



### **California Simulation Alliance (CSA) Simulation Scenario Template**

The California Simulation Alliance (CSA) is comprised of simulation users from all disciplines from throughout the state. Several regional collaboratives have formed totaling 7 as of March, 2011: The Rural North Area Simulation Collaborative (RNASC), the Capital Area Simulation Collaborative (CASC), the Bay Area Simulation Collaborative (BASC), the Central Valley Simulation Collaborative (CVBSC), the Southern California Simulation Collaborative (SCSC), the Inland Empire Simulation Collaborative (IESC), and the San Diego Simulation Collaborative (SDSC). The CINHC, a non-profit organization focused on workforce development in healthcare provides leadership for the CSA.

The purpose of the California Simulation Alliance (CSA) is to become a cohesive voice for simulation in healthcare education in the state, to provide for inter-organizational research on simulation, to disseminate information to stakeholders, to create a common language for simulation, and to provide simulation educational courses. The goals of the alliance will include providing a home within the CINHC for best practice identification, information sharing, faculty development, equipment/vendor pricing agreements, scenario development, sharing and partnership models. More information can be found on the CSA website at [www.cinhc.org/programs](http://www.cinhc.org/programs).

All scenarios have been validate by subject matter experts, pilot tested and approved by the CSA before they were published online. All scenarios are the property of the CINHC/CSA. The writers have agreed to release authorship and waive any and all of their individual intellectual property (I.P.) rights surrounding all scenarios. I.P release forms can be found at [www.bayareanrc.org/rsc](http://www.bayareanrc.org/rsc) and click documents. (Please send signed I.P. release forms to KT at [kt@cinhc.org](mailto:kt@cinhc.org))

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## SECTION I: SCENARIO OVERVIEW

<b>Scenario Title:</b>	Shoulder Dystocia	
Original Scenario Developer(s):	Connie M Lopez, <a href="mailto:connie.m.lopez@kp.org">connie.m.lopez@kp.org</a> Heidi Torkelsen, <a href="mailto:heidi.torkelsen@kp.org">heidi.torkelsen@kp.org</a> Susan Cantrell, <a href="mailto:scantrell@samuelmerritt.edu">scantrell@samuelmerritt.edu</a>	
Date - original scenario	3/15/2007	
Validation:	4/20/2010	
Revision Dates:	4/21/2010, 08/09/2011 Jacci Sterling, RN (Director of Perinatal Services), Julie Revolinski, RN (Perinatal Staff @ Sutter)	
Pilot testing:	4/10/2007	
QSEN revision:	8/02/2011, Marjorie Miller, MA, RN, CHSE	
<u>Estimated Scenario Time:</u> 15 minutes <u>Debriefing time:</u> 30 minutes		
<u>Target group:</u> Perinatal team, new graduate nurses, staff nurses		
<u>Core case:</u> Shoulder Dystocia		
<u>QSEN Competencies:</u>		
<ul style="list-style-type: none"> <li>• Safety</li> <li>• Patient Centered Care</li> <li>• Teamwork and Collaboration</li> </ul>		
<p><u>Brief Summary of Case:</u> Sandra Simmons is a 30 year old petite woman who is a G1 P0 at 41 weeks gestation. She is a gestational diabetic with an estimated fetal weight of 3800 grams. She has been pushing for 2 ½ hours and is becoming exhausted. Agreed to have saline lock placed with prolonged labor. The baby’s head delivers, and after 2 minutes a shoulder dystocia is declared. McRobert’s maneuver and suprapubic pressure are performed and the baby delivers in the labor/delivery room.</p>		

