Early Intervention and Standardization of Management of Postpartum Hemorrhage To Increase Evidence-Based Practice and Patient Safety in the Birth Center Setting
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Background
- In the United States postpartum hemorrhage (PPH) continues to be one of the leading causes of maternal death (11-12%).
- In Florida, it is the leading cause of mortality (15%).
- Incidence reported to occur between 5-15% of all births.
- Worldwide, 500,000 mothers die each year from a potentially treatable condition.
- In 2015, according to the Perinatal Data Registry (PDR), there were 5 postpartum hemorrhages. However, in 2016, there have been two postpartum hemorrhages noted.
- Active management of the third stage of labor only occurred with 5 births in 2015 (4.17%).

AIM
The aim of this quality improvement project was for over 50% of births at Breath of Life Birth Center to be managed with quantitative blood loss (QBL) measurement and active management of the third stage of labor (AMTSL) after implementing evidence-based management of third stage of labor protocols between April and July 2016.

Planned Improvement
- Increase in use of QBL vs EBL (at least 50% of births)
- Increase in use of AMTSL (> 90% of births)
- Defined: 10 units of pitocin IM after birth of infant, clamping / cutting of cord when pulsations cease / 5 minutes after birth, controlled cord traction, and fundal assessment / massage.
- Increase in knowledge / confidence of management of PPH
- Decrease in time of third stage of labor with a reduction in blood loss postpartum
- Increase in awareness and adherence to evidence-based practice

Measures
PDSA 1: Training of CNMs in AMTSL / QBL
PDSA 2: Training of BAs in AMTSL / QBL
PDSA 3: Application of AMTSL at each birth
PDSA 4: Application of QBL at each birth
PDSA 5: Continuation & adherence to AMTSL / QBL at each birth

Results
- Easily adapted into the birth center model of care.
- Low client refusal rate (<10%).
- AMTSL was utilized at 80% of births occurring during the intervention, which did not meet the goal of 90%. However, this was an increase from the pre-intervention of 4%.
- The median for blood loss from 4/16/16 to 4/11/16 (before intervention) compared to 4/2016 to 6/21/16 (after standardization of intervention) are both exactly 250mL—a adherence to QBL was 85%. After training, there was an 80% increase in using QBL for calculation of blood loss (from 5% to 85% of all births), which superseded the expectation of a 50% increase.
- There was a 20% reduction in time to effect delivery of placenta (10 to 8 minutes), but it did not meet the outcome measure of 30%.
- Pre and post-intervention reflected a 30% use of secondary pain management (use of acetylsalicylic acid in addition to suprafetum use) although the end of the intervention period depicted a trend toward less use (Fig. 4). There was no increase in use of pain meds with the use of pitocin as the balancing measure predicted.
- There was 95% attendance to all trainings conducted on QBL / AMTSL (one birth assistant and one birth assistant intern were out of town during trainings), which did not meet the process measure of 100% attendance.
- No noted increase in provider dissatisfaction with QBL / AMTSL, which is lower than the projected 30% increase.
- Use of pitocin increased from 20% to 80%, which reflects a 60% increase in medication cost per birth, which is lower than the projected balance measure of a 75% increase.
- Ability to use with waterbirth and land birth (52% waterbirth pre and post-intervention).

Conclusions
- Increase in awareness and adherence to evidence-based practice
- Easily adapted into the birth center model of care.
- Low client refusal rate (<10%).
- AMTSL was utilized at 80% of births occurring during the intervention, which did not meet the goal of 90%. However, this was an increase from the pre-intervention of 4%.
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Establish QBL measurement prior to the implementation of AMTSL in order to have a more accurate knowledge of what true blood loss was and then be able to track the effects of blood loss reduction in low-risk women in the birth center setting.

References

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