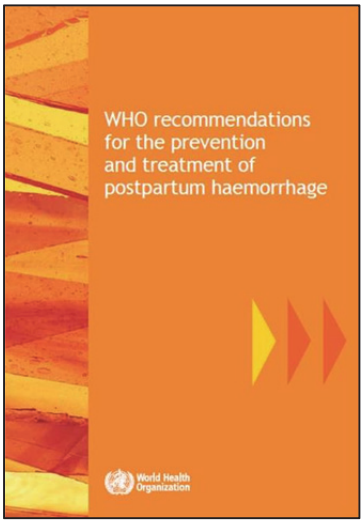
WHO RECOMMENDATIONS ON PREVENTION AND TREATMENT OF POSTPARTUM HAEMORRHAGE

Highlights and Key Messages from New 2012 Global Recommendations

Background

Despite the progress made in recent years in reducing the number of women who suffer morbidity or mortality from postpartum haemorrhage (PPH), it still remains the most common direct cause of maternal death in low-income countries. The majority of these deaths can be prevented through the use of prophylactic uterotonics during the third stage of labour and by timely and appropriate management.



In March 2012, the World Health Organization (WHO) held a Technical Consultation on the Prevention and Treatment of Postpartum Haemorrhage to review current evidence and to update previously published PPH guidelines.[1] The new guidelines combine previous documents to address both prevention and treatment—recognizing the importance of integrated care.

This brief summarizes key messages from the new WHO guidelines, with a focus on highlighting changes and recommended best practices. It is intended to assist policymakers, programme managers, educators, providers and all involved in assisting women to give birth to ensure increased efforts to prevent and manage PPH. All activities for the prevention of PPH should take place within a comprehensive package of interventions to prevent and manage PPH, along the household-to-hospital continuum of care.

Reaffirming and Refining Best Practice for PPH Prevention

- **Active management of the third stage of labour (AMTSL) is still a best practice, with the use of uterotonics now the most critical element.**
- **All women giving birth should be offered uterotonics during the third stage of labour for PPH prevention.** Recent evidence has confirmed the effectiveness of the administration of a uterotonic, which causes the uterus to contract and thus reduce length of third stage and the risk of PPH. See the WHO 2012 brief entitled "*AMTSL: New WHO recommendations help to focus implementation*" for more information.

AMTSL (2012)

- A uterotonic, preferably oxytocin, 10 IU IM immediately after all births, including caesarean sections *(recommended)*
- Delayed (1–3 minutes after birth) cord clamping *(recommended)*
- Controlled cord traction for delivery of the placenta *(optional)*
- Fundal massage *(optional).*
- Regular and frequent assessment of uterine tone by palpation of the uterine fundus after delivery of the placenta *(recommended)*

See the WHO Brief "AMTSL: New WHO recommendations help to focus implementation" for further discussion of AMTSL.

[1] WHO. 2012. *WHO recommendations for the prevention and treatment of postpartum haemorrhage*. WHO: Geneva. http://www.who.int/reproductivehealth/publications/maternal_perinatal_health/9789241548502/en/index.html.

- **Oxytocin remains the uterotonic of choice for AMTSL**. Oxytocin (10 IU, IM or IV) is the preferred uterotonic based on studies on the safety and effectiveness of uterotonics. It also is the recommended uterotonic drug for PPH prevention during caesarean sections.
- **If oxytocin is not available, ergometrine or misoprostol should be given.** Because uterotonics are so important for PPH prevention, another uterotonic such as injectable ergometrine or oral misoprostol (600 mcg) should be provided if oxytocin is not available.
- **Other elements of AMTSL—controlled cord traction and immediate fundal massage—are optional for PPH prevention.** Recent evidence has shown there is little additional benefit from either of these practices for the prevention of haemorrhage. For more information, see the WHO 2012 brief entitled "*AMTSL: New WHO recommendations help to focus implementation.*"
- **If a skilled attendant is not present, and oxytocin is not available (such as at unattended home birth), lay health workers should administer 600 mcg of oral misoprostol.** Women delivering without a skilled attendant also need a uterotonic for PPH prevention, so oral misoprostol should be given by a community health worker or birth assistant who is present. WHO recommends further research on advanced distribution of misoprostol during the antenatal period for self-administration during the third stage of labour for home deliveries without a skilled attendant.
- **Late cord clamping (performed after 1 to 3 minutes after birth) is still recommended for all births to reduce newborn anaemia—while beginning essential newborn care at the same time.** Early cord clamping (< 1 minute after birth) is only recommended if a neonate is asphyxiated and needs to be moved immediately for resuscitation. Late cord clamping is recommended especially for preterm births and even for babies born to women living with HIV.