### EVIDENCE BASE / REFERENCES (APA Format)

Nursing Management in Delivery of Patient with Shoulder Dystocia (2011). <i>Sutter Maternity &amp; Surgery Center: Perinatal Services Manual</i> .
Simpson, K.R. (2007). AWHONN Perinatal Nursing. Lippincott, Philadelphia
F. G. Cunningham, K. Leveno, S. Bloom, J. Hauth, L. Gilstrap, K. Wenstrom (2010). Williams Obstetrics. McGraw-Hill Companies, United States.
Camune, B. & Brucker, M. (2007) “An Overview of Shoulder Dystocia. The Nurses Role” <i>Nursing for Women’s Health</i> , 11(5), 488–498
Gurewitsch, Edith Diamant. (2007) “Optimizing Shoulder Dystocia Management to Prevent Birth Injury”. <i>Clinical Obstetrics and Gynecology</i> .
Jevitt, C., Morse, S., Yong, S. (2008) Shoulder Dystocia: Nursing Prevention and Posttrauma Care. <i>Journal of Perinatal Nursing</i> . 22(1)

## SECTION II: CURRICULUM INTEGRATION

### A. SCENARIO LEARNING OBJECTIVES

Learning Outcomes
1. Manages care of delivering woman using principles of safety.
2. Recognizes significance of findings based on critical assessment data.
3. Makes clinical decisions and calls for assistance based on accurate assessment of patient.
Specific Learning Objectives
1. Assesses laboring patient for normal vs. abnormal progress
2. Gathers relevant patient, environmental and contextual data to assess care priorities
3. Recognizes & reports risk factors for shoulder dystocia
4. Recognizes complication of shoulder dystocia and calls for appropriate assistance
5. Prioritizes care and communicates effectively with inter-professional team members
6. Communicates situation & plan of care to patient and family
7. Performs Mc Roberts maneuver and supra pubic pressure
8. Assists in safe delivery of baby, performing APGAR, skin to skin
Critical Learner Actions
1. Recognizes risk factors for complication of shoulder dystocia & prioritizes care
2. Notifies OB/MW/Pediatrician of risk factors
3. Recognizes complication of shoulder dystocia
4. Calls for assistance and communicates emergency situation with team
5. Initiates IV
6. Communicates start time of shoulder dystocia
7. Performs McRoberts maneuver and suprapubic pressure accurately
8. Prepares for possible emergency delivery /surgical intervention (C-section)
9. Communicates with patient/family with clear calm statements of action.

### B. PRE-SCENARIO LEARNER ACTIVITIES

Prerequisite Competencies	
Required prior to participating in the scenario	
Knowledge	Skills/ Attitudes
<input type="checkbox"/> Assessment findings in shoulder dystocia	<input type="checkbox"/> Assessment of laboring mother
<input type="checkbox"/> Priorities in safe delivery of shoulder dystocia	<input type="checkbox"/> Fetal monitoring
<input type="checkbox"/> Assessment of fetal well being	<input type="checkbox"/> Significance of abnormal assessment findings
<input type="checkbox"/> Inter-professional team communication; structured communication tool (SBAR)	<input type="checkbox"/> McRoberts Maneuver & supra-pubic pressure interventions
<input type="checkbox"/> Therapeutic communication in acute situations	<input type="checkbox"/> Request for assistance appropriate to situation
<input type="checkbox"/> National Patient Safety Goals	<input type="checkbox"/> Preparation of labor bed for shoulder dystocia delivery
	<input type="checkbox"/> Patient/family communication

### SECTION III: SCENARIO SCRIPT

#### A. Case summary

Sandra Simmons is a 30 year old, petite woman who is a G1 P0 at 41 weeks gestation. She is a gestational diabetic with an estimated fetal weight of 3800 grams. She has been pushing for 2 ½ hours and is becoming exhausted. Agreed to have saline lock placed with prolonged labor. The baby's head delivers, and after 2 minutes a shoulder dystocia is declared. McRobert's maneuver and suprapubic pressure are performed and the baby delivers in the labor/delivery room.

#### B. Key contextual details

Setting: Labor and delivery room.

Situation: Patient has been pushing for 2 ½ and is exhausted. Fetal heart tones have been within normal range but as the baby crowns, the fetal heart rate decelerates to the 90's when the patient pushes. The FHR has moderate variability and the FHR returns to baseline between pushes.

