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SECTION I: SCENARIO OVERVIEW

Scenario Title:	Post-op Pain in 6 year old with laparoscopic appendectomy
Original Scenario Developer(s):	C. Madsen, MSN
Date - original scenario	08/07
Validation:	09/07
Pilot testing:	10/07
Revisions:	09/09
Estimated Scenario Time : 15 minutes	Debriefing time: 30 min
Target group: Beginning Pediatric Clinical Rotation – pre-licensure students	
Core case: Post-op pain in 6 year old with laparoscopic appendectomy	
Brief Summary of Case: Miguel Ortiz is a 5 year old male who is about 24 hours post-op lap appy. He had abdominal cramping, pain and vomiting for 2 days and family thought it was flu. He was brought to ED last evening where MRI showed swollen, inflamed appendix. Mother & child visiting her parents from Guatemala. Child did not receive pain medication during the night as he did not complain of pain. Learners are expected to complete shift assessment, pain assessment and determine course of action.	
QSEN Competencies ❑ Patient Centered Care ❑ Patient Safety ❑ Evidence Based Practice ❑ Teamwork and Collaboration ❑ Informatics ❑ Quality Improvement	Team*STEPPS* Competencies

EVIDENCE BASE / REFERENCES (APA Format)
McKinney, E., James, S., Murray, S., Ashwill, J. (2009), *Maternal-Child Nursing*, (3rd ed), St. Louis, Elsevier Saunders.

SECTION II: CURRICULUM INTEGRATION

A. SCENARIO LEARNING OBJECTIVES
Learning Outcomes
1. Demonstrate therapeutic and professional communication in interactions with the client and use oral, written and technological communication formats effectively with guidance.
2. Utilize principles & knowledge of caring practices, age & developmental stage, and cultural awareness to provide sensitive & effective nursing care for a pediatric client.
3. Provide patient/family centered care utilizing principles of safety to minimize risk of errors.
Specific Learning Objectives
1. Utilize safety principles to minimize risk of post-operative infection.
2. Demonstrate a developmentally appropriate post-op assessment on a 6 year old.
3. Demonstrate determining accuracy of a medication order.
4. Demonstrate administration of medication utilizing safety principles to minimize risk of error.
5. Demonstrate developmentally appropriate pain assessment in a 6 year old
6. Identify patient/family learning needs and perform, evaluate and modify teaching as necessary.
7. Recall common post-operative findings leading to complications in a post-operative assessment.
Critical Learner Actions
1. Implement hand hygiene.
2. Establish professional relationship with child/mother by identifying self & role, updating white board in room with collaborative goals.
3. Demonstrate focused post-operative assessment, recognizing deviations from normal.
4. Utilize age-appropriate pain scale in assessing pain in 6 year old.
5. Demonstrate interventions to minimize post-operative complications based on assessment.
6. Demonstrate clinical decision making related to choices of medication administration for this child.
7. Formulate an SBAR handoff report related to care of child and reassessment of pain & activity.

B. PRE-SCENARIO LEARNER ACTIVITIES	
Prerequisite Competencies	
Knowledge	**Skills/ Attitudes**
1. Post-op assessment of 6 year old	1. Post-op assessment and care for 6 year old
2. Post-op care of 6 year old, including medication and IV fluids.	2. Developmentally and culturally appropriate communication with child/mother
3. Effective (age-appropriate) communication with patient/mother	3. Medication calculation and administration of medications to a 6 year old
4. Interventions for abnormal post-op findings (pain control, fever, atelectasis, hypoactive bowel sounds)	4. Determining accuracy of IV rates, adjusting rates using IV pumps as ordered
5. Structured communication tool (SBAR)	5. Patient/family centered communication

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SECTION III: SCENARIO SCRIPT

A. Case summary
Miguel Ortiz is a 6-year old male who had a lap appy 24 hours ago. His chief complaint was abdominal cramping, pain, vomiting for 2 days. Mother and son live with father in Guatemala and are visiting her parents. Treatment was delayed as family has no health insurance or primary physician in the area. Miguel was seen in the ED last night when his pain became severe; MRI showed swollen and inflamed appendix and he was taken to surgery. Handoff Report: Miguel did not receive any pain medication this past shift "because he didn't complain of any pain". Urine output is "adequate"; walks to BR to void; has not ambulated on unit yet. IV is infusing at 62 mL/hr. He has had a few sips of water, without N/V. Dressing RLQ dry & intact. Bowel sounds present, but hypoactive.

