SECTION I: SCENARIO OVERVIEW

Scenario Title:	Prolapsed Umbilical Cord MCH
Original Scenario Developer(s)	C. Lopez, RNC, MSN, CNS, S. Cantrell, MSN, RNC
Date - original scenario	04/08
Validation:	02/09
Revision Dates:	08/18 Connie Lopez, MSN, CNS, RNC-OB, CPHRM, CHSEA 08/10
Pilot testing:	02/09
QSEN revision:	

Estimated Scenario Time: 15 minutes   Debriefing time: 30 minutes

Target group: Pre-licensure students in OB, new graduates, orientees, staff in OB and IP teams

Core case: Prolapsed Umbilical Cord/Emergency C-section

QSEN/IOM Competencies:
- ❑   Patient Centered Care
- ❑   Safety
- ❑   Teamwork and Collaboration

Brief Summary of Case: Carey Jones is a 22-year-old woman who is G3P0 at 37 weeks gestation. She was admitted to L&D 3 hours ago, in early labor. She had a moderate variable deceleration (< 70 bpm lasting 60 seconds) during her triage evaluation. FHR has had moderate variability with accelerations, since that time. Early prenatal care was uneventful. However, at 33 weeks, it was noted that fetal size was greater than dates and an ultrasound confirmed fetal growth and anatomy were within normal limits. Her AFI was 29 and a diagnosis of polyhydramnios was confirmed. She is 5'5" and weighs 220 lbs. Her blood sugars have been within normal limits.

EVIDENCE BASE / REFERENCES (APA Format)

Davidson, M. R., London, M. L., & Ladewig, P. W. (2012). *Olds maternal-newborn nursing & womens health across the lifespan*. Boston: Pearson.

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Lowdermilk, Deitra Leonard, et al. *Maternity & Womens Health Care*. Elsevier, 2016.

Mercer, B. (2014). Premature Rupture of Membranes In *Creasy and Resnik's maternal-fetal medicine: Principles and practice*. (7th Ed. Pp.663-672) Philadelphia, PA: Saunders / Elsevier.

Miller, L., Miller, D., & Cypher, R. (2017). *Mosby's Pocket Guide to Monitoring: A Multidisciplinary Approach* (8th ed.). St Louis, MO: Elsevier.

ALL DATA IN THIS SCENARIO IS FICTITIOUS

SECTION II: CURRICULUM INTEGRATION

A. SCENARIO LEARNING OBJECTIVES

Learning Outcomes

1. Apply clinical decision-making skills in interpreting and analyzing complex patient data and assessment.
2. Provide patient/family centered care, utilizing safety principles to reduce risk and minimize risk of error.
3. Communicate with IP team valuing each role & using standard tools (SBAR) & closed loop communication.

Specific Learning Objectives

1. Demonstrate focused labor and delivery assessment.
2. Identify changes in maternal/fetal status that require further assessment and intervention.
3. Prioritize nursing care based on accurate assessment and interpretation of data.
4. Demonstrate SVE to relieve pressure of presenting part on prolapsed umbilical cord.
5. Initiate/activate Labor & Delivery emergency response system.
6. Communicate SBAR to each member of Emergency response team as they arrive on scene.
7. Utilize patient safety interventions throughout care.
8. Recognize emotional states of patient/family and intervene, delegate one person to keep family informed.
9. Delegate required nursing interventions (IV start, Foley insertion and prep for C-section).
10. Maintain close monitoring of fetal status by FHR by monitor and cord palpation.
11. Position patient appropriately.
12. Explain procedures in clear, calm voice.

Critical Learner Actions

1. Demonstrate a systematic, focused assessment of patient and fetus.
2. Identify cord prolapse, displace presenting part off cord.
3. Position patient in knee chest or deep Trendelenburg position.
4. Obtain assistance and activate emergency system.
5. Accurately present change in patient status to interprofessional team using structured communication tool (SBAR).
6. Initiate IV. Deliver bolus with Lactated Ringers solution.
7. Demonstrate situation awareness with call outs, check backs and closed loop communication.

