

Misoprostol:

Prevention and Treatment

Addressing the Global Issues

- 515,000 maternal deaths
- >125,000 deaths from PPH
- 14 million cases of PPH
- Leading cause of maternal death in developing world (98% cases)
- 3rd leading cause of maternal death in US and Europe

Risk Factors Are of Limited Value

Evidenced-based

- 1st pregnancy
- maternal obesity
- Macrosomia
- Multiples
- Prolongd or augmented labor
- Antepartum hemorrhage

Presumed

- Precipitous delivery
- Grand multiparity
- P/H of PPH

Compelling Evidence Exists to Prevent PPH

- Active mgt 3rd stage of labor (2-3 fold risk ↓)
- Availability and use of a uterotonic agent
 - Oxytocin – gold standard
 - Misoprostol – where oxytocin unavailable or cannot be employed

Special Thanks

National Institute of Child
Health & Human Development



BILL & MELINDA
GATES *foundation*

*Bringing innovations in health and
learning to the global community*



Primary Outcome: PPH Rates

Primary Outcome	Misoprostol (N= 812*) N (%)	Placebo (N=805) N (%)	P-value
Postpartum Hemorrhage (blood loss \geq 500 ml)	53 (6.5)	97 (12.0)	0.0001
Severe Postpartum Hemorrhage (blood loss \geq 1,000 ml)	2 (0.2)	10 (1.2)	

**Cost effectiveness
of these interventions
have been proven.**

Treatment of PPH is More Problematic

Improved outcomes in developed countries associated with rapid response teams, team training, availability of blood banking and having a variety of uterotonic drugs and surgical options.

Contributing Factors in Developing World

- Lack of access (including transport)
- Lack of ICU
- Lack of skilled providers
- Lack of IV fluids/blood
- Underlying poor nutritional status

Misoprostol – A Proven Option for Both Prevention and Treatment of PPH Issues

- Political climate
- Ongoing controversies over efficacy differences with oxytocin/ergometrine
- Dosing/route of administration/side effect profile
- Training of personnel
- Cost

Research to Address Prevailing Questions

- Comparison of misoprostol to oxytocin in rural communities employing all birth attendants
- As part of AMTSL
- The potential benefit of visual and rapid blood loss estimation in modifying outcomes
- A continuum of misoprostol for prevention, implementation of standardized protocols (to include uterine massage), proactive treatment in the face of PPH (including tranexamic acid) and a system for transfer which might include a body shock garment
- Implementation Research