Systems issues: The primary nurse for the patient is a novice nurse. The novice nurse has just received report on this patient and is assisting the patient with pushing. The father of the baby is at the bedside.

#### C. Scenario Cast

Patient/ Client	<input type="checkbox"/> High fidelity simulator <input type="checkbox"/> Mid-level simulator, <b>Noelle birthing manikin</b>	
<b>Role</b>	<b>Brief Descriptor</b>	<b>Confederate (C) or Learner (L)</b>
Nurse #1	Novice nurse	L
Charge Nurse #2	Expert nurse	L
MD or CNM		L
Patient	Exhausted Initial: Patient exhausted "I am so tired" I can't push anymore!" Trigger: Baby's head out "This hurts! Please help me!"	C (Actor)
Father of baby	Fearful and anxious Initial: When the mother expresses that she is exhausted "My wife is exhausted, isn't there anything you can do for her?" Trigger: When the head is delivered but not the shoulders, "Is my baby going to be okay?" "Why isn't my baby being delivered?"	C (Actor)
Sister of mother	Sister: With hand under manikin's abdomen, hold baby to delay delivery of shoulders. Push baby's head out, then pull back (Turtle's sign). After 2 minutes, release and allow baby to birth	C (Actor)

D. Patient/Client Profile				
Last name:	Simmons		First name:	Sandra
Gender: Fe	Age: 30	Ht: 5'1"	Wt: 160	Code Status: Full
Spiritual Practice: Catholic		Ethnicity: Caucasian		Primary Language spoken: English
1. History of present illness				
Sandra Simmons is a 30 year old, petite woman who is a G1 P0 at 41 weeks gestation. She is a diet controlled, gestational diabetic with an estimated fetal weight of 3800 grams. She has been pushing for 2 ½ hours and is becoming exhausted. Agreed to have saline lock placed with prolonged labor.				
Primary Medical Diagnosis		Intrauterine pregnancy @ 41 weeks		

2. Review of Systems	
CNS	WNL
Cardiovascular	WNL
Pulmonary	WNL
Renal/Hepatic	WNL
Gastrointestinal	WNL
Endocrine	Diet controlled gestational diabetes
Heme/Coag	WNL
Musculoskeletal	WNL
Integument	WNL
Developmental Hx	WNL
Psychiatric Hx	WNL
Social Hx	First pregnancy. Married and living with husband.
Alternative/ Complementary Medicine Hx	unknown

Medication allergies:	None reported	Reaction:	
Food/other allergies:	NKDA	Reaction:	

3. Current medications	Drug	Dose	Route	Frequency
	PNV	1 tablet	PO	Once a day
	Colace	1 tablet	PO	Twice a day

4. Laboratory, Diagnostic Study Results					
Na:	K:	Cl:	HCO <sub>3</sub> :	BUN:	Cr:
Ca:	Mg:	Phos:	Glucose: 90	HgA1C:	
Hgb: 11.2	Hct: 35	Plt: 150	WBC: 10,000	ABO Blood Type:	
PT	PTT	INR	Troponin:	BNP:	
Ammonia:	Amylase:	Lipase:	Albumin:	Lactate:	
ABG-pH:	paO <sub>2</sub> :	paCO <sub>2</sub> :	HCO <sub>3</sub> /BE:	SaO <sub>2</sub> :	
VDRL: NR	GBS: neg	Herpes: none	HIV: NR		
CXR:		ECG:			
CT:		MRI:			
Other:					

E. Baseline Simulator/Standardized Patient State (This may vary from the baseline data provided to learners)					
1. Initial physical appearance					
Gender: Fe		Attire: hospital maternity gown			
Alterations in appearance (moulage): red wig with pigtails					
x	ID band present, accurate information		ID band present, inaccurate information		ID band absent or not applicable
x	Allergy band present, accurate information		Allergy band present, inaccurate information		Allergy band absent or not applicable

2. Initial Vital Signs Monitor display in simulation action room:					
x	No monitor display		Monitor on, but no data displayed	x	Monitor on, standard display

