NICE National Institute for Health and Care Excellence

Intrapartum care (NG235) – Update to recommendation on first-line treatment for postpartum haemorrhage

This guideline covers the care of women and their babies during labour and immediately after birth. It focuses on women who give birth between 37 and 42 weeks of pregnancy ('term'). The guideline helps women to make informed choices about where to have their baby and about their care in labour. It also aims to reduce variation in aspects of care.

These recommendations will update NICE guideline NG235 (published September 2023).

Who is it for?

- Healthcare professionals
- Commissioners
- Healthy women who have had a straightforward pregnancy and give birth between 37 and 42 weeks of pregnancy

What does it include?

- revised table 12 from the guideline on choice of uterotonics for the treatment of postpartum haemorrhage because of uterine atony

- some recommendations from the guideline on management of postpartum haemorrhage (please note the selected recommendations are provided for context only, and have not been changed)
- rationale and impact information that explains why the committee made the 2024 update to table 12, and how this might affect practice and services.

Information about how the guideline was developed is on the guideline's webpage. This includes the evidence review, details of the committee and any declarations of interest.

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Recommendations		**Proposed change**
1.10.33	If a woman has a postpartum haemorrhage: • call for help • give immediate clinical treatment: – emptying of the bladder **and** – uterine massage **and** – uterotonic drugs **and** – intravenous fluids **and** – controlled cord traction if the placenta has not yet been delivered	Not updated – provided for context only.

	• continuously assess blood loss and the woman's condition, and identify the source of the bleeding • consider giving supplementary oxygen (starting at 15 L/minute to obtain a target oxygen saturation of 94% to 98%, using a non-rebreathing mask with a reservoir bag) • arrange for transfer of the woman to obstetric-led care (following the general principles for transfer of care described in section 1.5). **[2014, amended 2023]**	
1.10.34	Administer 1 of the following (see table 12) as first-line treatment for postpartum haemorrhage, taking into account which uterotonics have already been administered as part of active management of the third stage of labour. Offer further treatment for postpartum haemorrhage if needed. **[2023]**	Not updated – provided for context only.
Table 12	(See pages 5 and 6 below)	• Carbetocin was removed as an option from the fourth column in the table 'Additional treatments that can be offered, depending on clinical need' where the prophylaxis in the third stage of

		labour was physiological management, oxytocin alone, or oxytocin plus ergometrine. • Footnotes were added to the table.

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Table 12. Choice of uterotonics for the treatment of postpartum haemorrhage because of uterine atony

Uterotonic used in the third stage of labour as prophylaxis	Suggested first-line treatment of postpartum haemorrhage	Suggested second-line treatment of postpartum haemorrhage	Additional treatments that can be offered, depending on clinical need
No uterotonic used – physiological management	• Oxytocin plus ergometrine by intramuscular injection (if contraindicated, give carboprost), **or** • oxytocin infusion as soon as intravenous access is available	Carboprost intramuscular injection	• Carboprost intramuscular injection (can be repeated at intervals not less than 15 minutes up to a maximum of 8 doses), **or** • misoprostol 800 micrograms sublingually or rectally (may be used earlier if intravenous route not available)
Oxytocin alone	• Ergometrine intramuscular injection (if contraindicated give carboprost), **or** • oxytocin infusion as soon as intravenous access is available	Carboprost intramuscular injection	• Carboprost intramuscular injection (can be repeated at intervals not less than 15 minutes up to a maximum of 8 doses), **or** • misoprostol 800 micrograms sublingually or rectally (may be used earlier if intravenous route not available)
Oxytocin plus ergometrine	• Carboprost intramuscular injection, **or** • oxytocin infusion as soon as intravenous access is available	Repeat carboprost after 15 minutes	• Carboprost intramuscular injection (can be repeated at intervals not less than 15 minutes up to a maximum of 8 doses), **or** • misoprostol 800 micrograms sublingually or rectally (may be used earlier if intravenous route not available)

Uterotonic used in the third stage of labour as prophylaxis	Suggested first-line treatment of postpartum haemorrhage	Suggested second-line treatment of postpartum haemorrhage	Additional treatments that can be offered, depending on clinical need
Carbetocin	Ergometrine intramuscular injection	Carboprost intramuscular injection	• Carboprost intramuscular injection (can be repeated at intervals not less than 15 minutes up to a maximum of 8 doses), **or** • misoprostol 800 micrograms sublingually or rectally

Please note that:

- Not all medicines in table 12 will be available in all settings, and this may impact on choice and order of use.
- A repeat dose of ergometrine or the combination of oxytocin and ergometrine may be given if other medicines are not available, for example in a home birth setting. Note that after intramuscular administration, oxytocin acts in about 2.5 minutes and the effects last about 30 minutes to 1 hour. Ergometrine acts in about 7 minutes and the effects last about 3 hours.

