



Instructor Guide

Trauma and Resuscitation in Pregnancy Workstation

The Instructor should help a Learner lead a debriefing where the team discusses what went well and what could have been done better, specifically in regard to medical management, communication, and system issues.

Please Note: The scenarios below are suggestions. Instructors may improvise and use cases that are based on real-life scenarios. Remember that the focus of this workstation should not be for Learners to recite advanced cardiovascular life support algorithms and drug dosages. Instead, it should focus on teamwork and communication issues including when to initiate the code, maternal and fetal assessment, assigning roles, recording of events, and determining when to proceed to delivery in a timely fashion.

Case #1: Trauma (Motor Vehicle Accident) With Placental Abruption

Instructor reads scenario: "A 24-year-old Gravida 4 Para 2 at 37 2/7 weeks' gestation is brought to the emergency department by ambulance after a motor vehicle accident in which she was a restrained front-seat passenger. The airbag deployed. She did not lose consciousness, but it took more than 45 minutes to extract her from the car using hydraulic rescue tools. When she arrives in the emergency department, she is tachycardic and hypotensive, but responsive."

Learners perform:	After team asks corresponding questions, the Instructor may add the following responses:	Suggested team behaviors:
Initial patient assessment and initiation of Circulation/Airway/Breathing	<p><u>Assessment findings:</u> The pregnant person is tachypneic, is cyanotic and becomes unconscious. What do you do?</p> <p><u>Vital sign findings:</u></p> <ul style="list-style-type: none"> • Pulse - 150 BPM • Blood pressure (BP) - 90/40 mm Hg • Respiratory rate - 28 breaths/minute • Oxygen saturation - 84% <p><u>After lungs auscultated:</u> You hear no breath sounds on the right side. The pregnant person is having worsened respiratory distress</p> <p>What pulmonary condition do you suspect?</p> <p><u>Pneumothorax is confirmed on the right side:</u> What do you do now?</p> <p><u>Vital signs stabilize after procedure:</u></p> <ul style="list-style-type: none"> • Pulse – 100 BPM • BP - 105/60 mm Hg • Respiratory rate – 20 breaths/minute • Oxygen saturation - 92% 	<ul style="list-style-type: none"> <input type="checkbox"/> Calls a code blue <input type="checkbox"/> Asks for extra help in the room <input type="checkbox"/> Requests anesthesia, operating room, and neonatal teams be on standby <input type="checkbox"/> Assigns recorder and all times of interventions to be noted <input type="checkbox"/> Asks for crash cart in room <input type="checkbox"/> Ensures 2 intravenous (IV) lines started and STAT labs drawn <input type="checkbox"/> Administers oxygen <input type="checkbox"/> Places defibrillator pads on woman <input type="checkbox"/> Patient assessment performed <input type="checkbox"/> Asks for frequent vital sign updates <input type="checkbox"/> Pneumothorax diagnosed <input type="checkbox"/> Needle decompression (14-16 gauge midclavicular second intercostal space above the rib) and/or chest tube placed
Initial fetal and uterine assessment	<p><u>Fetal assessment findings:</u> Baseline fetal heart rate (FHR) 120 BPM with minimal variability and repetitive variable decelerations to 90s with late return. No vaginal bleeding noted</p> <p>Pregnant person is having regular contractions that are lasting 50 seconds and occurring every 1 to 1.5 minutes</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Requests FHR <input type="checkbox"/> Requests contraction pattern <input type="checkbox"/> Palpates abdomen <input type="checkbox"/> Assesses for vaginal bleeding <input type="checkbox"/> Administers IV fluids and oxygen, changes maternal position, oxygen <input type="checkbox"/> Performs cervical examination
Obstetric diagnosis	<p>Based on the uterine assessment, what diagnosis are you considering?</p> <p>What should you do now? No response to IV fluids, position change, or oxygen. Cervical</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Diagnoses placental abruption <input type="checkbox"/> Determines mode of delivery <input type="checkbox"/> Decides to attempt assisted vaginal delivery with vacuum <input type="checkbox"/> Considers need for transfusion <input type="checkbox"/> Prepares resuscitation team for newborn