BP: 138/80	HR: 90	RR: 18	T:	SpO <sub>2</sub> : 94%
FHR: 120 BL, moderate variability,			FHR 90 with pushing	
CVP:	PAS:	PAD:	PCWP:	CO:
AIRWAY:	ETCO <sub>2</sub> :	FHR:		
Lungs: Sounds/mechanics	Left:		Right:	
Heart:	Sounds:	S <sub>1</sub> S <sub>2</sub>		
	ECG rhythm:			
	Other:			
Bowel sounds:				Other:

3. Initial Intravenous line set up						
x	Saline lock #1	Site:				IV patent (Y/N)
	IV #1	Site:		Fluid type:	Initial rate:	IV patent (Y/N)
	Main					
	Piggyback					
	IV #2	Site:		Fluid type:	Initial rate:	IV patent (Y/N)
	Main					
	Piggyback					
4. Initial Non-invasive monitors set up						
x	NIBP		ECG First lead:		ECG Second lead:	
x	Pulse oximeter		Temp monitor/type		Other:	
5. Initial Hemodynamic monitors set up						
	A-line Site:		Catheter/tubing Patency (Y/N)		CVP Site:	PAC Site:
6. Other monitors/devices						
	Foley catheter	Amount:		Appearance of urine: voiding clear urine		
	Epidural catheter	x	Infusion pump:	Pump settings: Primary Piggyback (2 <sup>nd</sup> channel)		
x	Fetal Heart rate monitor/tocometer			Internal	External	
Environment, Equipment, Essential props						
Recommend standardized set ups for each commonly simulated environment						
1. Scenario setting: (example: patient room, home, ED, lobby)						
Perinatal Unit/ Labor & Delivery Room						

2. Equipment, supplies, monitors						
(In simulation action room or available in adjacent core storage rooms)						
x	Bedpan/ Urinal	x	Foley catheter kit	x	Straight cath. kit	Incentive spirometer
x	IV Infusion pump		Feeding pump		Pressure bag	Wall suction
	Nasogastric tube		ETT suction catheters		Oral suction catheters	Chest tube insertion kit
	Defibrillator		Code Cart		12-lead ECG	Chest tube equip
	PCA infusion pump		Epidural infusion pump		Central line Insertion Kit	Dressing Δ equipment
x	IV fluid Type:	Lactated Ringers	IV fluid additives:	20 Units Pitocin		Blood product ABO Type: # of units:



3. Respiratory therapy equipment/devices							
x	Nasal cannula		Face tent	x	Simple Face Mask		Non re-breather mask
	BVM/Ambu bag		Nebulizer tx kit	x	Flowmeters (extra supply)		

4. Documentation and Order Forms							
x	Health Care Provider orders	x	Med Admin Record	x	H & P	x	Lab Results
	Progress Notes	x	Graphic record		Anesthesia/PACU record		ED Record
x	Medication reconciliation		Transfer orders		Standing (protocol) orders		ICU flow sheet
x	Nurses' Notes		Dx test reports		Code Record	x	Prenatal record
x	Actual medical record binder, constructed per institutional guidelines				Other Describe:		

5. Medications (to be available in sim action room)							
#	Medication	Dosage	Route	#	Medication	Dosage	Route
	Pitocin	20 Units	IV				
	Lactated Ringers	1000 mL	IV				
	Fentanyl		IV				