B. Key contextual details
Acute care pediatric unit. Fully staffed. Change of shift report.

C. Scenario Cast		
Patient/ Client	❑ High fidelity simulator	
	❑ Mid-level simulator – Sim Junior or similar mannequin	
	❑ Task trainer	
	❑ Hybrid (Blended simulator)	
	❑ Standardized patient	
Role	Brief Descriptor (Optional)	Standardized Participant (SP) or Learner (L)
Mother	Carefully watches everything nurse does. If nurses do not introduce themselves or explain what they are doing: • Needs to answer questions for son as he is acting like he doesn't understand English • Helps to determine pain at incision sites 7/10 • Offers to take temp if nurse picks up thermometer. Reports temp of 101.6°F.; acts very worried and asks"why does he have a temp? Does he have an infection?" • After awhile, acts very concerned as to why he isn't speaking English. ("He speaks English fine at home." Acts reassured when nurse teaches about regression.	Standardized Participant
Charge Nurse	Comes in making rounds, interacts with mother & child; asks nurses for SBAR. CN visit ends scenario.	Standardized Participant
Primary Nurse	Assessment, manages IV	Learner
2nd nurse	Checks orders, Kardex, MAR	Learner

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D. Patient/Client Profile

Last name:	Ortiz			First name:	Manual
Gender: M	Age: 6 y	Ht:	Wt: 19.5 kg	Code Status: Full	
Spiritual Practice: unknown		Ethnicity: Mother, No. European Father, Guatemalan			Primary Language spoken: English & Spanish

1. Past history

Child visiting from Guatemala with mother. Became ill with vomiting, abdominal cramping for 2 days. Mother thought it was flu and cared for child at home. Brought child to ED when pain became severe. MRI showed inflamed and swollen appendix.

Primary Medical Diagnosis	Acute appendicitis; immunization status unknown

2. Review of Systems	
CNS	No deficits, whining
Cardiovascular	Sinus tach – 100/min S1-S2
Pulmonary	Clear, RR 20
Renal/Hepatic	wnl
Gastrointestinal	Hypoactive bowel sounds
Endocrine	wnl
Heme/Coag	wnl
Musculoskeletal	wnl
Integument	Lap appy wounds
Developmental Hx	Normal 6 year old according to mother when not ill
Psychiatric Hx	wnl, appears frightened in hospital
Social Hx	Lives in Guatemala w/parents. Visiting US w/mother. No health insurance.
Alternative/ Complementary Medicine Hx	None known

Medication allergies:		Reaction:	
Food/other allergies:		Reaction:	

3. Current medications	**Drug**	**Dose**	**Route**	**Frequency**
	Ceftriaxone	600 mg	IVPB	Q12 h
	Acetaminophen w/Codeine Elixer (120/12 per 5 mL)	5 mL	PO	Q6h PRN (mod pain)
	Ibuprophen Susp. 100 mg/5 mL	150 mg	PO	Q6h PRN (mild pain or temp >101°F. (ax) or 102°F. (oral)

4. Laboratory, Diagnostic Study Results					
Na: 138	K: 4.0	Cl: 100	HCO3: 25	BUN: 10	Cr: 0.4
Ca:	Mg:	Phos:	Glucose: 75	HgA1C:	
Hgb: 12	Hct: 36	Plt:	WBC:	ABO Blood Type:	
PT	PTT	INR	Troponin:	BNP:	
ABG-pH:	paO2:	paCO2:	HCO3/BE:	SaO2:	
VDRL:	GBS:	Herpes:	HIV:	ECG:	
MRI: swollen, inflamed appendix					

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E. Baseline Simulator/Standardized Patient State					
1. Initial physical appearance					
Gender: Male	Attire: hospital pajamas				
Alterations in appearance (moulage): abdominal dressing RLQ with small amount serosanguinous drainage					
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		Monitor on, but no data displayed		Monitor on, data displayed
BP: 100/50	HR: 115	RR: 24	T: 99°F. (oral)	SpO_2: 98%
CVP:	PAS:	PAD:	PCWP:	CO:
AIRWAY:	$ETCO_2$:	FHR:		
Lungs:	Left: clear	Right: clear		
Heart:	Sounds: S_1S_2			
	ECG rhythm: regular			
Bowel sounds:	hypoactive		Other:	
Pain Score	7/10 using FACES			

