SECTION I: SCENARIO OVERVIEW

Scenario Title:	Post-op 5 yr. old with CP, seizure disorder & G-Tube
Original Scenario Developer(s): C. Madsen, MSN, RN	
Date - original scenario	03/08
Validation:	04/08 M. Gilbert, M S ; M. Miller, MA, RN
Revision Dates:	06/09, 10/10; 06/18 M. Solokian, MSN, RN, CPNP
Pilot testing:	05/08
QSEN revision:	05/12 M. Miller, MA, RN, CHSE

Estimated Scenario Time: 15-20 minutes Debriefing time: 30-40 minutes

Target group: Beginning Pediatric Nursing students, new grad transition or orienting nurses Core case: 5 year old child, post-operative heel cord lengthening. History of Cerebral Palsy and seizure disorder.

QSEN Competencies:

- Safety
- Patient Centered Care
- Teamwork and Collaboration

Brief Summary of Case:

5-year old male with cerebral palsy, with developmental delay (non-verbal) with a seizure disorder admitted this a.m. for bilateral heel cord lengthening surgery due to foot drop. Contracture has hampered physical therapy treatment to walk. Child had a gastric tube placed for feedings 3 years ago, for aspiration and GERD. Receives Pediasure bolus 50 mL every 4 hrs, and is at 10th percentile on growth curve for both height and weight. Mother comes in during the scenario.

Learners are expected to perform initial assessment, communicate with mother about typical findings, assess for pain and administer tube feeding safely.

Note: This scenario is designed for the mid-fidelity Sim 5-year old which allows giving meds through g-tube. Scenario can also be used for the Gaumard Child manikin which can be programmed to have seizures, but does not accommodate giving meds through g-tube. See Scenario B

EVIDENCE BASE / REFERENCES (APA Format)

Ward, S. & Hisley, S. (2016). Maternal-Child Nursing Care: Optimizing outcomes for Mothers, Children & Families, F.A. Davis: Philadelphia, PA.

Hockenberry, M.J., Loudermilk, & Wilson, D. (2014). *Maternal Child Nursing Care* (5th Ed.). Maryland Heights, MO: Mosby Elsevier

Cronenwett, L., Sherwood, G., Barnsteiner, J. et. al. (2007) Quality and safety education for nurses. Nursing Outlook. 55(3), 122-131. doi:10.1016/j.outlook.2007.02.006

SECTION II: CURRICULUM INTEGRATION

A. SCENARIO LEARNING OBJECTIVES
Learning Outcomes
1. Utilize principles and knowledge of caring practices, age & developmental stage, and cultural awareness to provide safe & effective nursing care for pediatric patients.
2. Implement clinical decision making skills to interpret data and implement appropriate interventions.
3. Integrate understanding of multiple dimensions in patient care.
Specific Learning Objectives
1. Gather relevant patient, environmental and contextual data.
2. Demonstrate developmentally-appropriate post-op assessment on a 5-year-old.
3. Demonstrate ability to determine accuracy of a med order.
4. Demonstrate developmentally appropriate communication to a 5-year-old, as well as to family members.
5. Demonstrate the ability to treat common post-op abnormal findings in assessment.
6. Reassure patient and family throughout care with clear, calm statements.
7. Communicate significant data to inter-professional team using SBAR tool to obtain necessary orders for interventions.
Critical Learner Actions
1. Perform hand hygiene; Introduce self and role, and identify patient using 2 identifiers.
2. Communicate in developmentally appropriate manner with patient while performing assessment.
3. Performs accurate post op assessment of the orthopedic pediatric client to include CSM.
4. Anticipate possible seizure activity, planning for protecting patient.
5. Assess oxygenation and administer oxygen as indicated.
6. Administer medications via gastrostomy tube following all safety procedures.
7. Call charge nurse and report change in status using SBAR tool.
8. Collect data from mother and reassure in calm manner.
9. Reassesses plan of care based on patient change and new orders.

B. PRE-SCENARIO LEARNER ACTIVITIES	
Prerequisite Competencies	
Knowledge Competencies	Skill/ Attitudes Competencies
❑ Post-op assessment of developmentally delayed 5-year old child.	❑ Developmentally and culturally appropriate communication w/child & parent.
❑ Post-operative assessment and management of pediatric client following orthopedic surgery.	❑ Proper use of IV pump with volume control chamber.
❑ Current National Patient Safety Goals	❑ Role of nurse in calming family members in crisis situation.
❑ Structured communication tools. (SBAR)	❑ Routine post-op assessment & care, including CMS
❑ Pharmacology of anti-seizure medications and drug levels.	❑ Value role of nurse in preventing errors by verification of correct drug dosage based on weight.

