

Abstract:

Background: Thirty to thirty nine percent of maternal mortality is attributed to excess bleeding after childbirth. Amount of blood loss after childbirth is generally estimated visually though it is known that such estimates are grossly inaccurate. Locally, no studies had been done to assess the performance of visual estimation and direct measurement methods of estimating blood loss after delivery. This study aimed at estimating the amount of blood loss after childbirth using three different quantitative methods (visual estimation, direct measurement and laboratory determination). The study also aimed at establishing the incidence of Postpartum Hemorrhage (PPH) in a setting where Active Management of Third Stage of Labor (AMSTL) is practiced.

Objectives: To determine the amount of blood loss and the prevalence of PPH after vaginal delivery. **Design:** Analytic cross-sectional study. **Setting:** Pumwani Maternity Hospital (PMH) in Nairobi, Kenya. **Subjects and methods:** One hundred thirty four pregnant women delivering vaginally at PMH were recruited and studied. Sampled pregnant women were interviewed using a structured data collection form, pre- and post delivery venous blood samples were taken for determination of hematocrit and blood loss after delivery estimated visually by the primary clinician conducting the delivery and directly measured by the researchers. **Main outcome measures:** Visually estimated blood loss, directly measured blood loss and pre-and post-delivery hematocrit values. **Results:** The mean age of the study population was 24.7 ± 4.8 years. The mean visually estimated, directly measured and laboratory determined blood loss was 121.1 ml, 300.2 ml and 257.0 ml respectively. Prevalence of PPH (blood loss ≥ 500 ml) by visual estimation was zero percent and 13.4% (95% CI 5.3 - 21.5) and 11.2% (95% CI 4.0 - 18.8) by direct measurement and laboratory determination respectively. Visual estimation consistently underreported the most significant risk factor for PPH was performance of an episiotomy.

Conclusion: Visual estimation is not sensitive and grossly underestimates the amount of blood loss after delivery, magnitude of underestimation increases with increasing amount of blood loss. Direct measurement of blood loss is both highly sensitive and specific in the detection of PPH.