CASE FLOW / TRIGGERS/ SCENARIO DEVELOPMENT STATES			
<p><b>Initiation of Scenario :</b> Sandra Simmons is a 30 year old gestational diabetic who is a G1P0 at 41 weeks gestation. Patient has been pushing for 2 ½ hours and is becoming exhausted. You must help the patient push. The baby is at 2+ station. Patient is petite with an estimated fetal weight of 3800 Gm. MD is on her way.</p>			
STATE / PATIENT STATUS	DESIRED LEARNER ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
<p><b>1. Baseline</b></p> <p>Patient has been pushing for 90 minutes. (Vocalize as such)</p> <p>BP 136/80, HR 90, RR 24 FHT's 120, ↓ to 90 with pushing, moderate variability</p> <p>IV lock is in place.</p> <p>Patient continues to push but vocalizes Initial "I am so tired. I can't push anymore!"</p> <p>When the mother expresses that she is exhausted "My wife is exhausted, isn't there anything you can do for her?"</p>	<p><b>Operator</b></p> <p>BP 136/80 HR 90 RR 24 FHT's 120, ↓ to 90 with pushing, moderate variability</p> <p><b>Triggers:</b> To perform expected actions within 5 minutes</p>	<p><b>Learner Actions</b></p> <ol style="list-style-type: none"> <li>1. Assists patient w/pushing</li> <li>2. Assesses maternal and fetal well-being</li> <li>3. Recognizes risk factors for shoulder dystocia</li> <li>4. Calls for assistance</li> <li>5. Notifies MD/MW of risks for shoulder dystocia &amp; of patient's exhaustion. (SBAR)</li> <li>6. Communicates with patient/family with clear, calm statements</li> <li>7. Requests step stool</li> <li>8. O2 @ 10 L via mask</li> </ol>	<p><b>Debriefing Points:</b></p> <ol style="list-style-type: none"> <li>1. Communication with patient and family</li> <li>2. Identify maternal/fetal risk factors for shoulder dystocia</li> <li>3. Strategies for remaining calm in escalating situation</li> <li>4. Strategies for effective teamwork communication.</li> </ol>

STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
<p>2. MD at bedside. 2 RN's present</p> <p>Patient exhausted</p>	<p><b>Operator:</b></p> <p>Baby's head is delivered. Sister: With hand under manikin's abdomen, hold baby to delay delivery of shoulders. Push baby's head out, then pull back (Turtle's sign)</p> <ul style="list-style-type: none"> <li>○ Normal maternal VS</li> <li>○ FHT's 110 baseline with decelerations ↓ 90's with pushing, moderate variability</li> </ul> <p><b>Triggers:</b></p> <p>Shoulders undelivered after 2 minutes</p>	<p><b>Learner Actions:</b></p> <ol style="list-style-type: none"> <li>1. Note time of head delivery</li> <li>2. Attempts to suction baby</li> <li>3. Notifies team of possible shoulder dystocia</li> <li>4. Directs team following safe communication skills</li> <li>5. Get step stool if not previously done</li> </ol>	<p><b>Debriefing Points:</b></p> <ol style="list-style-type: none"> <li>1. Direct team communication</li> <li>2. Teamwork and collaboration.</li> <li>3. Hazards of shoulder dystocia</li> </ol>

STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
<p><b>3.</b></p> <p>Baby's head out "This hurts! Please help me!"</p> <p>Patient/family follow directions to stop pushing.</p> <p>When the head is delivered but not the shoulders, "Is my baby going to be okay?" "Why isn't my baby being delivered?"</p>	<p><b>Operator:</b></p> <p>Normal maternal vital sign,</p> <p>FHT's 100 baseline with decelerations ↓ 80's with pushing, moderate variability</p> <p><b>Triggers:</b></p> <p>Shoulders delivered</p> <p>Sister allows descent of baby by loosening grasp on baby.</p>	<p><b>Learner Actions:</b></p> <p><b>MD directs team.</b></p> <ol style="list-style-type: none"> <li>1. RN calls time of shoulder dystocia &amp; calls time (every 15 seconds) to Perinatal team</li> <li>2. Calls for immediate help/ anesthesia, pediatrician ?</li> <li>3. RN Directs patient/family to stop pushing</li> <li>4. MD Performs McRoberts maneuver</li> <li>5. MD directs RN to perform suprapubic pressure (Stand on stool and use rocking motion)</li> <li>6. Communicates throughout with patient/family</li> <li>7. Initiates IV if not already done</li> </ol>	<p><b>Debriefing Points:</b></p> <ol style="list-style-type: none"> <li>1. Optimal maternal position for pushing with shoulder dystocia (lateral or knee chest)</li> <li>2. Maneuvers to relieve the shoulder dystocia</li> <li>3. Factors for documentation</li> <li>4. MD communication <ol style="list-style-type: none"> <li>a. Feedback loop</li> <li>b. Call outs</li> <li>c. Prepare to open OR</li> <li>d. Notify pediatrician</li> </ol> </li> </ol>

STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
<p><b>4.</b></p> <p>Vocalizations of mother &amp; father appropriate to situation.</p> <p>Very concerned about baby not crying loudly at first.</p> <p>“What are you doing with my baby over there? Is he alright?”</p>	<p><b>Operator:</b></p> <p>Baby delivers vaginally</p> <p>APGAR 4-7-9</p> <p>Poor tone</p> <p>Lethargic</p> <p>No vigorous cry</p> <p><b>Triggers:</b></p> <p>APGAR @ 9</p>	<p><b>Learner Actions:</b></p> <ol style="list-style-type: none"> <li>1. Performs APGAR accurately</li> <li>2. Reports findings to team</li> <li>3. Communicates with patient/family (periodic updates)</li> </ol>	<p><b>Debriefing Points</b></p> <ol style="list-style-type: none"> <li>1. Importance of skin to skin as soon as possible.</li> <li>2. APGAR’s</li> <li>3. Family support</li> </ol>
Scenario End Point: Baby to mother skin to skin			
<p>Suggestions to <u>decrease</u> complexity:</p> <p>Suggestions to <u>increase</u> complexity: No response to interventions, requires crash C-Section. Patient and family become significantly distracting.</p>			



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

<p><b>Insert digital photo here</b></p>	<p><b>Insert digital photo here</b></p>
<p><b>Insert digital photo here</b></p>	<p><b>Insert digital photo here</b></p>

**APPENDIX C: DEBRIEFING GUIDE**

<b>General Debriefing Plan</b>			
<input type="checkbox"/> Individual	<input type="checkbox"/> Group	<input type="checkbox"/> With Video	<input type="checkbox"/> Without Video
<b>Debriefing Materials</b>			
<input type="checkbox"/> Debriefing Guide	<input type="checkbox"/> Objectives	<input type="checkbox"/> Debriefing Points	<input type="checkbox"/> QSEN
<b>QSEN Competencies to consider for debriefing scenarios</b>			
<input type="checkbox"/> Patient Centered Care	<input type="checkbox"/> Teamwork/Collaboration	<input type="checkbox"/> Evidence-based Practice	
<input type="checkbox"/> Safety	<input type="checkbox"/> Quality Improvement	<input type="checkbox"/> Informatics	
<b>Sample Questions for Debriefing</b>			
<ol style="list-style-type: none"> <li>1. How did the experience of caring for this patient feel for you and the team?</li> <li>2. Did you have the knowledge and skills to meet the learning objectives of the scenario?</li> <li>3. What GAPS did you identify in your own knowledge base and/or preparation for the simulation experience?</li> <li>4. What RELEVANT information was missing from the scenario that impacted your performance? How did you attempt to fill in the GAP?</li> <li>5. How would you handle the scenario differently if you could?</li> <li>6. In what ways did you check feel the need to check ACCURACY of the data you were given?</li> <li>7. In what ways did you perform well?</li> <li>8. What communication strategies did you use to validate ACCURACY of your information or decisions with your team members?</li> <li>9. What three factors were most SIGNIFICANT that you will transfer to the clinical setting?</li> <li>10. At what points in the scenario were your nursing actions specifically directed toward PREVENTION of a negative outcome?</li> <li>11. Discuss actual experiences with diverse patient populations.</li> <li>12. Discuss roles and responsibilities during a crisis.</li> <li>13. Discuss how current nursing practice continues to evolve in light of new evidence.</li> <li>14. Consider potential safety risks and how to avoid them.</li> <li>15. Discuss the nurses' role in design, implementation, and evaluation of information technologies to support patient care.</li> </ol>			
<b>Notes for future sessions:</b>			