2012 WHO Guidelines for Prevention and Treatment of PPH

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Postpartum Haemorrhage (PPH)

- blood loss of ≥ 500 ml within 24h after birth
- common problem (1-3% or more)
- one-quarter of all maternal deaths globally
- the leading cause of maternal mortality in most low-income countries.
- a significant contributor to severe maternal morbidity and long-term disability
- an avoidable cause of maternal deaths:
  - Effective prevention and treatment

PPH Causes

- Uterine atony is the most common cause of PPH
- Other causes include:
  - genital tract trauma
    - vaginal or cervical lacerations
  - uterine rupture,
  - retained placental tissue,
  - maternal coagulation disorders.

PPH Risk Factors

- In most cases: no identifiable risk factors
- Grand multiparity
- Multiple gestation

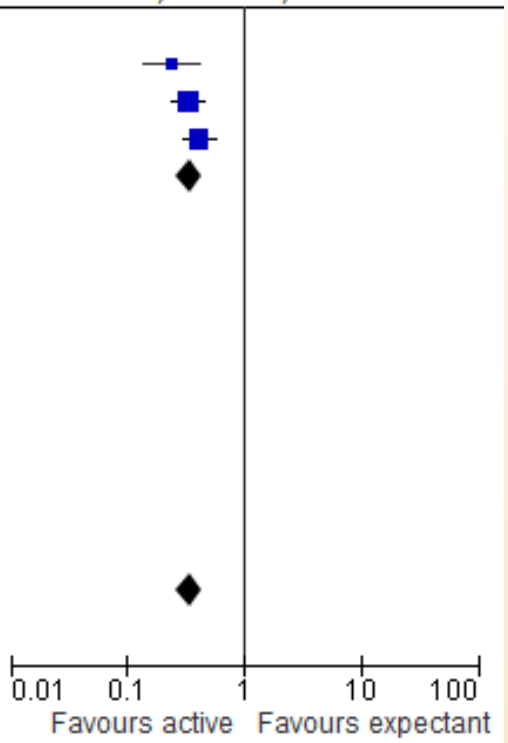
- PPH may be aggravated by pre-existing anaemia
  - The loss of a smaller volume of blood may still result in severe complications.

Active Management of Third Stage of Labour

- **Third stage of labour** spans the time from the birth of the baby to the placenta delivery.
- AMTSL: Package of interventions
  - developed in the last 50 years
  - cornerstone for the prevention of PPH

AMTSL: PPH reduction

Study or Subgroup	Active management Events	Total	Expectant management Events	Total	Weight	Risk Ratio M-H, Random, 95% CI
1.10.1 High-income setting						
Begley 1990	14	705	60	724	16.9%	0.24 [0.14, 0.42]
Prendiville 1988	50	846	152	849	41.9%	0.33 [0.24, 0.45]
Rogers 1998	51	748	126	764	41.2%	0.41 [0.30, 0.56]
Subtotal (95% CI)		**2299**		**2337**	**100.0%**	**0.34 [0.27, 0.44]**
Total events	115		338			
Heterogeneity: Tau² = 0.02; Chi² = 2.95, df = 2 (P = 0.23); I² = 32%						
Test for overall effect: Z = 8.14 (P < 0.00001)						
1.10.2 Low-income setting						
Subtotal (95% CI)		**0**		**0**		**Not estimable**
Total events	0		0			
Heterogeneity: Not applicable						
Test for overall effect: Not applicable						
Total (95% CI)		**2299**		**2337**	**100.0%**	**0.34 [0.27, 0.44]**
Total events	115		338			
Heterogeneity: Tau² = 0.02; Chi² = 2.95, df = 2 (P = 0.23); I² = 32%						
Test for overall effect: Z = 8.14 (P < 0.00001)						
Test for subgroup differences: Not applicable						



Active Management of Third Stage of Labour

It consisted initially of the following components:

- A prophylactic uterotonic after the delivery of a baby
- Early cord clamping and cutting
- Controlled traction of the umbilical cord
- Uterine massage is also frequently included

