Prevention and Treatment of Post-partum Haemorrhage
New Advances for Low Resource Settings

Joint Statement

International Confederation of Midwives (ICM)
International Federation of Gynaecology and Obstetrics (FIGO)

The International Confederation of Midwives (ICM) and the International Federation of Gynaecology and Obstetrics (FIGO) are key partners in the global effort to reduce maternal death and disability around the world. Their mission statements share a common commitment in promoting the health, human rights and well-being of all women, most especially those at greatest risk for death and disability associated with childbearing. FIGO and ICM promote evidence-based interventions that, when used properly with informed consent, can reduce the incidence of maternal morbidity and mortality.

This statement reflects the current (2006) state-of-the-art and science of prevention and treatment of post-partum haemorrhage (PPH) in low resource settings. It incorporates new research evidence that has become available since the 2003 publication of the first FIGO/ICM Joint Statement: *Management of the Third Stage of Labour to Prevent Post-partum Haemorrhage*.[1]

Approximately 30 per cent of direct maternal deaths worldwide are due to haemorrhage, mostly in the post-partum period.[2] Most maternal deaths due to PPH occur in developing countries in settings (both hospital and community) where there are no birth attendants or where birth attendants lack the necessary skills or equipment to prevent and manage PPH and shock. The Millennium Development Goal of reducing the maternal mortality ratio by 75 per cent by 2015[3] will remain beyond our reach unless we confront the problem of PPH in the developing world as a priority.

Both ICM and FIGO endorse international recommendations that emphasise the provision of skilled birth attendants and improved obstetric services as central to efforts to reduce maternal and neonatal mortality. Such policies reflect what should be a basic right for every woman. Addressing PPH will require a combination of approaches to expand access to skilled care and, at the same time, extend life-saving interventions along a continuum of care from community to hospital. The different settings where women deliver along this continuum require different approaches to PPH prevention and treatment.

Call to Action

Despite Safe Motherhood activities since 1987, women are still dying in childbirth. Women living in low resource settings are most vulnerable due to concurrent disease, poverty, discrimination and limited access to health care. The ICM and FIGO have a central role to play in improving the capacity of national obstetric societies and midwifery associations to reduce maternal mortality through safe, effective, feasible and sustainable approaches to reducing deaths and disabilities resulting from PPH. In turn, national obstetric and midwifery associations must lead the effort to implement the approaches described in this statement. Professional associations can mobilise to:

- Lobby governments to ensure healthcare for all women;
- Advocate for every woman to have a midwife, doctor or other skilled attendant at birth;
- Disseminate this statement to all members through all available means including publication in national newsletters or professional journals;
- Educate their members, other health care providers, policy makers, and the public about the approaches described in this statement and about the need for skilled care during childbirth;
- Address legislative and regulatory barriers that impede access to life-saving care, especially policy barriers that currently prohibit midwives and other birth attendants from administering uterotonic drugs;
- Ensure that all birth attendants have the necessary training, appropriate to the settings where they work, to safely administer uterotonic drugs and implement other approaches described in this statement and that uterotonics are available in sufficient quantity to meet the need;
- Call upon national regulatory agencies and policy makers to approve misoprostol for PPH prevention and treatment;
- Incorporate the recommendations from this statement into current guidelines, competencies and curricula.

We also call upon funding agencies to help underwrite initiatives aimed at reducing PPH through the use of cost-effective, resource-appropriate interventions.

Prevention of Post-partum Haemorrhage

Pregnant women may face life-threatening blood loss at the time of delivery. Anaemic women are more vulnerable to even moderate amounts of blood loss. Fortunately, most PPH can be prevented. Different approaches may be employed depending on the setting and availability of skilled birth attendants and supplies.

Active Management of the Third Stage of Labour (AMTSL)
Data support the use of active management of the third stage of labour (AMTSL) by all skilled birth attendants regardless of where they practice. AMTSL reduces the incidence of PPH, the quantity of blood loss and the use of blood transfusion[4], and thus should be included in any programme of interventions aimed at reducing deaths from PPH.
The usual components of AMTSL include:

- Administration of oxytocin* or another uterotonic drug within one minute after the birth of the baby
- Controlled cord traction**
- Uterine massage after delivery of the placenta as appropriate.

(For more detailed information on AMTSL, see the FIGO/ICM Joint Statement: *Management of the Third Stage of Labour to Prevent Post-partum Haemorrhage*.)

