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Measuring and Communicating Blood Loss

In 2013, the Association of Women's Health Obstetric and Neonatal Nurses (AWHONN) launched its Postpartum Hemorrhage Project. The purpose of this project, which will take a year and half to complete, is to reduce clinical errors and change clinical practices related to postpartum hemorrhage in obstetrics. Fifty-four birthing hospitals from Georgia, New Jersey and the District of Columbia are expected to complete this project by 2016. The project is designed to: 1) increase clinician recognition of women at greatest risks of obstetrical hemorrhage; 2) increase early recognition of women who are bleeding too much 3) increase the readiness of the clinical team's preparedness to successfully respond to obstetric hemorrhage and track clinicians' response to obstetric hemorrhage for improving future performance. AWHONN, along with the California Maternal Quality Care Collaborative (CMQCC) and the National Maternal Health Initiative, has standard recommendations for the quantification of maternal blood loss. It is recommended that for every birth, quantification of blood loss begin immediately after the infant's birth and ongoing measurements should continue until the bleeding is stable. Stabilization usually occurs about 2-4 hours postpartum. Failure to recognize excessive blood loss during childbirth is a leading cause of maternal morbidity and mortality. Therefore an accurate measurement of blood loss is superior to an estimation of blood loss. Until the AWHONN research project is completed, giving us scientific and objective data for clinical practice, quantifying blood loss will provides us with an objective assessment of blood loss. This objective information will likely improve communication and team situational awareness and promote an early team response. This newsletter will discuss ways to quantify blood loss.

Quantification of Blood Loss

Quantification of blood loss can be done by weighing items used for delivery that become blood soaked or by direct measurement of fluid collected in the drapes or canisters used during delivery. Quantification of blood loss can be used in any hospital setting at low cost by following these tips.

- Create a laminated list or cards of dry weights of items used during birth that may become blood soaked. (laps, chux, cloth pads, sanitary pads) and attach to scales and PPH kits.
- Use scales to weigh all blood saturated items and clots.
- 1 gram weight equals 1 mL of blood loss volume
- $\text{WET item gram weight} - \text{DRY item gram weight} = \text{milliliters of blood within the item}$
- Use calibrated under buttocks drapes and graduated suction canisters to measure blood loss
- $\text{Total fluid volume} - \text{total non-blood fluid volume (urine, feces, irrigation fluid)} = \text{blood loss}$
- Add the fluid volume collected in the drapes and canisters to the blood volume measured by weighing soaked items to determine the cumulative volume of quantitative blood loss.

Quantification of blood loss may never yield an exact number, but it is more accurate than visual estimation and subjective terms like, scant, small, moderate and large. Quantification of blood loss will require of practice change but should not be more cumbersome than recording accurate oral/IV input or urine/emesis output. Reporting Milliliters of blood loss during communication between nurse and provider or between nurses at shift change eliminates ambiguity and gives an objective assessment of the patient's condition. Keep in mind that, amniotic fluid or urine may drain into the drapes, canister or soak other items used during delivery. Therefore, it is important to differentiate between pre-placental fluid volume loss and post-placental loss. The average amount of amniotic fluid at term can be subtracted from the blood canisters when a patient's membranes rupture. The normal amount of amniotic is 700 ml; the amount for oligohydramnios is 300 ml and polyhydramnios is 1400 ml (Gabel & Weeber, 2012). Beginning quantification of blood loss after rupture of membranes or after delivery of the infant can help more accurately determine blood loss; fluid loss after the delivery of the placenta is generally blood.

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References and additional resources

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SAMPLE LIST