2012 WHO PPH Guidelines

- Update of the "*WHO recommendations for the prevention of PPH*" (2007) and the "*WHO guidelines for the management of PPH and retained placenta*" (2009)
- Technical consultation held in March 2012
- The new guidelines will be officially released during the summer 2012

2012 WHO PPH Guidelines

- The guideline development methods included:
  - the identification of critical questions and critical outcomes
  - the retrieval of the evidence (SR)
  - the assessment and synthesis of evidence (GRADE)
  - the formulation of recommendations & international consultation, and
  - the dissemination, implementation, impact evaluation and continuous updating of the guideline.

PPH Prevention

- New evidence
  - Evaluation of the **intrinsic contribution** of each component of the AMTSL
  - Potential **simplification** of the management of third stage of labour

PPH Prevention

- **All women** giving birth **should receive uterotonics** during the third stage of labour for the prevention of PPH
  - **Oxytocin is recommended as the uterotonic drug of choice.**
    - Other injectable uterotonics (e.g. ergometrine) and misoprostol are recommended as alternatives for the prevention of PPH in settings where oxytocin is unavailable.

Misoprostol at the community

- The use of **misoprostol** for the prevention of PPH by **community health care workers and lay health workers is supported** in settings where skilled birth attendants are not present.

- Antenatal distribution of misoprostol for women self-administration → RESEARCH

PPH Prevention

- The importance of controlled cord traction (CCT) was revisited due to new evidence.
  - **CCT** is now regarded as **optional** in settings where skilled birth attendants are available, and is contra-indicated in settings where skilled birth attendants are not available.
  - **Early cord clamping is not recommended**
  - Where uterotonics are used during the third stage of labour, **uterine massage is not recommended** for the prevention of PPH.

Prevention of PPH in CS

- **Oxytocin is the recommended uterotonic drug in CS** for PPH prevention in caesarean sections.

- **Cord traction is recommended in CS** in preference to manual removal

Treatment of PPH

- **Uterotonics play a central role** in PPH treatment

Oxytocin alone is the first choice

Treatment of PPH

- **Early fluid resuscitation (with isotonic crystalloids) is essential** for the management of shock and preventing other organ dysfunctions (e.g. renal failure)

- **Uterine massage** is recommended for PPH treatment **as soon as PPH is diagnosed.**

Treatment of PPH

- **Refractory bleeding** or persistent **trauma-related** bleeding: **Tranexamic acid**

- **Intrauterine balloon tamponade** is recommended for persistent bleeding or if uterotonics are unavailable.
  - Bimanual uterine compression, external aortic compression, and the use of non-pneumatic anti-shock garments are recommended as temporizing measures until substantive care is available.

Treatment of PPH

- If there is persistent bleeding and the relevant resources are available, **uterine artery embolization** is recommended as a treatment for PPH due to uterine atony.

- If bleeding persists despite treatment with uterotonic drugs and other conservative interventions, **surgical intervention should be used without further delay.**

Treatment of PPH

- If the third stage of labour lasts more than 30 minutes, **CCT and oxytocin** (10 IU) should be used to manage the retained placenta.
  - If there is **no bleeding**, **another 30 minutes** could be allowed to pass before manual removal of the placenta.
  - If the placenta is retained and bleeding occurs, the **manual removal of the placenta** should be expedited.
  - Whenever the manual removal of the placenta is undertaken, a single dose of **prophylactic antibiotics** is recommended.

Organization of PPH care

- **Formal protocols** for the prevention and treatment of PPH and for patient referral are recommended
- PPH treatment **simulations** for training programmes are recommended.
- The use of uterotonics for the prevention of PPH should be **monitored** and a specific indicator was suggested:

Proportion of women giving birth receiving uterotonics

2012 WHO PPH Guidelines

- Revises previous WHO recommendations for the prevention and treatment of PPH and adds new recommendations.
  - **Summer 2012**
- Support for the implementation of sustainable health policies for the reduction of maternal mortality and morbidity in developing countries