SECTION III: SCENARIO SCRIPT

A. Case Summary

Joseph Martinez is a 5 year old male with CP, dev. Delay & seizure disorder who is non-verbal. He received Tylenol with Codeine for pain an hour ago for a lot of moaning and restlessness and a HR of 115. The moaning has decreased and his HR has returned to baseline, so I think it was effective.
This morning he had a bilateral heel cord lengthening. Both legs are wrapped with kerlix and ace wrap. There is no drainage and CMS checks are WNL.
He has a gastric tube for feedings & meds. He is due for both a feeding and his Tegretal now at 1600. He had his last feeding at 1200 with no nausea or vomiting. We are to start slowly, so he got 10 mL at noon.

B. Key Contextual Details

Beginning of PM shift in busy Pediatric Unit. Adequate staffing. Mother in attendance and quite knowledgeable about Joseph's care.

C. Scenario Cast

Patient/	❑ High fidelity simulator
	❑ Mid-level simulator
	❑ Task trainer
	❑ Hybrid (Blended simulator)
	❑ Standardized patient

Role	Brief Descriptor (Optional)	Standardized Participant (SP) or Learner (L)
Primary nurse		Learner
Orienting nurse		Learner
Mother	Script: Attentive, quiet; well-versed in his care. Able to determine not in pain. (previous pain med very helpful) Offer to take temp when nurse starts – go axillary; **report temp to be 99**. If cued by a lot considerable coughing, performs mild CPT on anterior chest	Standardized Participant
Charge Nurse	Script: comes into room to end scenario. Engages mother and asks learners for SBAR to end scenario.	Standardized Participant

D. Patient/Client Profile				
Last name:	Martinez		First name:	Joseph
Gender: Male	Age: 5	Ht: 97 cm	Wt: 15 Kg	Code Status: Full
Spiritual Practice: Catholic		Ethnicity: Hispanic		Primary Language spoken: English

1. History of present illness

Source of information: mother
Chief complaint: inflexible Achilles tendon, making walking difficult

HPI: Spasticity controlled with Baclofen; mother feels if heel cords more flexible, child might be able to walk and participate in Physical Therapy more fully.

Past medical history: 5-year old male with Cerebral Palsy since birth- hypoxic event intra-partum. Moderate developmental delay; poor verbal ability (25 words). Admitted last month for seizures and started on Dilantin, but developed vomiting and a rash. Currently is stable on Tegretol.

Primary Medical Diagnosis	Post-op heel cord lengthening

2. Review of Systems	
CNS	Normo-cephalic Spastic. Severe foot-drop unable to flex feet
Cardiovascular	Normal S1, S2; No murmur or rub heard
Pulmonary	Loose cough; coarse bilateral breath sounds; previous history of multiple aspirations prior to placement of gastrostomy tube
Renal/Hepatic	Voids clear urine
Gastrointestinal	Flat with active bowel sounds; g-tube site clear without redness or discharge
Endocrine	Within normal limits
Heme/Coag	Within normal limits
Musculoskeletal	Extremities thin; foot drop as noted above; mild scoliosis noted.
Integument	Clear and intact.
Developmental Hx	Developmental Delay
Psychiatric Hx	None reported
Social Hx	Lives with parents and 3 siblings
Alternative/ Complementary Medicine HX:	None reported

Medication allergies:	Dilantin	Reaction:	Total body rash, vomiting
Food/other allergies:	None known	Reaction:	

3. Current Medications			
Drug	Dose	Route	Frequency
Baclofen pump (intrathecal):	100 mcg	IT	daily
Carbamazepine (Tegretol) 30 mg/kg/day	112 mg	PO	Q 6h

4. Laboratory, Diagnostic Study Results					
Na: 138	K: 4.0	Cl: 100	HCO3: 24	BUN: 10	Cr: 0.4
Ca:	Mg:	Phos:	Glucose: 75	HgA1C:	
Hgb: 12	Hct: 36	Plt: 250	WBC: 7.0	RBC: 5	
PT	PTT	INR	Troponin:	BNP:	
AST: 30	ALT: 25	Lipase:	Albumin:	Lactate:	
ABG-pH:	paO^2:	$paCO^2$:	HCO^3/BE:	SaO^2:	
VDRL:	GBS:	Herpes:	HIV:		
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: Male Attire: Hospital gown					
Alterations in appearance (moulage): dark, curly wig. Lower legs wrapped with Kerlix and ace bandages (see photo's); elevated on pillows					
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

	No monitor display		Monitor on, no data displayed	x	Monitor on, standard display

BP: 100/50	HR: 90	RR: 24	T: 36.6° C.	SpO^2: 94 %
CVP:	PAS:	PAD:	PCWP:	CO:
AIRWAY:	ETC02:	FHR:		
Lungs: Sounds/mechanics	Left: coarse		Right: coarse	
Heart:	Sounds:	S^1, S^2		
	ECG rhythm:	Normal sinus rhythm		
	Other:			
Bowel sounds:	Active bowel sounds x 4		Other:	

