

Simulation of Obstetric Massive Hemorrhage and Improvement of Patient Care in Emergency Cases

The Problem

Obstetrical Massive Hemorrhage is a low frequency and high risk event that can be very chaotic involving multiple disciplines. Obstetrical Hemorrhages have three stages outlined in the OBGYN policy. The protocol involves obstetrical, anesthesia, and nursing departments in collaboration with the blood bank and stat laboratory during each stage. There is a lack of awareness among the disciplines of the intended response.

Aim/Goal

- Identify a leader to delegate the roles to staff and facilitate clear communication.
- Provide all 80 labor and delivery nurses with real-time intervention, response and expectations required during these emergencies.
- Allow real-time feedback and ability to identify obstacles in these emergencies in a judgment-free safe environment.
- Clarify roles through multidisciplinary collaboration in the simulation, improving patient safety and outcomes.

The Team

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OB/GYN: Toni Golen MD, Kyoko Okamura MD, Hope Ricciotti, MD, Lucy Chie MD, Katharyn Meredith Atkins MD, Katherine Barnes MD

OBGYN-MFM: Tamara Takoudes MD, Bill Schnettler MD

ANESTHESIA: Vimal Akhouri MD, Yunping Li MD, David Feinstein MD, Joan Spiegel MD

Simulation Center: David Fobert, Michael McBride, Darren Tavernelli

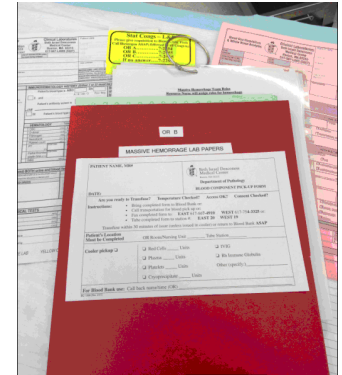
The Interventions

- Simulation packets distributed containing objectives and information on: OB hemorrhage, stages of blood loss, uterotonics, bakri balloon, blynch suture procedure and BIDMC guidelines
- The simulation was limited to 6 nurses who were dressed in OR attire. One nurse was appointed primary nurse. All were given a full patient report. The scenario of a routine cesarean section was performed. At delivery of placenta, hemorrhage developed progressing through 3 stages of our Obstetrical procedure

- Hemorrhage was communicated; Massive Hemorrhage Team Roles were assigned and carried out
- Debrief to allow Q&A and suggestions for improvement

The Results/Progress to Date

- All L&D nursing staff (80) completed the simulation
- Roles for nurses during an obstetrical hemorrhage were developed and are laminated in each OR
- Interdisciplinary communication was enhanced by the simulation. By listing all of the tasks done during this emergency, each discipline was enlightened by the others assignments.
- Team decision on appropriate forms essential in the OR are now stored in red folders by the anesthesia machine.
- Location of emergency equipment and medications were identified, especially for off shifts
- Nursing was able to identify anticipated needs of physicians



Lessons Learned

- This multidisciplinary simulation identified areas for improvement for each discipline.
- All paperwork required is now stored in one red folder in the OR.
- Information on blood products that protocol stipulates sent every 20 minutes is now known to anesthesia, obstetricians and nursing. Increased awareness of the Blood Bank's role (constant calls were an obstacle to preparing products).
- All disciplines are aware of roles assigned during this emergency and what nurse they should be communicating their needs to.
- Protected time for all disciplines is vital for successful simulation.

Next Steps/What Should Happen Next

- Follow up to assess impact of role assignments, red folder with paperwork, Blood Bank's experience re: unnecessary phone calls.
- Continue to assess future hemorrhages and challenges to care.



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