3. Initial Intravenous line set up							
	Saline lock #1	Site:					IV patent (Y/N)
x	**IV #1**	Site: RA		Fluid type: D5/0.45 NS w/20mEq KCl/liter	Initial rate: 62 mL/h		IV patent (Y/N)
x	Main						
	Piggyback						
	IV #2	Site: RA		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:	
	Epidural catheter		Infusion pump:	Pump settings:

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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		Foley catheter kit		Straight cath. kit	x	Incentive spirometer
x	IV Infusion pump		Feeding pump		Pressure bag		Wall suction
	Nasogastric tube		ETT suction catheters		Oral suction catheters		Chest tube kit
	Defibrillator		Code Cart		12-lead ECG		Chest tube equip
	PCA infusion pump		Epidural infusion pump		Central line Insertion Kit	x	Dressing Δ equipment
x	IV fluid Type:	D5/0.45NS with 20 mEq KCl/L					Blood product ABO Type: # of units:

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

4. Documentation and Order Forms							
x	Provider orders	x	Med Admin Rec	x	H & P	x	Lab Results
x	Progress Notes	x	Graphic record	x	Anesthesia/PACU	x	ED Record
	Med. Reconcile.		Transfer orders		Standing protocols		ICU flow sheet
x	Nurses' Notes	x	Dx test reports		Code Record		Prenatal record
x	Actual medical record binder			x	EMR (if available)		

5. Medications (to be available in sim action room)			
Drug	**Dose**	**Route**	**Frequency**
Ceftriaxone	600 mg	IVPB	Q12 h
Acetaminophen w/Codeine Elixer (120/12 per 5 mL)	5 mL	PO	Q6h PRN (mod pain)
Ibuprophen Susp. 100 mg/5 mL	150 mg	PO	Q6h PRN (mild pain or temp >101°F. (ax) or 102°F. (oral)

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CASE FLOW / TRIGGERS/ SCENARIO DEVELOPMENT STATES			
Initiation of Scenario : Handoff Report:			
Miguel Ortiz is a 5-year old male who is about 24 hours post-op lap appendectomy. Chief complaint was vomiting, abd. cramping, pain for 2 days which family thought was the flu. Brought in to ED last evening when pain became severe. MRI showed swollen, inflamed appendix. He had lab appy yesterday evening. Shift Assessment: He did not receive any pain medication this past shift "because he didn't complain of any pain". Urine output is "adequate"; walks to BR to void; has not ambulated on unit yet. IV is infusing at 62/hr. He has had a few sips of water, without N/V. Dressing RLQ dry & intact. Bowel sounds present, but hypoactive. Child lives in Guatemala w/parents (Fa Guatemalan, Mo form US of No-European descent). Mother & son are here visiting with her family when he became ill. No health insurance or primary physician in US. Immunization history is unknown. Students to find or make note of: Bowel sounds present, but hypoactive (reported); rhonchi (atelectasis); pain a 6/10;			
STATE / PATIENT STATUS	**DESIRED LEARNER ACTIONS & TRIGGERS TO MOVE TO NEXT STATE**		
Baseline	**Operator**	**Learner Actions**	**Debriefing Points:**
Occasional moaning and short cries from child. Mother answers all the questions for the child. Child will only speak Spanish even though mother says he speaks both fluently for 6 year old.	Show vital signs when learners take them: HR 115, RR 24, T 101.6 (mom) Lung sounds: bilateral rhonchi Vital signs remain at baseline settings until last frame in scenario Push occasional whimpers & moans as nurse asks questions. **Triggers** Learner Actions complete within 5 minutes	1. Hand hygiene 2. Introduce selves & role 3. Updates white board in room 4. Performs 60 second environmental assessment 5. Attempts to communicate with child, using developmentally appropriate language 6. Notes child's occasional moans and cries and child's lack of verbal response to questions. 7. Responds to mothers concerns about his reluctance to speak or respond to English 8. Second nurse checks orders, MAR	❑ Patient Safety Goals re. patient identification, minimize risk of infection ❑ Patient Centered Care. Involve mother in communication and in care. ❑ Regression in ill 6 year old

ALL DATA IN THIS SCENARIO IS FICTITIOUS

<table>
<tr><th>STATE / PATIENT STATUS</th><th colspan="3">DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE</th></tr>
<tr><th>Frame 2</th><th>Operator</th><th>Learner Actions:</th><th>Debriefing Points:</th></tr>
<tr><td rowspan="3">Child continues to moan and cry at intervals