3. Initial Intravenous line set up							
	Saline lock #1	Site:					IV patent (Yes/No)
x	**IV #1**	Site:	RA	Fluid type: D5/0.45 NS w/20 mEq KCl	Initial rate: 50 mL/hour		IV patent (Yes/No)
x	Main						
x	IV pump						
	IV #2	Site:		Fluid type:	Initial rate:		IV patent (Yes/No)
	Main						
	Piggyback						

4. Initial Non-invasive monitors set up					
x	NIBP	x	ECG First lead:		ECG Second lead:
x	Pulse oximeter	x	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:	
	Epidural catheter		Infusion pump: agency pump	Pump settings: 50 mL/hr
	Fetal Heart rate monitor/tocometer		Internal	External

Environment, Equipment, Essential props

1. Scenario setting: (example: patient room, home, ED, lobby)

Pediatric unit

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	x	Incentive spirometer
x	IV Infusion pump	x	IV pump		Pressure bag	x	Wall suction
	Nasogastric tube		ETT suction catheters	x	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
	IV fluid type: D5/0.45 NS w/20 mEq KCl				Tubes/drains Type:		Blood product ABO Type: # of units:

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

4. Documentation and Order Forms							
x	Health Care Provider orders	x	Med Admin Record	x	H & P	x	Lab Results
x	Progress Notes	x	Graphic record		Anesthesia/PACU record	x	ED Record
x	Medication reconciliation		Transfer orders	x	Standing (protocol) orders		ICU flow sheet
x	Nurses' Notes	x	Dx test reports		Code Record		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**
20 mL	Tegretol Suspension	100 mg/5mL	G-tube
20 mL	Tylenol with Codeine Elixer	7.5 mg (0.5 mg/kg) (Acetaminophen 120 mg w/ Codeine 12 mg in 5 mL)	G-tube

CASE FLOW / TRIGGERS/ SCENARIO DEVELOPMENT STATES			
Initiation of Scenario : (Shift Report @ 1600): Joseph Martinez is a 5-year-old male with cerebral palsy, developmental delay- pretty severe, I guess – mom says Joseph is normally non-verbal, with a vocabulary of approximately 25 words. He has a history of a seizure disorder, is allergic to Dilantin and well maintained on Tegretol Suspension via g-tube. Today he had a heel cord lengthening of both Achilles tendons. Both legs are wrapped with ace wrap. No drainage. CMS checks are good. He has a gastric tube for feedings & meds– he is due for both a feeding and his Tegretol now at 1600. We are to start feedings slowly, so he received a 10 mL feeding at 1200 which he tolerated without vomiting. We are increasing each feeding by 10 mL every 4 hours, so you are due to give 20 mL with the next feeding. He received Tylenol w/codeine for pain an hour ago, pain level of 5 by FLACC Pain Scale for a lot of moaning, restlessness & a HR of 115. He has settled down, so it appears that pain med effective.			
STATE / PATIENT STATUS	**DESIRED LEARNER ACTIONS & TRIGGERS TO MOVE TO NEXT STATE**		
1. Baseline Lying in supine position with one pillow, legs elevated on pillows.	**Operator** HR 90 RR: 24- coarse lung sounds, occasional cough. Lung sounds stay the same throughout the scenario **Trigger:** Learners perform initial assessment and actions within 5 -8 minutes	**Learner Actions** 1. Performs hand hygiene 2. Identifies self and engages child at developmental level to participate in assessment. 3. Completes environmental assessment for O2, suction, correct IV solution and rate, amount of solution in volume control chamber 4. Assesses CMS, pain, lungs. 5. Attempts to have child cough and deep breathe involving mother 6. Collaborate with team to determine if CPT is needed to keep secretions mobile.	**Debriefing Points:** 1. NPSG to minimize risk of error and infection 2. Components of focused pulmonary and neurovascular assessment; interventions if not within normal limits 3. Strategies for engaging patient and mother in plan of care; 4. Pain assessment using FLACC in non-verbal pediatric patient. 5. Strategies for coughing/ deep breathing in non-verbal child 6. Causes of coarse rhonchi in post-op patient

STATE / PATIENT STATUS	**DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE**		
2. Mother responsive to questions about son and care	**Operator:** No changes in monitor settings. **Triggers:** Learner actions accomplished within 7-10 minutes **Cues:** If learners having trouble with equipment or medication, Charge nurse enters as Confederate	**Learner Actions:** 1. Calculate appropriate dose of Tegretol 2. Check calculations with 2nd nurse. 3. Accurately give Pediasure feeding (bolus) and Tegretol by GT	**Debriefing Points:** 1. National Patient Safety Goals 2. Agency policy/procedure for checking medications in the pediatric populations 3. Potential complications of administering medications via g-tube 4. Strategies for engaging with knowledgeable mother at bedside
Scenario End Point: Assessment complete; medication administered accurately. Charge nurse enters to relieve learners for a break			
Suggestions to <u>decrease</u> complexity: child could be more verbal; mother not in room and child calling for her Suggestions to <u>increase</u> complexity: 1. Child is in pain and nurses need to assess and give medications along with feeding and scheduled medications, 2. Child has seizure; mother upset because she neglected to give Tegretol. (See scenario B), 3. IV infiltrated, elevated temperature, need for CPT, problems with tube feedings			

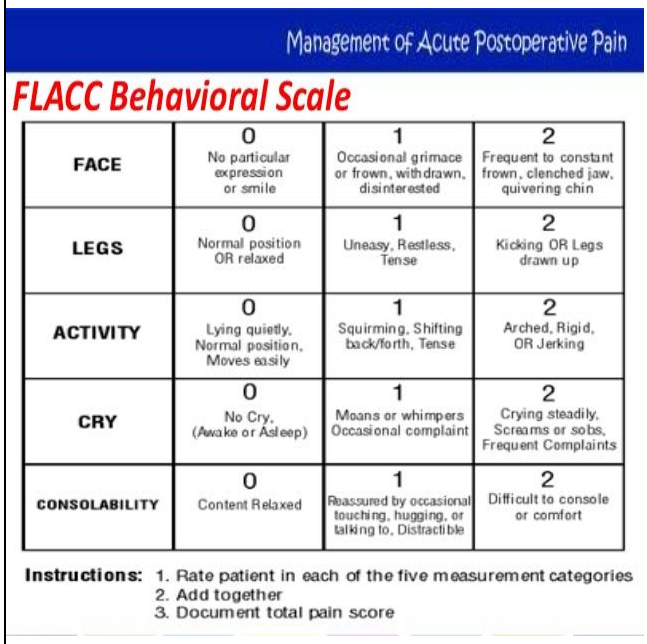
APPENDIX A: HEALTH CARE PROVIDER ORDERS

Patient Name: Joseph Martinez **DOB: 09/14/2006** **Age: 5 years old** **MR#:**	**Diagnosis: Bilateral heel cord lengthening; Cerebral Palsy, seizure disorder**

No Known Allergies:
Allergies & Sensitivities : Dilantin

Date	Time	**HEALTH CARE PROVIDER ORDERS AND SIGNATURE**
		1. Admit to Pediatric unit: s/p bilateral Achilles Tendon lengthening. Cerebral Palsy – seizure disorder
		2. D5.45NS w/20 mEq KCl/liter @ 50 mL/hr
		3. Carbamazepine (Tegretol) suspension (100 mg/5mL) 112 mg PO q.6 h.
		4. Acetaminophen w/codeine (120 mg/12 mg per 5 mL): give 3 mL (7.5 mg codeine) PO every 4 hours prn pain. Level 4-6/10
		5. Ibuprofen 75 mg PO every 6 hours prn mild pain level 1-3/10, fever over 101.5 F.
		6. Regular diet for age (soft) when fully awake. 1 can Pediasure b.i.d.
		7. CMS of both lower extremities q. 4 hrs. Keep Ace Wraps on at all times
		until MD changes dressing.
		8. Elevate legs on pillows
		9. Bed rest until seen by Physical Therapy
		10. Physical Therapy in a.m. – post-op Achilles Tendon lengthening.
Signature		*D. Bone, MD*

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



Management of Acute Postoperative Pain

FLACC Behavioral Scale

	0	1	2
FACE	No particular expression or smile	Occasional grimace or frown, withdrawn, disinterested	Frequent to constant frown, clenched jaw, quivering chin
LEGS	Normal position OR relaxed	Uneasy, Restless, Tense	Kicking OR Legs drawn up
ACTIVITY	Lying quietly, Normal position, Moves easily	Squirming, Shifting back/forth, Tense	Arched, Rigid, OR Jerking
CRY	No Cry, (Awake or Asleep)	Moans or whimpers Occasional complaint	Crying steadily, Screams or sobs, Frequent Complaints
CONSOLABILITY	Content Relaxed	Reassured by occasional touching, hugging, or talking to, Distractible	Difficult to console or comfort

Instructions: 1. Rate patient in each of the five measurement categories
2. Add together
3. Document total pain score

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APPENDIX C: DEBRIEFING GUIDE

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 check 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 in light of 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: