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Reducing Maternal Morbidity: Postpartum Hemorrhage Risk Assessment

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Reducing Maternal Morbidity: Postpartum Hemorrhage Risk Assessment
More than 50,000 women were impacted by severe maternal morbidity (SMM) in 2014 and the number of women affected has been steadily increasing in recent years. SMM includes unexpected outcomes of labor and delivery that result in significant short or long term consequences to a woman's health. Overall health of the population of women giving birth may be contributing to the increases in complications. For example, maternal age increases, obesity, chronic medical conditions and cesarean delivery have all been documented as contributing factors to increasing SMM. The increasing SMM rates contribute to longer hospitalization and increased medical costs.
Women who received blood transfusions account for the greatest portion of women with SMM; blood transfusions are administered as a result of hemorrhage during childbirth. Postpartum hemorrhage (PPH) remains a substantial cause of maternal morbidity and mortality. Prevention of PPH starts with preparation. More than half of women who hemorrhage due to uterine atony have no known risk factors; however, identification of associated risk factors can improve readiness to respond for those with known risks. Upon admission to delivery, assigning each women a PPH risk level may improve readiness and response to PPH.
Our institution implemented PPH risk assessment in September 2016. Upon admission to labor and delivery, each patient is assigned a PPH risk: low, medium, medium (+) or high. The risk assessment is assigned by the provider and validated by the nurse. It is a mutually agreed upon value that is updated at least every shift and upon any change in the women's medical condition. Each risk categorization has associated actions. For example, women with a low risk for PPH have a type and screen drawn. Women with a medium risk for PPH are type and crossed for 2 units of packed red blood cells and have the PPH cart brought to the bedside at the time of delivery. The risk assessment is documented in the electronic health record by the nurse in a discreet flowsheet row and by the provider in the H&P and each progress note. Also, nurses and providers report off on the PPH risk category at every hand-off report, including during the postpartum period.
To determine if the risk assessment is a valid tool to predict a PPH at our hospital, a prospective case control analysis from September 2016 to April 2018 was conducted that included 5326 deliveries in which women who had a PPH were compared to women without a PPH. During this time, women were assigned a PPH risk upon admission to labor and delivery. Blood loss before, during and after delivery was measured quantitatively and PPH was defined as blood loss > 1000 mL for both vaginal and cesarean deliveries. During this time period 537 (10%) women had a PPH. Of the

women with PPH 126 (23%) required a blood transfusion. The majority of women having a PPH were assigned a PPH risk classification of low risk. While this risk stratification system was not sensitive for detecting PPH, it was highly specific. Women classified with >1 medium risk factor (medium "plus") or high risk were significantly more likely to have a PPH and require blood transfusion.

This pre-delivery risk stratification system for PPH risk identified women at risk for PPH with high specificity. However, many women with PPH were in the low risk category. While risk stratification systems may increase awareness for PPH, all care team members must be prepared to recognize and respond to PPH for women in every PPH risk category.

Title:
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References:
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Abstract Summary:
More than 50,000 women were impacted by severe maternal morbidity (SMM) in 2014 and the number of women affected has been steadily increasing in recent years. This educational offering will describe how small changes in nursing practice can impact SMM.

Content Outline:
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1. Introduction. Severe Maternal Morbidity continues to increase in the U.S. at alarming rates with PPH as the leading cause in Texas.
2. Quality Improvement
1. PPH Bundle, including the PPH risk assessment
2. Describe PPH risk assessment

3. Nurses role in PPH risk assessment
4. Prospective case control analysis from September 2016 to April 2018 was conducted that included 5326 deliveries in which women who had a PPH were compared to women without a PPH
3. Findings
4. Conclusion. This pre-delivery risk stratification system for PPH risk identified women at risk for PPH with high specificity. However, many women with PPH were in the low risk category.

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