Mother attentive and helpful</td><td>No change in parameters</td><td rowspan="3">1. Shift assessment performed
2. Notes serosanguinous drainage on dressing, report said dressings dry and intact.
3. Notes rhonchi on lung assessment; report said lungs clear
4. Responds to mothers desire to help by taking temperature; notes oral temp of 101.6
5. Pain Assessment performed with mothers help. Notes Pain level as 7/10 on FACES scale
6. Collaborates with mother and team member about pain control and fever.
7. Collaboratively sets priority of pain control prior to breathing exercises and ambulation.</td><td rowspan="3">❑ Why the change in vital signs, pain assessment, lung sounds and wound assessment from baseline given in report.
❑ Pain assessment in non-verbal patient
❑ What should pain control look like in first 24 hours post-op
❑ What is the most likely cause of elevated temp in first 24 hours post-op
❑ Interventions for fever, rhonchi, etc.</td></tr>
<tr><td>Triggers:</td></tr>
<tr><td>Learner Actions completed within 5 minutes</td></tr>
</table>

ALL DATA IN THIS SCENARIO IS FICTITIOUS

<table>
<tr><th>STATE / PATIENT STATUS</th><th colspan="3">DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE</th></tr>
<tr><th>Frame 3</th><th>Operator:</th><th>Learner Actions:</th><th>Debriefing Points:</th></tr>
<tr><td rowspan="3">No change</td><td>No change in parameters</td><td rowspan="3">1. Determines appropriate drug and dose
2. Calculates dose of drug with colleague
3. Administers pain medication using all safety principles
4. Document accurately either on MAR or EMR
5. Explain expected outcomes in to child/mother time elements child can understand.
6. Inform child and mother you will check back in 20 minutes
7. Plan deep breathing exercises and ambulation 30 minutes – one hour after medication given</td><td rowspan="3">❑ Decision making – Rationale for giving either drug that is ordered
❑ Safe medication administration procedures
❑ Rationale for deep breathing and ambulation exercises
❑ Documentation elements</td></tr>
<tr><td>Triggers:</td></tr>
<tr><td>Learner Actions complete within 5 minutes</td></tr>
</table>

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STATE / PATIENT STATUS	**DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE**		
Frame 4	**Operator**	**Learner Actions**	**Debriefing Points**
30 minutes later: Child playing video games with mother.	Pain level 3/10 **Triggers:** Learner Actions completed within 5 minutes	1. Reassessment of pain 2. Engage child/mother in age appropriate breathing exercises 3. Teaches child/mother importance of breathing exercises every hour 4. Plans with child/mother time for ambulation within next hour. 5. Teaches importance of ambulation every hour 6. Re-checks abdominal dressing	❑ Parameters of pain reassessment ❑ Nursing interventions if pain control is not achieved ❑ Rationale for breathing exercises and ambulation ❑ Strategies for gaining cooperation of child in plan of care ❑ Elements of shift report
Scenario End Point: Charge nurse comes in to check on child/mother. Requests SBAR & plan for rest of shift			
Suggestions to <u>decrease</u> complexity: child could speak English Suggestions to <u>increase</u> complexity: Add the administration of IVPB antibiotic. Have the child and mother much more upset. Child refuses medications			

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APPENDIX A: HEALTH CARE PROVIDER ORDERS

Patient Name: Miguel Ortiz **DOB:** **Age: 6** **MR#:**			**Diagnosis: Appendicitis – lap appy**
ⱶNo Known Allergies ⱶAllergies & Sensitivities			
Date	Time	**HEALTH CARE PROVIDER ORDERS AND SIGNATURE**	
		Transfer orders from PACU:	
		1. Admit to pediatric unit – S/P lap Appy	
		2. NPO	
		3. IV: D5/0.45 NS w/20 KCl @ 62 mL/hr	
		4. Intake and Output; daily weight	
		5. Ambulate at least TID	
		6. Incentive Spirometer every hour while awake	
		7. Ceftriaxone 600 mg IV every 12 hours	
		Next morning orders	
		1. Clear liquids – advance as tolerated	
		2. Encourage incentive spirometer	
		3. Acetaminophen with Codeine Elixir (120/12.5 per 5 mL) Give 5 mL PO every 6 hours as needed for moderate pain	
		4. Ibuprofen Suspension 150 mg PO every 6 hours for mild pain or Temp over 100.2 axillary or 101.2 orally	
Signature			

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

APPENDIX C: DEBRIEFING GUIDE

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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: