Prevention of postpartum haemorrhage at community level: which uterotonic?

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Despite a substantial reduction in global maternal deaths due to postpartum haemorrhage between 1990 and 2013 (from 71 295 to 44 190), this condition continues to be the main cause of maternal mortality worldwide.[1] In sub-Saharan Africa and south Asia, many women still deliver at home without a skilled attendant, or attended by low-level providers in facilities with limited resources.[2] In these contexts, availability of uterotonics that are easy to administer and are stable in field conditions are fundamental to decrease the morbidity and mortality of postpartum haemorrhage.

Oxytocin is recommended by WHO, whereas misoprostol is recommended only when oxytocin is not available or cannot be given.[3] Although the results one of the largest facility-based randomised controlled trials,[4] in which misoprostol was compared with oxytocin in its original vial formulation, showed oxytocin to be significantly more efficacious than misoprostol in settings with well equipped facilities, several questions remained unanswered. For example, the clinical significance of the results was small, study sites differed substantially, and oxytocin was not always given intramuscularly (sometimes it was given intravenously). Furthermore, because of its route of delivery, oxytocin has limited applicability in resource-poor settings, especially when women deliver without a skilled provider. Thus, the debate about misoprostol versus oxytocin during the third stage of labour continued. The Uniject formulation (ie, via a prefilled single-use intramuscular injection) offered hope because it could surmount some of the community-based limitations that vial formulations of oxytocin present.

In an Article in *The Lancet Global Health*,[5] Ayisha Diop and colleagues answer some of these questions. They did a cluster-randomised controlled trial in Senegal to investigate the efficacy of oxytocin in Uniject (10 IU intramuscularly) versus misoprostol (600 µg orally) for the prevention of postpartum haemorrhage.[5] Haemoglobin measurements for 1049 women delivering in maternity huts were gathered for the primary outcome—mean change in haemoglobin concentrations. Results suggested that oxytocin in Uniject was not superior to misoprostol. Furthermore, oxytocin in Uniject was associated with additional programmatic limitations such as its limited shelf life when not refrigerated, making the choice between the two uterotonics clearer in low-resource settings.

The results of this trial are timely and extremely important. They contribute to the body of evidence on uterotonic choice for first-line prophylaxis in addition to shedding light on which uterotonic to use in limited-resource settings, taking into account formulation and programmatic feasibility. The Article fits well within health-systems research and action. Many countries are trying to optimise the health-care workforce, and, in the context of maternal mortality, postpartum haemorrhage and uterotonic use are at the forefront of these discussions. Although updates to the WHO recommendations about the use of uterotonics for the prevention of postpartum haemorrhage might take some years, efforts to disseminate these results widely are important. The key messages include that countries already using misoprostol at community level should continue to do so, and countries that have not yet started should accelerate implementation. Available evidence shows that misoprostol is a viable option at community level to prevent postpartum haemorrhage.

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