Research into bleeding prevention post-birth could save lives

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Research brings together evidence about the potential for misoprostol to prevent bleeding after home births in low resource countries.

A new research review published today (27 November) in *BJOG: An International Journal of* Obstetrics and Gynaecology demonstrates that taking the tablet misoprostol after the birth of the baby helps prevent postpartum haemorrhage (PPH) (a blood loss of more than 500ml) amongst women delivering at home. The evidence for this is strongest in two studies in India and Pakistan, where frontline health workers attended the delivery and provided the tablets.

Every day about 800 women die from complications associated with pregnancy and childbirth. The majority of these deaths occur in low resource countries and many are the result of bleeding following the birth of the baby.

Previously published reviews have examined medications to prevent PPH, but this is the first to focus on misoprostol taken orally (as a tablet) in a home birth setting. "We know that another medication, oxytocin, is the most effective means of preventing PPH. However, it requires cold storage and needs to be given by a skilled birth attendant. The reality is that many women in low resource countries give birth in settings that offer neither of these things. For these women having access to a simple oral tablet that reduces their chance of bleeding heavily after their baby is born could be lifesaving." said lead researcher Professor Vanora Hundley of Bournemouth University.

Dr Bilal Avan, Scientific Coordinator for IDEAS, an evaluation project at the London School of Hygiene & Tropical Medicine working with partners in areas where maternal and newborn mortality burdens are high, said:

"Given the poor health system infrastructure and lack of skilled staff in low resource settings, there is significant potential for the innovative use of technologies or drugs, like misoprostol, for safe home deliveries. Although by no means a substitute for giving birth in a health facility, using misoprostol at a home delivery could be an effective intermediate measure until health systems in these settings achieve acceptable standards of service delivery."

The authors from Bournemouth University, London School of Hygiene & Tropical Medicine, University of Aberdeen and INOVA Fairfax, analysed data from six trials involving a total of 10,798 women who gave birth at home in low and middle income countries. Although all six trials showed some benefits from the use of misoprostol, only two – both in South Asia - provided sufficiently-robust evidence to draw firm conclusions, and thus further trials are needed in other types of home birth settings.

There are also concerns about potential adverse effects. The review shows that self-limiting effects such as shivering and fever were more common among the group of women that took misoprostol. However, in all studies there was limited data on adverse effects for the baby or the potential for inappropriate or inadvertent use of the tablets.

As emphasized by Professor Wendy Graham from the University of Aberdeen "Deciding when evidence of a medication is strong enough and sufficiently generalizable to recommend wide-scale adoption is often difficult, particularly where health systems are weak, and where the drug also carries some risks. From our review, we highlight the need

to continue to build the evidence base to inform routine use of misoprostol across the very diverse circumstances in which homes birth take place, and to develop local implementation and safety guidelines.

More information: Hundley, V. et al., Should oral misoprostol be used to prevent postpartum haemorrhage in home-birth settings in low-resource countries? A systematic review of the evidence, *BJOG: An International Journal of Obstetrics & Gynaecology*, 27 NOV 2012, DOI: 10.1111/1471-0528.12049.

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