

Spotlight on Oxytocin and Misoprostol for Postpartum Hemorrhage

Globally, more than eight million of the 136 million women giving birth each year suffer from excessive bleeding after childbirth. This condition, medically referred to as postpartum hemorrhage (PPH), causes one out of every four maternal deaths annually and accounts for more maternal deaths than any other individual cause. Deaths due to PPH disproportionately affect women in low-resource countries. WHO recommends oxytocin during the third stage of labor to prevent PPH. In settings where skilled birth attendants are not present and oxytocin is unavailable, misoprostol is recommended. However, both oxytocin and misoprostol remain underutilized and as such, have been identified by the UN Commission on Life-Saving Commodities for Women's and Children's Health as two of 13 commodities that if more widely accessed and properly used, could save the lives of more than six million women and children worldwide.

A review was conducted to analyze and synthesize current key evidence in order to understand the social and behavioral drivers of oxytocin and misoprostol demand and utilization, examine effective practices in implementing demand generation programs, and

inform future programming. The evidence review found 17 documents related to demand generation for oxytocin that met the inclusion criteria, including studies from Latin America (7), Africa (4) and Asia (5); and found 21 documents related to demand generation for misoprostol that met the inclusion criteria, including studies from Africa (9) and Asia (9).

Social and Behavioral Drivers

Beyond supply-side and product issues, e.g. stock-outs and the need for cold-chain storage, there are a number of social and behavioral barriers that may also hinder the uptake of this commodity by health care providers—the primary audience for demand generation of this commodity. Health workers lack knowledge of oxytocin due to lack of access to and evaluation of up-to-date information, as well as inadequate training in the management of PPH. At the administrative level, the lack of leadership, commitment and explicit guidelines on PPH prevention and treatment (and oxytocin use specifically) leaves health workers without clear guidance on standard protocols. However, health care providers may also be resistant to change (Althabe et al., 2011; Belizan et al., 2007), such as when new guidelines or protocols are imposed from the top down. Providers identified peer-level factors as influential when considering the adoption of new practices; many expressed fear of negative judgments by colleagues. Changes in behavior were seen to occur most effectively when physicians identified as leaders model new practices and 'later adopters' are able to assess those efforts.

Evidence shows that birth attendants and community health workers (CHWs)—and their knowledge of misoprostol and the significance of PPH—play a strong role in use of misoprostol. As part of a community mobilization effort in northwestern Nigeria, women said that traditional birth attendants, community-oriented resource persons and midwives (in that order) were the primary sources of information about misoprostol (Prata et al., 2012a).

In Bangladesh, community distribution of misoprostol helped increase use of the drug after delivery. Reasons for non-use included: misperceptions (especially regarding when to take misoprostol), lack of knowledge, belief that it is not necessary, absence of a CHW, unavailability of the drug and husbands' objection to its use (Mobeen et al., 2011).



The traditional packaging of oxytocin in ampoules also creates difficulties for some birth attendants. This is especially true in instances where no assistance is available to attend to multiple demanding needs after birth (PATH, 2010; Tsu, Luu, & Mai, 2009).

Demand Generation Interventions

To increase oxytocin use and improve front-line services, the primary intervention approach was the training of health workers. In Latin America, there was increased prophylactic use of oxytocin, which persisted post-intervention due to a participatory approach—increasing oxytocin administration by actively involving health professionals in training and the development of clinical guidelines for active management of the third stage of labor (AMTSL) and PPH prevention and treatment (Althabe et al., 2011; Figueras et al., 2008). In India, rural primary health center paramedical workers and medical officers received training on AMTSL, including the administration of oral misoprostol. A significant reduction in the duration of third stage labor and median blood loss after delivery was experienced by 99 percent of the intervention group workers (Chandhiok et al., 2006). Similar results were found among traditional birth attendants in Bangladesh. After being trained on managing PPH in home births, knowledge about misoprostol increased immediately after training and remained high for six and eighteen months after training (Prata et al., 2012b). The ability of health extension workers to deliver misoprostol safely was also confirmed in Ethiopia (Ethiopian FMOH, VSHD, & DKT-Ethiopia, 2008).

A new technology to deliver oxytocin—the Uniject™ device—has been tested in Latin America, Asia and Africa. The prefilled syringe ensures that an accurate dose of oxytocin is delivered to a patient with minimal preparation, making it easier for non-skilled attendants to administer. Studies examining its use among non-skilled birth attendants found positive results (Althabe et al., 2011; PATH, 2010; Stanton et al., 2012; Tsu et al., 2009).

Direct distribution of misoprostol to pregnant women, through antenatal care and community outreach, has also been tested in Mozambique, Bangladesh, Nigeria and Zambia (VSI, 2011; EngenderHealth, 2010; Prata et al., 2012a; Zambia MoH, VSI, & UC Berkeley, 2010). In all four studies, 80 percent or more of women enrolled reported taking misoprostol appropriately and acceptability of the drug was very high. In all locations, community awareness and education were integral to community acceptance and its use.

Conclusions and Recommendations

To accelerate the uptake of oxytocin and misoprostol, barriers need to be overcome, such as low awareness of PPH and AMTSL among communities and providers, inadequate knowledge of uterotonics among providers, and lack of guidelines on PPH prevention and treatment. With the recent development of the Uniject™ device, there is potential for increasing demand for oxytocin. Recommendations to overcome barriers to demand include: (1) raising awareness of PPH in communities; (2) increasing knowledge of PPH and oxytocin as the most effective treatment among all healthcare providers; (3) developing explicit guidelines on PPH prevention and treatment, with active participation of health care providers; and (4) considering product packaging.

To read the full report, visit <http://sbccimplementationkits.org/demandrmnch/evidence-synthesis/>.

For tools and resources on demand generation for life-saving commodities, visit <http://sbccimplementationkits.org/demandrmnch/>.

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