

FLETCHER D-PRIZE COMPETITION

2017-2018 Academic Year

Train Birthing Attendants & Reduce Postpartum Hemorrhage

Misoprostol is a drug that reduces postpartum hemorrhage, the world's leading cause of maternal death, by 38%, costs under US \$3 and can be administered by trained traditional birth attendants. In three months, pilot a plan to train 100 birth attendants to administer misoprostol, then scale to 5,000 attendants over two years.

The Problem: Postpartum hemorrhage (PPH) is the excessive loss of blood following childbirth. PPH is the leading cause of maternal death. The WHO estimates that 25 percent of the 400,000 maternal deaths a year are due to PPH, a risk that is 100 times larger in developing countries.^{1, 2}

The Proven Solution: Misoprostol is a drug that prevents and treats PPH. The drug costs less than \$3, and does not require refrigeration.³ Randomized controlled trials show that this ultra-cheap drug can reduce PPH-caused deaths by 38 percent.⁴

The drug does not require a doctor to administer treatment. Instead, misoprostol is generally administered by traditional birth attendants (TBAs) during at-home births. Total cost per DALY, including the cost of training TBAs and distributing misoprostol, is estimated at \$6.⁵

Your Challenge: We will award up to \$20,000 to a social entrepreneur who can develop an organization that trains 5,000 traditional birth attendants (TBAs) to correctly administer misoprostol as a PPH treatment within two years. A three-month pilot program should reach at least 100 TBAs, with a six month follow-up proving a significant increase in treatment with misoprostol.

Additional Information:

- Judging by the number and probability of maternal deaths, the greatest need for misoprostol and TBA training is in sub-Saharan Africa. An estimated 247,000 maternal deaths occurred in this region in 2000, with a lifetime risk of maternal death being 1 in 16.⁶

¹ Mousa H, Walkinshaw S. Major postpartum haemorrhage. *Current Opinion in Obstetrics and Gynecology* 2001;13:595-603.

² <http://emedicine.medscape.com/article/275038-overview>

³ <http://vsinnovations.org/assets/files/Bradley et al 2007.pdf>

⁴ <http://www.ncbi.nlm.nih.gov/pubmed/17027730>

⁵ <http://www.ncbi.nlm.nih.gov/pubmed/20079493>

⁶ Blum, Jennifer; Prata, Ndola. "Proposal for the Inclusion of Misoprostol in the WHO Model List of Essential Medicines." Submission to the 17th Expert Committee on the Selection and Use of Essential Medicines. March 2009. Page 4.

- It may be difficult to secure supply of misoprostol. Monopoly pricing in areas with limited drug supply can be a burden. Working with misoprostol manufacturers with strong in-country manufacturing facilities and presence will help to avoid this bottleneck. At the last mile of the supply, TBAs must have the drug on hand in the home at the time of birth.
- There is no need to invent a new TBA training curriculum. The WHO and a number of national governments have already developed TBA training programs, which can be found free online.
- Misoprostol has recently gained attention as a potential drug for abortion induction, leading to political motivations to curb its use in some areas.⁷ In many sub-Saharan African countries, misoprostol is not approved for distribution at all.⁸
- Although the drug is less effective than oxytocin (an alternative drug), it does not require refrigeration and is consequently recommended by the WHO in settings where health facilities do not have reliable cold storage.⁹

Ready To Apply?

Download a First Round Application Packet and start creating your proposal. www.fletcher.tufts.edu/D-Prize

Questions? Email Dorothy Orszulak at dorothy.orszulak@tufts.edu.

⁷ Another Pill That Could Cause a Revolution. (2010) <http://www.nytimes.com/2010/08/01/opinion/01kristof.html>

⁸ <http://medicationabortion.com/misoprostol/>

⁹ <http://www.who.int/bulletin/volumes/87/9/08-055715/en/>