B. PRE-SCENARIO LEARNER ACTIVITIES

Prerequisite Competencies

Knowledge	Skills/ Attitudes
❑ Pathophysiology, risk factors, clinical manifestations, interventions and expected outcomes for pat. w/ Prolapsed Umbilical Cord ❑ Physiology behind fetal heart pattern.	❑ SVE to keep pressure of presenting part off cord ❑ Fetal monitoring and interpretation ❑ Foley catheter insertion ❑ IV insertion
❑ Priority interventions for umbilical cord prolapse	❑ Communication with patient and family in escalating situations.
❑ Effective communication for reporting change in pt. condition to family & IP team.	❑ Communication with interprofessional team using SBAR, call outs, check backs & closed loop communication
❑ Prioritization of interventions in preparation for emergency delivery.	❑ Preparation for emergency C-Section

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SECTION III: SCENARIO SCRIPT

A.   Case summary

Carey Jones is a 22-year-old woman who is G3P0 at 37 weeks gestation. She was admitted to your L&D unit 3 hours ago, in early labor. She had a moderate variable deceleration during her triage evaluation. FHR has had moderate variability with accelerations, since that time. Early prenatal care was uneventful. However, at 33 weeks, it was noted that fetal size was greater than dates and an ultrasound confirmed fetal growth and anatomy were with in normal limits. Her AFI was 29 and a diagnosis of polyhydramnios was confirmed. She is 5'5" and weighs 220 lbs. Her blood sugars have been within normal limits.

B. Key contextual details

Labor & Delivery Room
Situation: Patient is resting in bed in a semi fowler's position. Her family member(s) are sitting in the room, talking to patient. FHR is within normal limits with contractions every 2-4 minutes lasting 80 - 90 seconds.

C. Scenario Cast		
Patient/ Client	❑ High fidelity birthing simulator	
	❑ Hybrid (Blended simulator)	
	❑ Mid-level simulator with baby manikin	
	❑ Task trainer	
	❑ Standardized patient	
Role	Brief Descriptor	Standardized Participant (SP) or Learner (L)
RN #1	Novice Nurse	L
RN #2	OB nurse	L
RN #3	Expert Nurse	SP
Provider		L or SP
CRNA		L or SP
Significant Other	*Fearful & anxious*	SP

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D. Patient/Client Profile				
Last name:	Jones		First name:	Carey
Gender: Female	Age: 22	Ht: 5'5"	Wt.: 220 lb.	Code Status: Full
Spiritual Practice: None identified		Ethnicity: Caucasian		Primary Language spoken: English

1. History of Present Illness

Patient is G3P0 at 37 weeks gestation with polyhydramnios. She has been laboring for 4 hours.

Primary Medical Diagnosis	IUP at 37 weeks

2. Review of Systems

CNS	within normal limits
Cardiovascular	within normal limits
Pulmonary	within normal limits
Renal/Hepatic	Pedal edema
Gastrointestinal	within normal limits
Endocrine	within normal limits
Heme/Coag	within normal limits
Musculoskeletal	within normal limits
Integument	within normal limits
Developmental Hx	within normal limits
Psychiatric Hx	N/A
Social Hx	Married, husband and family are supportive. First grandchild on both sides of family
Alternative/ Complementary Medicine Hx	N/A

Medication allergies:	None known	Reaction:	
Food/other allergies:	None known	Reaction:	

	Drug	Dose	Route	Frequency
3. Current medications	D5LR	125 mL/h	IV	continuously

4. Laboratory, Diagnostic Study Results

ALT/SGPT: 7		AST/SGOT:	LDH:	BUN:	Cr:
Ca:	Mg:	Phos:	Glucose:	HgA1C:
Hgb: 12.1 g/dl	Hct: 35.8%	Plt: 180,000	WBC: 11,000	ABO Blood Type:
PT	PTT	INR	Troponin:	BNP:
ABG-pH:	paO2:	paCO2:	HCO3/BE:	SaO2:
VDRL: NR	GBS: neg	Herpes: neg	HIV: neg	Urine Protein:

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E. Baseline Simulator/Standardized Patient State
(This may vary from the baseline data provided to learners)

1. Initial physical appearance

Gender: female	Attire: patient gown

Alterations in appearance (moulage): Baby in manikin abdomen. Cord should be between head and cervix. Patient is attached to the EFM and an IVD5LRat 125 ml/hr.. On the over bed table is a half-finished can of "soda" and some granola bar wrappers. Significant other is at the bedside. FHR is within normal limits with contractions every 2-4 minutes lasting 70 - 90seconds.
Place fluid in tubing for family member (confederate) to squirt when rupture of membranes occurs.
Monitor cords attached to computer.

x	ID band present, accurate		ID band present, inaccurate		ID band absent or not applicable
	Allergy band present, accurate		Allergy band inaccurate	x	Allergy band absent or N/A

2. Initial Vital Signs Monitor display in simulation action room:

	No monitor display	x	Monitor on, but no data displayed		Monitor on, standard display
BP: 130/90		HR: 98	RR: 24	T: 37.8 C	SpO²: 90% RA

FHR: baseline 140	Moderate variability. Occasional mild variable decelerations			
AIRWAY:			ETC0²:	FHR:
Lungs:	Left: clear	Right: clear		
Heart:	Sounds: within normal limits			
	ECG rhythm:			
	Other:			
Bowel sounds:	within normal limits		Other:	

3. Initial Intravenous line set up

	Saline lock #1	Site:			IV patent (Y/N)
x	IV #1 Main	Site: Left forearm	Fluid type: D5/LR	Initial rate: 125 mL/hr.	IV patent (Y/N)
x	Piggyback	Not infusing			

4. Initial Non-invasive monitors set up

x	NIBP		ECG First lead:		ECG Second lead:
	Pulse oximeter		Temp monitor/type		Other:

5. Initial Hemodynamic monitors set up

	A-line Site:	Catheter/tubing Patency (Y/N)	CVC Site:	PAC Site:

6. Other monitors/devices

	Foley catheter		Amount:	Appearance of urine:	
	Epidural catheter	x	Infusion pump:	Pump settings:	
x	Fetal Heart rate monitor/tocometer			Internal	External

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Environment, Equipment, Essential props

1. Scenario setting: (example: patient room, home, ED, lobby)
Labor & Delivery Room

2. Equipment, supplies, monitors
(In simulation action room or available in adjacent core storage rooms)

	Bedpan/ Urinal	x	Foley catheter kit	x	Straight cath. kit		Incentive spirometer
x	IV Infusion pump		Feeding pump		Pressure bag		Wall suction
	Defibrillator	x	Code Cart		12-lead ECG		Chest tube equip
	PCA infusion pump		Epidural pump		Central line Kit		Dressing Δ equip
x	IV fluid Type: LR & D5LR				Blood products: _____ ABO Type: # of units:_____		
x	IV tubing type: main line, secondary, piggyback						

x	Nasal cannula		Face tent	x	Simple Face Mask		Non-rebreather mask
x	BVM/Ambu bag		Nebulizer Tx kit		Flowmeters (extra supply)		

4. Documentation and Order Forms

x	Provider orders	x	Med Admin Record	x	Hx & Physical	x	Lab Results
x	Progress Notes	x	Graphic record	x	Anes/PACU record		ED Record
	Med Reconciliation	x	Triage forms		Prenatal record	x	Shift Assessment
x	Nurses' Notes		Dx test reports	x	Code Record		Prenatal record
x	Actual medical record binder			x	Electronic Medical Record		

5. Medications (to be available in sim action room)

#	Medication	Dose	Route		#	Medication	Dosage	Route
x	Terbutaline					Alkaseltzer		
						Sodium Bicarbonate		

ALL DATA IN THIS SCENARIO IS FICTITIOUS

CASE FLOW / TRIGGERS/ SCENARIO DEVELOPMENT STATES

Initiation of Scenario: Carey Jones is a 22-year-old woman who is G3P0 at 37 weeks gestation. She was admitted to your L&D unit 3 hours ago, in early labor. She had a moderate variable deceleration during her triage evaluation. FHR has had moderate variability with accelerations, since that time. Early prenatal care was uneventful. However, at 33 weeks, it was noted that fetal size was greater than dates and an ultrasound confirmed fetal growth and anatomy were with in normal limits. Her AFI was 29 and a diagnosis of polyhydramnios was confirmed. She is 5'5" and weighs 300 lbs. Her blood sugars have been within normal limits.
Patient is resting in bed in a semi fowler's position. Her family member(s) are sitting in the room, talking to patient. FHR is within normal limits with contractions every 2-4 minutes lasting 80-90 seconds. On SVE 10 minutes ago she was 6 cm/90/-2 with a BBOW.

STATE / PATIENT STATUS	DESIRED LEARNER ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		

1. Baseline
Patient resting in bed, was admitted 3 hours ago in active labor.
 	
If asked, pt. states "pain is at 7/10"
	Operator
	Display vital signs as learner assesses
	RR: 22/min,
	SpO²: 98% RA
	HR: SR @ 90
	BP: 128/78
	
	FHR is baseline 140 with moderate variability and occasional accelerations.
	
	Triggers & Cues:
	• If introductions not made, SO asks "Who are you?"
	• If equipment not checked, then call light will not be within reach when needed.
	Patient will state she feels a lot of "pressure."
		Learner Actions
		1. Introduces self and role; updates white board
		2. Washes hands, identifies patient
		3. Performs shift assessment
		4. Assesses Fetal heart monitor
		5. Checks equipment and call lights
		6. Assesses pain status
		7. Offers pain medication
			Debriefing Points:
			
			❑ Patient centered care
			
			❑ Patient safety; infection control; assuring equipment in working order
			
			❑ Establish baseline status for mother and baby at beginning of shift.
			  o Patient centered care
			  o Planning of care
			  o Time management

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STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
2. Pt. states, "I feel a lot of pressure" If nurse does not reposition patient, significant other becomes anxious and asks "why did that happen? Is the baby alright?	**Operator:** *5 min. after nurse enters room:* FHR shows variable deceleration to 80 bpm w/ return to baseline in 30 secs FHR returns to baseline of 140 if patient is turned to left side No change in pt.'s vital signs **Triggers & Cues:** Learner actions complete within 5 minutes.	**Learner Actions:** 1. Assesses FHR when FHR deceleration is noticed. 2. Turns patient to left side 3. Initiate O² via face mask 4. Explain to patient and family what is happening and rationale for turning on left side. 5. Activate Emergency Response system	**Debriefing Points:** ❑ Significance of fetal deceleration ❑ Optimal maternal position to relieve pressure on cord & increase blood flow to fetus ❑ Rationale for O² to mother ❑ Patient Centered care – keeping family calm and informed helps cooperation ❑ Teamwork & Collaboration -SBAR communication
STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
3. Patient states "I think I just wet the bed." **Cues:** ❑ If nurse does not notice FHR decel, SO becomes anxious and asks about baby's heart rate ❑ If nurse does not call for help, SO states "Get some help in here now!"	**Operator:** Maternal vital signs within normal limits FHR shows variable deceleration to 60 bp. 2 minutes after deceleration, the pt. states she "wet the bed". *Family member (SP) squirts fluid from concealed syringe.* **Triggers & Cues:** ❑ If nurse does not call for help ↓ FHR to 40 bpm ❑ If nurse does not identify prolapsed cord & intervene, ↓ FHR to ZERO. ❑ Learner Actions complete within 5 minutes	**Learner Actions:** 1. Assess FHR after position change 2. Assess fluid & perform SVE 3. Identify cord prolapse 4. Maintain SVE to keep pressure of presenting part off the cord 5. Places bed in deep Trendelenburg position 6. Respond to each person arriving to help with SBAR of situation.	**Debriefing Points:** Patient Safety: ❑ Elements of focused assessment ❑ Interventions for prolapsed cord and rationale for each Teamwork & Collaboration ❑ SBAR communication ❑ Delegation ❑ Call outs, check backs, closed loop communication Patient Centered Care: ❑ Communication strategies to allay anxiety, keep informed and gain cooperation.