Misoprostol and the Prevention of Post-Partum Haemorrhage
In situations where no oxytocin is available or birth attendants' skills are limited, administering misoprostol soon after the birth of the baby reduces the occurrence of haemorrhage [7, 8]. The most common side effects are transient shivering and pyrexia. Education of women and birth attendants in the proper use of misoprostol is essential.
The usual components of giving misoprostol include:

- Administration of 600 micrograms (mcg) misoprostol orally or sublingually after the birth of the baby***
- Controlled cord traction ONLY when a skilled attendant is present at the birth
- Uterine massage after the delivery of the placenta as appropriate.

Management of the Third Stage of Labour in the Absence of Uterotonic Drugs
In some settings there will be no uterotonics available due to interruptions of supplies or the setting of birth. In the absence of current evidence, ICM and FIGO recommend that when no uterotonic drugs are available to either the skilled or non-skilled birth attendant, management of the third stage of labour includes the following components:

- Waiting for signs of separation of the placenta (cord lengthening, small blood loss, uterus firm and globular on palpation at the umbilicus)
- Encouraging maternal effort to bear down with contractions and, if necessary, to encourage an upright position
- Controlled cord traction is not recommended in the absence of uterotonic drugs**,** or prior to signs of separation of the placenta**,** as this can cause partial placental separation, a ruptured cord, excessive bleeding and uterine inversion
- Uterine massage after the delivery of the placenta as appropriate.

Treatment of Post-partum Haemorrhage

Even with major advances in prevention of PPH, some women will still require treatment for excessive bleeding. Timely and appropriate referral and transfer to basic or comprehensive Emergency Obstetric Care (EmOC) facilities for treatment is essential to saving lives of women. Currently, the standard of care in basic EmOC facilities includes administration of IV/IM uterotonic drugs and manual removal of the placenta and retained products of conception; comprehensive emergency obstetrical care facilities would also include blood transfusion and/or surgery.[9]

Community-based Emergency Care – Home-based Life-saving Skills (HBLSS)
Anyone who attends a delivery can be taught simple home-based life-saving skills. Community-based obstetric first aid with home-based life-saving skills (HBLSS) is a family and community-focused programme that aims to increase access to basic life-saving measures and decrease delays in reaching referral facilities. Family and community members are taught techniques such as uterine fundal massage and emergency preparedness. Field tests suggest that HBLSS can be a useful adjunct in a comprehensive PPH prevention and treatment programme.[10] Key to the effectiveness of treatment is the early identification of haemorrhage and prompt initiation of treatment.

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* The preferred storage of oxytocin is refrigeration but it may be stored at temperatures up to 30^0C up to three months without significant loss of potency.[5]

** Delaying cord clamping by one to three minutes reduces anaemia in the newborn.[6]

***Data from two trials comparing misoprostol with placebo show that misoprostol 600 mcg given orally or sublingually reduces PPH with or without controlled cord traction or use of uterine massage.[7,8]

Misoprostol in the Treatment of Post-partum Haemorrhage

While there is less information about the effect of misoprostol for treatment of PPH, it may be appropriate for use in low resource settings and has been used alone, in combination with oxytocin, and as a last resort for PPH treatment. In the published literature, a variety of doses and routes of administration have shown promising results.[11] In home births without a skilled attendant, misoprostol may be the only technology available to control PPH. An optimal treatment regimen has not yet been determined. One published study on treatment of PPH found that 1000 mcg rectally significantly reduces the need for additional interventions.[12] Studies are ongoing to determine the most effective and safe dose for the treatment of PPH. A rare case of non-fatal hyperpyrexia has been reported after 800 mcg of oral misoprostol.[13]

NOTE: Repeated doses of misoprostol are not recommended.

Innovative techniques

Other promising techniques appropriate for low resource settings for assessment and treatment of PPH include easy and accurate blood loss measurement, [14, 15] oxytocin in Uniject, [16] uterine tamponade, [17] and the anti-shock garment.[18]These innovations are still under investigation for use in low resource settings but may prove programmatically important, especially for women living far from skilled care.

Research Needs

Important strides have been made in identifying life-saving approaches and interventions appropriate for PPH prevention and treatment in low resource settings. The field is rapidly evolving and the following issues have been identified as priorities for further research in low resource settings:

- Determine the optimal dose and route of misoprostol for prevention and treatment of PPH that will still be highly effective but will minimize the risk of side effects.
- Determine the most effective method of third stage management when no uterotonics are available.
- Assess the impact of better measurement of blood loss (e.g. with a calibrated drape or other means) on birth attendants' delivery practices.
- Assess options for treatment of PPH in lower-level (basic EmOC) facilities, in particular, uterine tamponade and the anti-shock garment.
- Identify the most efficient and effective means of teaching and supporting the skills needed by birth attendants and for community empowerment to address PPH.

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