When Oxytocin Is Not Available

Although oxytocin is the drug of choice for PPH prevention and treatment, it is not always feasible in low-resource settings because it requires refrigeration, sterile equipment for injection and a skilled provider. The new recommendations acknowledge this in two ways:

- When oxytocin is unavailable, the use of other injectable uterotonics or oral misoprostol (600 µg) should be given.
- When skilled birth attendants are not present and oxytocin is unavailable, community health care and lay health workers should administer misoprostol (600 µg PO) for PPH prevention.

PPH PREVENTION: POLICY AND PROGRAMME ACTIONS TO INCORPORATE NEW GUIDELINES	
WHO Recommendation 2012	**Policy/Programme Action**
Oxytocin is the uterotonic of choice for AMTSL.	• Ensure oxytocin availability and appropriate storage in a cool environment at all health facilities where deliveries are occurring. • Monitor oxytocin stockouts. • Assess oxytocin quality where there are concerns about cold chain and storage. • Continue to promote AMTSL in national policies—including supporting the practice of AMTSL in all maternity facilities of the health system, and by all cadres with midwifery skills. • Orient colleagues that other elements of AMTSL—controlled cord traction (CCT) and immediate fundal massage—are optional for PPH prevention. • Ensure AMTSL is included in all in-service and pre-service curricula for skilled attendant cadres. • Ensure systems are in place to monitor and track AMTSL implementation. • Add Prophylactic Uterotonic Coverage Indicator[2] as a process indicator for national programmes.

[2] It is suggested the indicator is calculated as the number of women receiving prophylactic uterotonics during the third stage of labour divided by all women giving birth.

PPH PREVENTION: POLICY AND PROGRAMME ACTIONS TO INCORPORATE NEW GUIDELINES	
WHO Recommendation 2012	**Policy/Programme Action**
In settings where skilled birth attendants are available, CCT is recommended for vaginal births if the care provider and the woman in labour regard a small reduction in blood loss and a small reduction in the duration of the third stage of labour as important. In settings where skilled birth attendants are unavailable, CCT is not recommended. (NEW in 2012)	• Ensure that training and education systems continue to include the component of CCT in training programmes. • If the national priority is to get PPH prevention services out to women who do not have a skilled attendant for their birth, the programme should promote a uterotonic alone (either misprostol or oxytocin in Uniject®), but should not include CCT in the package.
Late cord clamping (performed after 1 to 3 minutes after birth) is recommended for all births while initiating simultaneous essential newborn care.	• Ensure clinical protocols in essential obstetric and newborn care address late cord clamping including during caesarean sections.
Sustained uterine massage is not recommended as an intervention to prevent PPH in women who have received prophylactic oxytocin. (NEW in 2012)	• Ensure practice is not included in national policies or training curricula.
Postpartum abdominal uterine tonus assessment for early identification of uterine atony is recommended for all women. (NEW in 2012)	• Ensure practice is included in national policies or training curricula.
Lay or community health workers should administer misoprostol when a skilled attendant is not available (such as at a home birth). (NEW in 2012)	• Strengthen national policies and programmes to ensure 100% uterotonic coverage for every woman immediately after birth—whether delivering in a facility or at home. • Train community-based cadres to administer misoprostol at home births. • Procure sufficient misoprostol for distribution to trained community-based health workers. • Support and monitor community-based cadres to administer misoprostol at home births.
Oxytocin (IV or IM) is the recommended uterotonic for PPH prevention in caesarean section. (NEW in 2012)	• Ensure that hospitals have a protocol for uterotonic administration during caesarean section. Oxytocin can be administered through the existing IV as long as an effort is made to have the solution run in quickly.
Cord traction is the recommended method for the removal of the placenta in caesarean section. (NEW in 2012)	• Providers should be trained to remove the placenta by cord traction, rather than by manual extraction, which was commonly performed in the past.

