Measurement of postpartum blood loss
Better accuracy is only the first step towards improving outcomes

Delayed diagnosis and poor management of postpartum haemorrhage are associated with increased mortality and morbidity. The challenge, particularly in developing countries, is to improve management—for example, by using prophylactic administration of uterotonic drugs. In the linked cluster randomised controlled trial, Zhang and colleagues assessed whether using a transparent plastic collector bag to measure postpartum blood loss after vaginal delivery reduced the incidence of severe postpartum haemorrhage.

Clinicians continue to rely on visual assessment to determine the volume of postpartum blood loss. Studies have repeatedly shown visual estimates to be inaccurate (overestimating blood loss at low volumes and underestimating blood loss at high volumes). Several technologies have been developed to help clinicians to measure postpartum blood loss more accurately, with the intention of improving outcomes after postpartum haemorrhage. These include direct collection of blood in pans, gravimetric measurement of sponges (weighed before and after use), spectrophotometric methods, calibrated and non-calibrated drapes, and even enhanced teaching methods for visual estimation. Several studies in developed countries have reported that such interventions have improved the accuracy of measuring blood loss but that more accurate measurement has little effect on postpartum haemorrhage outcomes.

Zhang and colleagues’ trial, which was conducted in hospitals in 13 European countries, concluded that a more accurate assessment of blood loss is not, by itself, sufficient to affect rates of postpartum haemorrhage. The population included had a low incidence of postpartum haemorrhage of 1-2% and very low associated mortality. In this setting, clinicians’ awareness of postpartum haemorrhage is high, and management—including prophylactic use of uterotonic drugs in the third stage of labour—is standard.

In the developing world where the incidence of postpartum haemorrhage varies between 5% and 20%, tools for the measurement of blood loss can be used to standardise timing of administration of an intervention, decide when to refer the patient, and plan for administration of additional interventions. Thus, research to help identify culturally acceptable blood collection methods, determine their accuracy and generalisability to various populations, and train providers on their use should be encouraged. By facilitating the timely diagnosis of postpartum haemorrhage, even during home births, such interventions can help manage postpartum haemorrhage and prompt referrals in a timely manner, ultimately helping to reduce the high associated mortality in the developing world.