In September 2023, this was an off-label use of misoprostol, so the dosage is included in table 12. Consult the BNF for dosages of other drugs listed. See NICE's information on prescribing medicines.

Recommendations on management of postpartum haemorrhage (cont.)		Proposed change
1.10.35	In addition to uterotonic drugs, give tranexamic acid (1 g by intravenous injection over 10 minutes). Repeat if necessary after at least 30 minutes for managing continuing postpartum haemorrhage. **[2023]**	Not updated – provided for context only.

Why the committee made the recommendations

There was good evidence that tranexamic acid reduced maternal death from bleeding compared with placebo, and some evidence that, when used in combination with oxytocin and ergometrine, it reduced blood loss volume and the need for additional surgical intervention, compared with oxytocin and ergometrine alone. There was no evidence for the benefits of oxytocin and ergometrine for the management of postpartum haemorrhage but based on their knowledge and experience, the committee knew these were effective so retained them in the guideline as treatment options. There was some evidence for the benefits of misoprostol at reducing the need for additional surgical and pharmacological management, and evidence that carboprost reduced blood loss compared with oxytocin, so these were included as treatment options. There was some evidence for the benefits of carbetocin compared to oxytocin and tranexamic acid, but this was from small studies. However, the committee also noted that carbetocin was not licensed for use for the treatment of postpartum haemorrhage and that it was more expensive than oxytocin, and therefore they did not recommend it.

There was no evidence on the ideal sequencing of pharmacological treatments for postpartum haemorrhage, but the committee were aware that the choice of medication for the management of postpartum haemorrhage depended on uterotonics that had

been received by the woman as part of active management and the setting (as some medicines would not be available in all settings).

As there was no evidence for the outcomes of breastfeeding or women's experience, the committee made a recommendation for research on management of postpartum haemorrhage.

How the recommendations might affect practice

Tranexamic acid was already recommended in the previous version of the guideline as an option for the treatment of postpartum haemorrhage, but these recommendations may increase its use and standardise practice across the NHS. All other medicines were recommended in the previous version of the guideline so this is unlikely to change practice.

Reasons for the proposed change to Table 12

The guideline committee revisited Table 12 in the guideline because NICE received stakeholder feedback about the following issues:

- carbetocin is not licensed for treating postpartum haemorrhage
- not all options given in Table 12 are necessarily available in all midwife-led settings
- the option to give a second dose of oxytocin plus ergometrine is not given, which in practice is sometimes done.

No new evidence was reviewed, but the 2023 evidence review on the topic was revisited. While this was done, an error was found in the reporting of one outcome for the comparison of carbetocin versus oxytocin. It was erroneously reported in the summary of the evidence section that there was an important benefit favouring carbetocin for the outcome of need for additional surgical management. In fact, there was no evidence of important difference between carbetocin and oxytocin for this outcome. The committee were made aware of this and the evidence review has been corrected.

The committee revisited the evidence and the recommendation on carbetocin. The evidence showed a benefit of carbetocin over oxytocin in terms of the need for additional pharmacological management and a benefit of carbetocin over tranexamic acid for the outcome of reduced blood loss, but there was no difference in terms of other outcomes considered. The quality of the evidence ranged from very low to moderate. Given the modest quality of the evidence and small sample sizes of the studies, the committee did not think the evidence was sufficient to justify the off-label use of carbetocin for the treatment of postpartum haemorrhage and agreed to remove it from the table.

The committee agreed that some of the uterotonics listed in the table would not be available in all settings, for example in homebirth settings or midwifery-led units. This would depend on the availability of appropriate storage facilities for medicines that need to be kept in a fridge, the availability of pumps to administer the medication, and whether a midwife is permitted to administer them. This can impact the choice and order of medicines given. The committee agreed to note this in the table.

The committee discussed that only a single dose of ergometrine (alone or in combination with oxytocin) is normally given. However, the committee acknowledged that in practice a second dose of ergometrine (alone or in combination with oxytocin) is sometimes used, particularly if no other options are available. The Summary of Product Characteristics (SPC) of ergometrine

alone and combination of ergometrine and oxytocin both refer to a second dose under special warnings and precautions for use, given that other causes for haemorrhage are ruled out. The committee noted that intramuscular injection of ergometrine acts in about 7 minutes and the effects last about 3 hours whereas intramuscular injection of oxytocin acts in about 2.5 minutes and the effects last about 30 minutes to 1 hour. The committee discussed that giving a repeat dose of ergometrine soon after the first dose may not be as effective and may indeed increase the risk of side effects. However, the committee agreed to note in the table that a second dose of ergometrine (alone or in combination with oxytocin) could be given in the absence of other uterotonic options for postpartum haemorrhage, such as in home birth settings while waiting for transfer to hospital.