Shoulder Dystocia with Postpartum Hemorrhage (PPH)

Facilitators

Objectives

1. Demonstrate clear team and patient communication during obstetric emergencies
2. Demonstrate McRoberts, supra-pubic and 1 internal maneuver to relieve shoulder dystocia birth
3. Utilize quantitative blood loss to identify staged based postpartum hemorrhage management needs
4. Demonstrate interventions for postpartum hemorrhage according to ACOG staged recommendations

Simulation Modality

Low fidelity with MamaNatalie and NeoNatalie. Option to adjust per facility resources.

Roles in Scenario

Standardized patient, Primary Nurse, Baby Nurse, Delivering provider.

Optional per facility resources and group sizes: Charge Nurse, Patient support person, Documenter, Observer (checklist), Surgical Tech, Respiratory Therapy, House Supervisor, Unit Secretary, Anesthesia, etc.

Recommend no more than 5-7 in scenario so all can fully engage.

Pilot date and attendee plan

Plan to trial at least 1 week prior to allow adjustments in session, supply gathering, etc.

Materials list and set up details

Mama Natalie: Load with mock blood and baby. Utilize protectant mat	Maternal Vital Signs and EFM (print out or verbalize)	Non rebreather O2 Mask	Unit PPH Cart with Small scale for Quantitative Blood Loss (QBL), Jada, Bakri, etc.
Delivery set up sterile table with vag laps, instruments and placenta basin	Supplies for Mock 2nd IV	Mock Lab draw equipment	3 chux with mock blood (red food coloring and water) prepared for QBL weights
Baby blankets, hat, neo stethoscope, bulb suction.	Urinary catheter or Straight Cath kit	Mock PPH medications (Pitocin, Methergine, Cytotec, TXA) and administration devices (syringes, needles)	Team Resources: NPQIC Toolkit items or facility specific procedures
Standardized patient with mock IV (drain to floor), wearing a gown and in patient bed / stretcher	Fluid resuscitation: 1L LR, NS, IV tubing and pressure bags	Mock Blood products appropriate for facility stock	

Session Dates, Times and Location

Plan for 1 hour sessions: 15 min pre brief, 20 min scenario, 15 min debrief and 10 minute reset.				

Interdisciplinary roles attending simulation:

Nursing, Surgical Tech, Providers

Participants sign up process, confidentiality form plan and session evaluation

Participant notification and reminder dates

Pre-work: *Optional*

Pre-brief and Confidentiality Agreements

- **Welcome:** Introduce purpose of session and review of Objectives
- **Overview of session:** Review management of Shoulder Dystocia and PPH. Then we will show you around the simulation room, assign roles and read the lead in. We will work through the scenario and then debrief together. There are evaluations for feedback to help us improve future trainings.
- **Ground rules and Confidentiality Agreement:** Treat as real as possible. Request assistance as need from facilitators. What happens here stays here.
    - Commit to confidentiality for learning in this space (via form or verbal). We are here to work through processes so we can explore what things may be needed further developed or equipment obtained, etc. This is about the team.
- **Review expected Shoulder Dystocia recognition and response through Q&A:**
    - What is a turtle sign? (extension of fetal head and then recoil back in due to retention of shoulder)
    - What are first responses to shoulder dystocia? (Team identification, quick patient coaching, McRoberts, provider posterior slight traction)
    - What is McRoberts? (Patient head flat, knees back in frog like position to open hips)
    - How is supra-pubic pressure done and what materials may be needed? (Place pressure with fist just above pubic bone in one constant motion down or push in direction baby looking to concave that shoulder. May need stool)
    - What internal maneuvers may a provider consider? (Posterior Arm, Wood's or Rubin's)

  - What is one maneuver we have not yet discussed? (Gaskins / All 4s)
- **Review expected Postpartum Hemorrhage recognition and response:**
  - What qualifies as a postpartum hemorrhage? (500 mL blood loss for vaginal or 1000 mL cesarean)
  - What are the '4Ts' or 'causes' of PPH to explore to guide necessary interventions? (Tone #1!, Trauma, Tissue, Thrombin)
  - PPH requires a staged response based on level of bleeding (as assessed by QBL to the best of our ability) rather than all interventions at once. You can utilize tools as we discuss:
    - (OB Facilities) PPH Risk Assessments (AWHONN Resource) What are 3 risk factors for PPH?
    - Each stage of hemorrhage and key interventions (0-4)
    - Are there any contra-indications for any of theses medications? (Methergine not in hypertensive. Hemabate not in asthmatic. TXA not if history blood clots)
    - Discuss facility blood product availability and processes to obtain more.

Orient to room (enter simulation space)

- Introduce to the standardized patient wearing Mama Natalie. Explain process to birth, shoulder dystocia and hemorrhage. Abilities to perform assessments, speak to patient per usual, vaginal exam of device, etc.
- Orient to medications in space and how expected to administer.
- Relay what other equipment, materials and references are available in the space.
- Relay where to find vital signs, EFM and QBL.
- Discuss how to communicate to get more help, call lab, call provider, etc. during scenario.
- We will get roles, read the scenario lead in and then start supporting the patient with the precipitous birth, shoulder dystocia and postpartum hemorrhage. We will then debrief.
- Leave space for further questions regarding space or objectives/session purpose.

Role delegation

Per facility role decisions in session

Scenario lead in

Helen Home (they/them) is a 35-year-old G2P1 who presents with contractions that started a few hours ago while traveling in the car. They are 38 weeks today and contracts consistently now every 5 minutes so they presented to your Emergency department. They report routine prenatal care with 'nothing out of range, all went smoothly' (we are working to get records). The only notable health history is asthma. No labs or assessments yet done as the patient has just arrived.