	<p>examination reveals no palpable cord; cervix is completely dilated and +3 station, fetal head position - occiput anterior</p> <ul style="list-style-type: none"> • <u>You establish immediate delivery is necessary</u> 	<ul style="list-style-type: none"> <input type="checkbox"/> Explains what is happening to pregnant person and family throughout <input type="checkbox"/> Examines placenta
<p><u>Instructor reads case conclusion:</u> "Delivery of infant occurs after two pulls of the vacuum and no pop-offs. Apgar scores are 3, 5, and 9 and the arterial blood gas level is 7.08 with a base deficit of 8. The infant required positive pressure ventilation at birth but is now stable and doing well on room air. A large clot is evident on the placenta, consistent with a concealed placental abruption. The pregnant person required an immediate blood transfusion of 2 units of packed red blood cells. The patient and infant were discharged home 3 days later."</p>		

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	<ul style="list-style-type: none"> • <u>Immediately after perimortem cesarean delivery</u>: No immediate return of spontaneous circulation 	<ul style="list-style-type: none"> <input type="checkbox"/> Resumes CPR cycle <input type="checkbox"/> Alerts intensive care unit/OR staff of possible transfer
<p><u>Instructor reads case conclusion:</u> “Delivery of infant is achieved via perimortem cesarean delivery. The infant required chest compressions and positive pressure ventilation but is resuscitated quickly and transferred to the neonatal intensive care unit for further treatment. After the infant delivered, the uterus was packed with lap sponges and maternal resuscitation efforts continued. After the infant and placenta were delivered, the patient quickly benefited from resuscitative efforts, with a return of sinus rhythm and palpable pulse 2 minutes later. The patient is transferred to the intensive care unit for further care. You determine the diagnosis is consistent with amniotic fluid embolism. The patient and infant are discharged together 1 week later with no further complications.”</p>		

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Case #3: Respiratory Failure During Labor

Instructor reads scenario: “A 28-year-old Gravida 2 Para 1 at 36 4/7 weeks’ gestation, who has preeclampsia with severe features, has been receiving magnesium sulfate, is being induced with oxytocin, and is receiving epidural analgesia for pain control. Before your next evaluation, you are informed that the pregnant person appears anxious and is confused. On arriving to the delivery room, the patient appears cyanotic and disoriented and becomes unresponsive.”

Learners Perform:	After team asks corresponding questions, the Instructor may ADD the following responses:	Suggested Team Behaviors:
<p>Initial patient assessment and initiation of Circulation/Airway/Breathing</p> <p>Initial fetal assessment</p> <p>Obstetric diagnosis</p>	<ul style="list-style-type: none"> • Assessment findings: The pregnant person is not breathing, is cyanotic, and unconscious. What do you do? • Vital sign findings: <ul style="list-style-type: none"> • Pulse – 120 BPM • Blood pressure (BP) – 90/50 mm Hg • Respiratory rate – 0 breaths/minute • Oxygen saturation – 74% • After lungs auscultated: You hear no breathing sounds, and no respiratory efforts are observed • Fetal assessment findings: Baseline FHR is 120 BPM with minimal variability and prolonged decelerations. Uterine contractions occur every 3-4 minutes • Based on what you know, what conditions are you considering? • With calcium gluconate dosing: The pregnant person begins to breath spontaneously and FHR improves to show moderate variability 	<ul style="list-style-type: none"> <input type="checkbox"/> Calls a code blue <input type="checkbox"/> Asks for extra help in the room <input type="checkbox"/> Requests anesthesia, operating room, and neonatal teams be on standby <input type="checkbox"/> Assigns recorder and all times of interventions are noted <input type="checkbox"/> Asks for crash cart in room <input type="checkbox"/> Ensures 2 intravenous (IV) lines started and laboratory tests immediately obtained <input type="checkbox"/> Applies oxygen/positive pressure ventilation via bag valve mask <input type="checkbox"/> Places defibrillator pads <input type="checkbox"/> Requests fetal heart rate (FHR) <input type="checkbox"/> Requests contraction pattern <input type="checkbox"/> Palpates abdomen <input type="checkbox"/> Considers epidural analgesia complication, pulmonary embolism, septic shock, and magnesium sulfate toxicity <input type="checkbox"/> Discontinues epidural analgesia infusion <input type="checkbox"/> Requests/administers 1 g calcium gluconate IV; 10 mL of 10% solution over 10 minutes <input type="checkbox"/> Obtains magnesium level
<p>Instructor reads case conclusion: “Patient shows magnesium level is 15 mg/dL. Vital signs return to normal and, with a Category 1 FHR, is allowed to labor with reduced magnesium dosing and closer monitoring of deep tendon reflexes and magnesium levels.”</p>		