Reaffirming and Refining Best Practice for PPH Treatment

The new guidelines replace the 2009 *WHO Guidelines for the Management of Postpartum Haemorrhage and Retained Placenta*. Updates based on recent evidence include:

- **Uterine massage is recommended for the treatment of PPH.** Initiate uterine massage as soon as excessive bleeding/uterine atony is identified.
- **Intravenous oxytocin alone still is the recommended uterotonic drug for the treatment of PPH.** IV oxytocin is the first line drug of choice over other drugs (ergometrine and prostaglandins), including for women have already received it for PPH prevention.
- **If intravenous oxytocin is unavailable or if the bleeding does not respond to oxytocin, intravenous ergometrine, oxytocin-ergometrine fixed dose or a prostaglandin drug (including sublingual misoprostol, 800 mcg) should be given.** This is an updated recommendation that considers all 3 second-line options, including prostaglandins.
- **If PPH persists:**
  - The use of **intrauterine balloon tamponade** is recommended for the treatment of PPH due to uterine atony. This recommendation is now stronger than the previous guidelines. It can be used for women who do not respond to uterotonics or if uterotonics are not available. This procedure potentially can avoid surgery and is appropriate while awaiting transfer to a higher-level facility.

- The use of **uterine artery embolization** is recommended as a treatment for PPH due to uterine atony, if other measures have failed. This recommendation is now stronger than the previous guidelines.
- If bleeding does not stop in spite of treatment (using uterotonics and other available interventions), the use of **surgical interventions** is recommended.

- **For women experiencing PPH and awaiting transfer, the following are recommended as temporizing measures until appropriate care is available:**
  - Use of **bimanual uterine compression** for the treatment of PPH due to uterine atony after vaginal birth. This recommendation is now stronger than the previous guidelines.
  - Use of **external aortic compression** for the treatment of PPH due to uterine atony after vaginal birth.
  - Use of **non-pneumatic anti-shock garments (NASGs)**—This is a new recommendation. Research is under way to evaluate the potential benefits and harms of NASGs for PPH treatment.
- **For a retained placenta, IV/IM oxytocin (10 IU) in combination with CCT still is recommended.** Ergometrine still is not recommended. While the 2009 guidelines included intraumbilical vein injection of oxytocin as a treatment for retained placenta, the updated version concludes that there is insufficient evidence to recommend its use.

PPH TREATMENT: POLICY AND PROGRAMME ACTIONS TO INCORPORATE NEW GUIDELINES	
WHO Recommendation2012	**Policy/Programme Action**
If intravenous oxytocin is unavailable, or if the bleeding does not respond to oxytocin, the use of intravenous ergometrine, oxytocin-ergometrine fixed dose, or a prostaglandin drug (including sublingual misoprostol, 800 µg) is recommended. (NEW in 2012)	• No changes in national guidelines are needed but if a guidelines update process is planned, treatment can be simplified to remove second- and third-line distinctions.
If women do not respond to treatment using uterotonics, or if uterotonics are unavailable, the use of intrauterine balloon tamponade is recommended for the treatment of PPH due to uterine atony. (NEW in 2012)	• Review national guidelines to ensure balloon tamponade use is included. • Review training curricula to ensure providers are trained to use the balloon tamponade. • Procure tamponades; adapt for low-resource settings as needed.
If other measures have failed and if the necessary resources are available, the use of uterine artery embolization is recommended as a treatment for PPH due to uterine atony. (NEW in 2012)	• Review national guidelines to ensure this procedure can be offered where appropriate, given the significant resources required (cost of the treatment, facilities and provider training).
The use of bimanual uterine compression is recommended as a temporizing measure until appropriate care is available for the treatment of PPH due to uterine atony after vaginal delivery. (NEW in 2012)	• Review national guidelines to ensure it is included. • Review training curricula to ensure appropriate providers are trained.
The use of NASGs is recommended as a temporizing measure until appropriate care is available. (NEW in 2012)	• Review national guidelines to ensure NASGs are included. • Review training curricula to ensure providers are trained to use NASGs. • Procure NASGs; adapt for low-resource settings as needed.
There is insufficient evidence to recommend the use of intraumbilical vein injection of oxytocin as a treatment for retained placenta. (NEW in 2012)	• Revise/remove it from national guidelines if it is included. • Revise/remove it from training curricula if necessary.
Monitoring the use of uterotonics after birth for the prevention of PPH is recommended as a process indicator for programmatic evaluation. (NEW in 2012)	• Add this process indicator to national programmes. • Ensure data are available through HMIS.