Scenario

Admission	Expected Participant Events:	Facilitator cues:
VS: HR 100. BP 100/76 RR 22 SpO2 97% RA EFM (for OB facilities) FHR: 135 moderate variability, no accels, no decels UC: Every 3-5 minutes palpating strong	☐ Call for assistance ☐ Obtain precipitous delivery equipment ☐ SBAR to team as they arrive ☐ Coaching and support of patient ☐ Closed loop team communication	• Patient: "Contractions worse and closer so I came in, now I'm feeling PRESSURE!" • Descend fetus so crowning • Painful response and panic

Birth	Expected Participant Events:	Facilitator cues:
VS: Unable to obtain at this time EFM:FHR intermittent, UC unchanged Birth QBL 350 **(Stage 0)**	☐ Provider informs team of suspected shoulder dystocia and call for additional help ☐ Time noted for birth of head ☐ Provider delegate McRoberts maneuver ☐ Patient head laid flat and legs back ☐ Provider provides gentle downward traction ☐ Provider/Nurse coach patient/family ☐ SBAR to additional team members as arrive ☐ Provider delegate supra-pubic pressure ☐ Supra-pubic pressure applied above pubic bone as one constant pressure toward the direction baby is looking ☐ Provider delegates stop supra-pubic to attempt internal maneuvers ☐ Internal maneuvers attempted: Posterior arm, Rubins, or Woods Corkscrew. ☐ NO fundal pressure applied ☐ Birth time noted ☐ Infant placed skin to skin ☐ Infant assessed while skin to skin ☐ Cord clamped after 60 seconds of life ☐ Prophylactic Oxytocin administered ☐ Placenta delivery time noted ☐ Placenta inspected (tissue) ☐ Fundal massage performed (tone) ☐ Birth QBL measured (OB teams)	• Birth fetal head, pull back to simulate Turtle sign • Yell 'this hurts!' • 'Agh get it out!' • Hold on to fetus until McRoberts, Supra-pubic and at least 1 internal maneuver performed. • Infant cry after delivery. • 'Oh your okay, hi baby!' • Facilitator: *Baby is appropriate to stay skin to skin at this time.* • Facilitator: *Placenta is intact*

Hemorrhage	Expected Participant Events:	Facilitator cues:
VS: HR 110. BP 100/60 RR 22 SpO2 95% RA QBL now 600 **(Stage 1)** VS: HR 115. BP 90/55 RR 22 SpO2 92% RA QBL now 1000 **(Stage 2)** VS: HR 125. BP 80/45 RR 24 SpO2 89% RA **(Stage 3)**	☐ Fundal massage continues ☐ Provider inspects for tears or hematomas (trauma) ☐ Assess patient VS during case ☐ Assess fundus during case ☐ Assess bladder ☐ Measure 1st gush QBL and notify team ☐ Obtain PPH cart or unit materials if not already present. Refer to cognitive aids. ☐ First utero-tonic administered ☐ Team identify hemabate contraindication due to asthma ☐ Team identify 'Tone' etiology ☐ Remove infant from chest as patient states not feeling well ☐ Recognize T&C need, obtain sample. ☐ Ensure 16g or 18g IV. ☐ IV fluid bolus initiated ☐ Measure 2nd gush QBL and notify team ☐ Second line uterotonic / TXA administered ☐ Initiate O2 mask ☐ Blood products ordered ☐ Place secondary IV line ☐ Initiate methods to warm patient or fluid products ☐ Provider request intrauterine device (Bakri or Jada) and mobilize more providers for preparation of OR ☐ Prepare intrauterine device ☐ Provider places device	• 'Ugh, that is not comfortable, do you have to push my stomach?' • Facilitator: *No tears visualized.* • Facilitator: *Place bloody chux on to field. Additional QBL 250* • Patient: ensure fundus boggy, 1 above the umbilicus • 'Oh I felt a gush!' • 'I don't feel well, my ears are ringing' • Facilitator: *Place bloody chux on to field. Additional QBL 300= 900 total. 'Also, the gown is saturated (EBL 100)' so getting to be around 1000 mL* • *'I'm so cold, I think I'm going to throw up or faint'* • Patient: Adjust to firm fundus • Facilitator: *Tone achieved. Bleeding stabilized*.

	☐ Maintenance set up for device	
Recovery	**Expected Participant Events:**	**Facilitator cues:**
VS: HR 105. BP 98/60 RR 24 SpO2 94%	☐ Routine postpartum VS and Assessment ☐ Debrief with patient ☐ Team debrief (or verbalize would preform) ☐ Shoulder dystocia times, sequence of manuevers and ensure documentation captured ☐ Hemorrhage interventions and plan for continued monitoring	• Facilitator prompt if needed: *Patient stablizing, what are your actions at this time?*

Debrief

What went well? Anything we could do differently? Were any processes tested in this simulation? If checklist observer and/or documenter present in scenario, relay on their records to guide debrief discussion.

Objective	Expected Participant Events (as listed above in scenario)
Demonstrate clear team and patient communication during obstetric emergencies	
Demonstrate McRoberts, Subra-pubic and 1 internal manuever to relieve shoulder dystocia birth	
Utilize quantitative blood loss to identify staged based postpartum hemorrhage management needs	

Demonstrate interventions for postpartum hemorrhage according to ACOG staged recommendations	

Evaluations

Reset