Achieving Improved Maternal Health Outcomes Through Early Recognition and Intervention for Postpartum Hemorrhage

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Background

Postpartum Hemorrhage (PPH) is a leading cause of maternal mortality worldwide, with one death occurring approximately every **7-8 minutes.** The implementation of standardized approaches to PPH recognition and management has been shown to improve maternal outcomes significantly. Utilization of Quantitative Blood Loss (QBL), PPH risk assessments, and early pharmacological intervention promotes accurate and timely recognition of obstetrical hemorrhage. Prompt identification and rapid intervention are essential in reducing complications, improving maternal stabilization, and enhancing overall maternal safety and outcomes.

Objective

Improve early identification and management of PPH through:
- Standardized QBL
- Implementing PPH risk assessments in EHR
- Proactive use of hemorrhage control medications
- Improving provider and staff compliance
- Promoting early recognition and intervention to reduce hemorrhage severity

Actions Taken

Standardized QBL
- Initiated immediately after baby is born, but before placenta is expelled
- Use of under-buttock drape (volumetric collection)
- Weighing of all blood-soaked materials (gravimetric method)
- Measurement continued for first 2 hours postpartum

Implementing PPH risk assessments in EHR
- Completed at admission
- Prior to delivery (within 2 hours)
- During postpartum period (within 4 hours)

Proactive use of hemorrhage control medications
- Additional education on early use of Methergine and Hemabate provided

Standardized debriefing with patient and support person after an identified OB emergency

2021
QBL introduced while going through COVID-19

Initially rolled out only to vaginal deliveries

2022
Rolled out QBL for all deliveries

QBL, PPH risk assessment, and medication management education reinforced to providers and staff

After reinforcing education and training, Inpatient Services Director and Lead OB Nurse were present for every delivery and walked staff through QBL

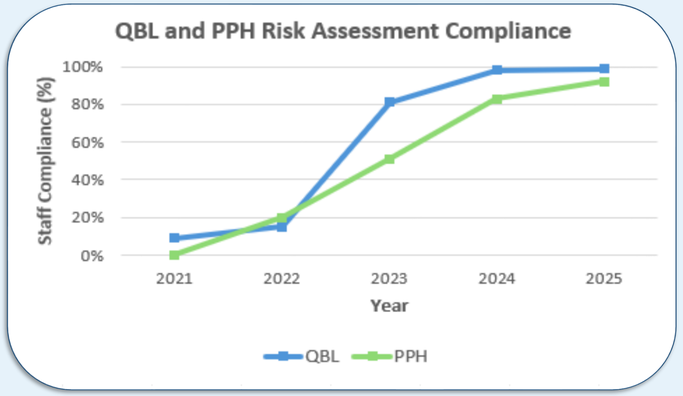
2023
The Iowa Maternal Quality Care Collaborative (IMQCC) came onsite and held simulations on PPH and OB emergencies

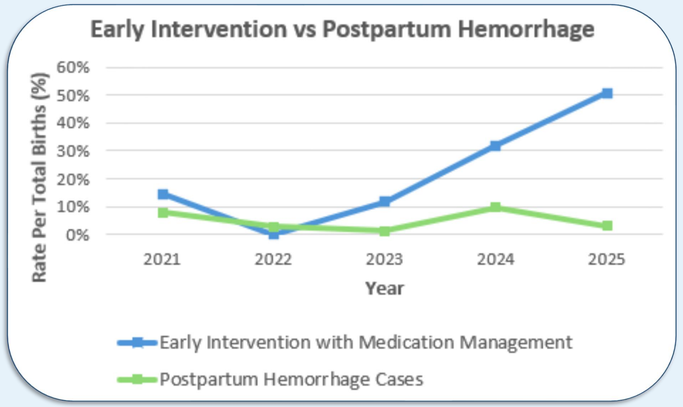
Interdisciplinary teams of Obstetrics, Emergency Department, Emergency Medical Services, Radiology, Med-Surg, and Surgical Services participated in simulations and training

2024
JADA device implemented alongside the current Bakri balloon

PPH Hemorrhage cart introduced

Metrics





Analysis

- Implementation of QBL and PPH risk assessment created a complementary system for hemorrhage detection
- QBL improved accuracy of blood loss measurement
- PPH risk assessment improved clinical awareness and preparedness
- Combined interventions reduced variability among providers
- Providers and staff fully bought into the standard process
- Medication administration through early intervention reduced cases of postpartum hemorrhage

Next Steps

- Quarterly hemorrhage drills performed using different causes of hemorrhage
- While the graphs show sustained improvement, real-time audits, along with bi-monthly report-outs at quality meetings, will ensure the improvements are maintained overtime
- Next, we will continue to review and make any needed adjustments to our massive transfusion policy

"As a critical access hospital in a resource-conscious environment, implementing a standardized process for postpartum hemorrhage has enhanced our ability to recognize early warning signs, allowing for more rapid intervention and improved maternal outcomes."
-Obstetric Provider, FPOB

"Education focused on postpartum hemorrhage has been extremely valuable for our rural emergency department and ambulance services. The hands-on training environment allows providers and staff to practice critical scenarios, strengthen communication, and build confidence in managing high-risk OB emergencies. This preparation ensures our teams are better equipped to respond quickly, provide evidence-based care, and improve outcomes for mothers and families during real-life emergencies."
-Emergency Room and Ambulance Medical Director

"My husband kept asking if I was going to die. Seeing all the blood was terrifying, and I felt extremely scared. The staff quickly recognized the emergency and immediately began treatment while calmly explaining everything to me and my family. The staff kept us informed throughout the situation."
-Obstetric Patient