p>Consensus of the committee</p>
<p>Mavrides et al. 2017, UK³⁰ Royal College of Obstetricians and Gynaecologists</p>	
<p><i>“A Cochrane review⁴⁴ has addressed the use of a longer-acting oxytocin derivative, carbetocin, in the prevention of PPH. Carbetocin is licensed in the UK specifically for the indication of prevention of PPH in the context of cesarean delivery. Use of carbetocin resulted in a statistically significant reduction in the need for further uterotonics compared with oxytocin for those undergoing a cesarean, but not for vaginal delivery. However, there were no statistically significant differences between carbetocin and oxytocin in terms of risk of PPH” (p. 12)</i></p>	<p>I ++ (High-quality meta-analyses, systematic reviews of randomised controlled trials or randomised controlled trials with a very low risk of bias)</p>
<p><i>“Guidelines from the Society of Obstetricians and Gynaecologists of Canada³⁰ recommend that carbetocin (100 micrograms given as an intravenous bolus over 1 minute) should be used for the prevention of PPH in elective cesarean deliveries. Randomised trials^{45–50} have compared different uterotonics (oxytocin, ergometrine–oxytocin, misoprostol, carbetocin and 15-methyl prostaglandin F2a) for prophylaxis in women delivering by cesarean section. Appraisal of the evidence from these trials, together with consideration of standard practice in the UK, led the development group for the NICE cesarean section guideline⁵¹ to recommend oxytocin 5 iu by slow intravenous injection for prophylaxis in the context of cesarean delivery” (p. 13)</i></p>	<p>I + (Well-conducted meta-analyses, systematic reviews of randomised controlled trials or randomised controlled trials with a low risk of bias)</p>
<p>Bennett et al. 2016, Canada¹ Association of Ontario Midwives</p>	
<p><i>“9. Midwives should use oxytocin as the first line uterotonic for the treatment of PPH due to uterine atony” (p. 28)</i></p>	<p><i>“Strong recommendation; moderate-quality evidence. No high-quality evidence 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” (p. 28)</i></p>

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<p><i>“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” (p. 28)</i></p>	<p><i>“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” (p. 28)</i></p>
<p>Sentilhes et al. 2016, France³¹ French College of Gynaecologists and Obstetricians French Society of Anesthesiology and Intensive Care</p>	
<p><i>“Carbetocin reduces the risk of PPH, but in the absence of a noninferiority trial, oxytocin remains the preventive treatment of reference for preventing PPH after cesarean deliveries (professional consensus). Tranexamic acid must not be used routinely for PPH prevention” (p. 15)</i></p>	<p>Professional consensus</p>

IM = intramuscular; IU = international unit; IV = intravenous; PPH = post-partum hemorrhage; QALY: quality-adjusted life year