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STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
4. Patient lying on left side Cues: If nurse does not inform or reassure patient and family, patient will start crying and SO becomes out of control and demanding in loud voice	**Operator:** *Within one minute of activating Emergency Call System* FHR remains at 60 bpm **Triggers & Cues:** ❑ If no SBAR, assisting staff will either do nothing or focus on same intervention ❑ If nurse does not prep bed for move to OR, ↓ FHR to ZERO	**Learner Actions:** 1. SBAR communication & delegation as soon as responding help arrives 2. Verify that provider and anesthesia have been notified 3. Maintains SVE 4. Assesses FHR via cord pulsation and FHR monitor 5. Positions self on bed in position that assures that the bed will fit through the door 6. Direct team member to remove IV bag from pump and place it on the bed 7. Remove O² from mother and d/c from wall source	**Debriefing Points** ❑ Strategies for therapeutic communication in escalating situation ❑ Strategies to keep self, patient, family & team members focused and in deteriorating situations ❑ Critical elements in preparation for emergency C-Section. ❑ Callouts, check backs, closed loop communication
Scenario End Point: Patient is ready to roll to OR or before FHR drops to "0".			
Suggestions to <u>decrease</u> complexity: for prelicensure students, send help in to facilitate change of position; don't let FHR drop to "0" Suggestions to <u>increase</u> complexity: Unfolding case to emergency C-Section. Start following scenario in OR with interprofessional team playing their own roles; focus on teamwork and collaboration.			

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APPENDIX A: HEALTH CARE PROVIDER ORDERS

Patient Name:	Diagnosis:
DOB:	
Age:	
MR#:	

†No Known Allergies
†Allergies & Sensitivities

Date	Time	HEALTH CARE PROVIDER ORDERS AND SIGNATURE
Signature		

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APPENDIX B: Digital images of manikin and/or scenario milieu

Insert digital photo here	Insert digital photo here
Insert digital photo here	Insert digital photo here

General Debriefing Plan			
☐ Individual	☐ Group	☐ With Video	☐ Without Video
Debriefing Materials			
☐ Debriefing Guide	☐ Objectives	☐ Debriefing Points	☐ QSEN

QSEN Competencies to consider for debriefing scenarios		
☐ Patient Centered Care	☐ Teamwork/Collaboration	☐ Evidence-based Practice
☐ Safety	☐ Quality Improvement	☐ Informatics

Sample Questions for Debriefing

1. How did the experience of caring for this patient feel for you and the team?
2. Did you have the knowledge and skills to meet the learning objectives of the scenario?
3. What GAPS did you identify in your own knowledge base and/or preparation for the simulation experience?
4. What RELEVANT information was missing from the scenario that impacted your performance? How did you attempt to fill in the GAP?
5. How would you handle the scenario differently if you could?
6. In what ways did you feel the need to check ACCURACY of the data you were given?
7. In what ways did you perform well?
8. What communication strategies did you use to validate ACCURACY of your information or decisions with your team members?
9. What three factors were most SIGNIFICANT that you will transfer to the clinical setting?
10. At what points in the scenario were your nursing actions specifically directed toward PREVENTION of a negative outcome?
11. Discuss actual experiences with diverse patient populations.
12. Discuss roles and responsibilities during a crisis.
13. Discuss how current nursing practice continues to evolve considering new evidence.
14. Consider potential safety risks and how to avoid them.
15. Discuss the nurses' role in design, implementation, and evaluation of information technologies to support patient care.

Notes for future sessions: