

## SECTION I: SCENARIO OVERVIEW

<b>Scenario Title:</b>	Total Hip Replacement post-op deep vein thrombosis (DVT)		
Original Scenario Developer(s):	Cathy Warner, RN, MN, ONC, CNS Kimberly Kim, RN, PhD		
Date - original scenario	04/07		
Validation:	11/08		
Pilot testing:	11/08		
Revisions:	08/10 C. O’Leary-Kelley, PhD, RN, CNE 12/14, 4/18 Melissa Punnoose, MSN, RN-BC, CHSE; Heidi Traxler, MSN, RN, CHSE; Marjorie A. Miller, MA, RN, CHSE		
<u>Estimated Scenario Time:</u>	20 minutes	<u>Debriefing time:</u>	40 minutes
<u>Target group:</u>	Pre-licensure nursing students, new graduates, staff nurses		
<u>Core case:</u>	85 year old female post op total hip replacement who develops deep vein thrombosis		
<u>Brief Summary of Case:</u>	<p>85 y/o female with osteoarthritis of right hip and s/p right total hip replacement (THR) develops an increase in her right leg pain on post-op day four when she is about to be discharged to home. Learners are to assess the patient, communicate with MD, Charge nurse and patient/family. They will complete interventions as delegated by charge nurse.</p> <p>The scenario is designed to help students to be able to assess post-op complication of DVT on patients having total hip replacement. It provides guidelines for students to be able to assess pain using analog scale and facilitate pain management in orthopedic unit. It allows the students to observe communication using SBAR technique. It also allows observation of student interaction with patient, family and inter-professional team.</p>		
<u>QSEN Competencies</u>	<ul style="list-style-type: none"> <li>X Patient Centered Care</li> <li>X Patient Safety</li> <li><input type="checkbox"/> Quality Improvement</li> <li>X Teamwork and Collaboration</li> </ul>		

EVIDENCE BASE / REFERENCES (APA Format)
Lip, G., and Hull, R. (2018). Overview of the treatment of lower extremity deep vein thrombosis (DVT). In L. Leung and J. Mandel (Eds), <i>UpToDate</i> . Retrieved April 2, 2018, from <a href="https://www.uptodate.com/contents/overview-of-the-treatment-of-lower-extremity-deep-vein-thrombosis-dvt?search=vte%20treatment&amp;source=search_result&amp;selectedTitle=1~150&amp;usage_type=default&amp;display_rank=1">https://www.uptodate.com/contents/overview-of-the-treatment-of-lower-extremity-deep-vein-thrombosis-dvt?search=vte%20treatment&amp;source=search_result&amp;selectedTitle=1~150&amp;usage_type=default&amp;display_rank=1</a>
Zsiro, D. and Wollan, M. (2014). Nursing management for musculoskeletal trauma and orthopedic surgery. In Dirksen, L. and Bucher, H. (Eds.) <i>Medical-Surgical Nursing: Assessment and management of clinical problems</i> (9 <sup>th</sup> ed.), (pp. 1524-1528). St. Louis, Missouri: Mosby.
Dolansky, M.A., and Moore, S.M. (2013). Quality and safety education for nurses (QSEN): The key is systems thinking. <i>Online Journal of Issues in Nursing</i> , 18( 3), Manuscript 1.

## SECTION II: CURRICULUM INTEGRATION

### A. SCENARIO LEARNING OBJECTIVES

#### Learning Outcomes

1. Provide evidence-based care for the patient with a suspected DVT
2. Communicate with team members effectively using SBAR and closed loop communication
3. Provide evidence-based nursing care for the patient in pain

#### Specific Learning Objectives

1. Recognize patient risk for VTE/DVT
2. Discuss nursing care for the patient who is post-op total hip replacement
3. Assess pain according to PQRST and differentiate post op pain from DVT related calf pain.
4. Perform a focused post op assessment
5. Reposition patient for comfort observing THR precautions.
6. Administer medications safely by observing the 6 rights
7. Utilizes available resources efficiently
8. Communicate effectively with team members by using SBAR and closed loop communication
9. Communicate therapeutically with patient and family to keep them informed and involved in care.

#### Critical Learner Actions

1. Complete PQRST pain assessment and reassessment after interventions
2. Patient education regarding pain medication: onset, side effects, action.
3. Observe post-op total hip precautions
4. Assess for possible DVT/VTE
5. Call for help and notify MD
6. Communicate with team members using SBAR and closed loop communication
7. Use therapeutic communication to keep patient and daughter informed and involved in care

### B. PRE-SCENARIO LEARNER ACTIVITIES

#### Prerequisite Competencies

Knowledge	Skills/ Attitudes
<input type="checkbox"/> Ability to assess V/S and pain using given pain scales (Analog 0-10 Scale)	<input type="checkbox"/> Musculoskeletal, neurovascular assessment
<input type="checkbox"/> Ability to assess MS, and integument functions	<input type="checkbox"/> Pain assessment and management in post-op patient
<input type="checkbox"/> Communication using SBAR	<input type="checkbox"/> Communication with inter-professional team
<input type="checkbox"/> VTE prevention measures	<input type="checkbox"/> Post-operative management of the patient with total hip replacement
<input type="checkbox"/> Post-op assessment and nursing care	

### SECTION III: SCENARIO SCRIPT

#### A. Case summary

Mildred Weiman is an 85 year old female with a history of R hip osteoarthritis, HTN, sleep apnea, and type 2 DM. She had an anterior approach total hip replacement four days ago. She was supposed to go home on post-op day two, but has struggled with mobility and post-op pain. Her pain is now under control. I gave her Norco 2 tabs 4 hours ago, which brought her pain down to 1/10. The dressing to her right hip is clean, dry, intact. She has B SCDs, but says they are uncomfortable and keeps taking them off. The plan for today is for discharge home. Her surgeon will be in this morning to write her discharge orders and her daughter should be here any minute to prepare to take her home. She is a/o x4. Very sweet and chatty. Her last set of vital signs were: BP: 138/90 HR: 88 RR: 18 T: 97.2 SpO<sub>2</sub>: 97% RA

#### B. Key contextual details

Daughter arrives shortly after scenario starts to take mom home.

#### C. Scenario Cast

Patient/ Client	<input checked="" type="checkbox"/> High fidelity simulator	
	<input type="checkbox"/> Mid-level simulator	
	<input type="checkbox"/> Task trainer	
	<input type="checkbox"/> Hybrid (Blended simulator)	
	<input type="checkbox"/> Standardized patient	
Role	Brief Descriptor (Optional)	Standardized Participant (SP) or Learner (L)
Primary nurse		L
Secondary Nurse	Back up help for primary RN	L
Patient's daughter Dorothy		SP
Charge RN		SP
Dr Smith	Available by phone	SP
Transporter	To take patient to ultrasound/end scenario	SP

D. Patient/Client Profile				
Last name:	Weiman		First name:	Mildred
Gender: Female	Age: 85	Ht: 66 inches	Wt: 160 lbs	Code Status: Full Code
Spiritual Practice: Protestant		Ethnicity: Caucasian		Primary Language spoken: English
<b>1. Past history</b>				
Pt has 2 year history of right hip pain, increasing in past 3 months. Using cane for long distance.				
<b>Primary Medical Diagnosis</b>		Osteoarthritis right hip		

2. Review of Systems	
CNS	WNL
Cardiovascular	NSR, HTN
Pulmonary	Sleep apnea, uses CPAP
Renal/Hepatic	Labs normal
Gastrointestinal	
Endocrine	DM Type 2
Heme/Coag	
Musculoskeletal	Right hip pain x 2 years
Integument	Clear and intact
Developmental Hx	
Psychiatric Hx	
Social Hx	Married; living with spouse in one story home 1-2 glasses wine/day Smoked x 10 years; quit 1985
Alternative/ Complementary Medicine Hx	

Medication allergies:	NKDA	Reaction:	
Food/other allergies:	NKA	Reaction:	

3. Current medications	Drug	Dose	Route	Frequency
	Celebrex	200 mg	PO	Twice a day
	Glucophage	500 mg	PO	Daily
	Lisinopril	20 mg	PO	Daily
	Morphine	2-4 mg	IV	Q4 hours PRN pain
	Narcan	0.4 mg	IV	PRN RR <10
	Lovenox	30mg	Subcutaneous	Daily
	Norco 5/325mg	1-2 tabs	PO	Every 4 hours prn pain
	Senekot	2 tabs	PO	Twice a day prn constipation
Protonix	40mg	PO	daily	

4. Laboratory, Diagnostic Study Results					
Na: 134	K: 3.7	Cl:	HCO3:	BUN:	Cr: 0.8
Ca:	Mg:	Phos:	Glucose: 132	HgA1C: 7.3	
Hgb: 10.0	Hct: 30.0	Plt: 150,000	WBC: 10.2	ABO Blood Type:	
PT 14.4	PTT	INR 1.24	Troponin:	BNP:	
ABG-pH:	paO2:	paCO2:	HCO3/BE:	SaO2:	
VDRL:	GBS:	Herpes:	HIV:		
CXR: normal	ECG: NSR				

E. Baseline Simulator/Standardized Patient State (This may vary from the baseline data provided to learners)			
1. Initial physical appearance			
Gender: Female		Attire: Hospital gown	
<u>Alterations in appearance (moulage):</u> Woman's hair, dressing on right hip. SCD's off and at end of bed			
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, data displayed	
BP: 138/90	HR: 104	RR: 18	T: 99
CVP:	PAS:	PAD:	PCWP:
AIRWAY:	ETCO <sub>2</sub> :	FHR:	CO:
Lungs: Sounds/mechanics	Left: Clear	Right: Clear	
Heart:	Sounds: Normal	S1S2	
	ECG rhythm:	NSR	
	Other:		
Bowel sounds:	Decreased, pt had small BM this a.m.		Other:

3. Initial Intravenous line set up						
X	Saline lock #1	Site: RFA			IV patent (Y/N)	
	IV #1	Site:		Fluid type:	Initial rate:	X 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	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:		Pump settings:	
<b>Environment, Equipment, Essential props</b>						
1. Scenario setting: (example: patient room, home, ED, lobby)						
Med-surg unit patient room						

2. Equipment, supplies, monitors (In simulation action room or available in adjacent core storage rooms)						
	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	Dressing Δ equipment
	IV fluid Type:		IV fluid additives:		IV Piggy back	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		Flow meters (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		ED Record
X	Medication reconciliation		Transfer orders		Standing (protocol) orders		ICU flow sheet
X	Nurses' Notes		Dx test reports		Code Record		Prenatal record
	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
	Norco	5/325mg	PO					
	Morphine	2mg/ml and 4mg/ml	IV					

**CASE FLOW / TRIGGERS/ SCENARIO DEVELOPMENT STATES**

**Initiation of Scenario : Handoff report to oncoming RN:** Mildred Weiman is an 85 year old female with a history of R hip osteoarthritis, HTN, sleep apnea, and type 2 DM. She had an anterior approach total hip replacement four days ago. She was supposed to go home on post-op day two, but has struggled with mobility & post-op pain. Her pain is now under control. I gave her Norco 2 tabs 4 hours ago, which brought her pain down to 1/10. The dressing to her right hip is clean, dry, intact. She has Bilateral SCDs, but says they are uncomfortable & keeps taking them off. The plan for today is for discharge home. Her surgeon will be in this morning to write her discharge orders & her daughter should be here any minute to prepare to take her home. She is a/o x4; pleasant & talkative. Her last set of vital signs were: BP: 138/90 HR: 88 RR: 18 T: 97.2 SpO<sub>2</sub>: 97% RA

STATE / PATIENT STATUS	DESIRED LEARNER ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
<p><b>1. Baseline</b></p> <p>Patient lying in bed. SCDs are off.</p> <p>Becoming restless with complaints of pain in right calf, rated as 4/10, sharp Calf is reddened and swollen</p> <p>Hip pain is 2/10</p> <p>Daughter enters shortly after new RN assumes care Concerned about new onset of pain.</p>	<p><b>Operator</b></p> <p>Slight increase in vital signs Pt with increasing calf pain BP 140/92, HR 96, RR 20 T 97.6, O<sub>2</sub> sats 97% RA</p> <p><b>Triggers:</b> If RN does not assess calf pain, intensity will increase</p>	<p><b>Learner Actions</b></p> <ol style="list-style-type: none"> <li>1. focused post op assessment</li> <li>2. pain assessment using PQRST</li> <li>3. evidence-based approach to assess a patient at risk for DVT</li> <li>4. notices redness and swelling to R calf</li> </ol>	<p><b>Debriefing Points:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Use an evidence based approach to assess a patient at risk for DVT</li> </ul>



STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
<p>2.</p> <p>Patient verbalizes c/o increasing calf pain. 5/10</p> <p>Daughter becoming anxious; concerned about planned discharge</p>	<p><b>Operator:</b></p> <p>HR 100 BP 146/96 RR 24 on monitor</p> <p><b>Triggers:</b> Change in VS</p>	<p><b>Learner Actions:</b></p> <ol style="list-style-type: none"> <li>1. Recognize signs of DVT</li> <li>2. ask nursing colleagues for help</li> <li>3. Communicates new findings to RN and MD in SBAR format</li> </ol> <p><b>MD ORDERS:</b></p> <ol style="list-style-type: none"> <li>1. Venous duplex R lower extremity ultrasound Hx: Leg pain.</li> <li>2. Labs: D-dimer.</li> <li>3. Hold discharge.</li> </ol>	<p><b>Debriefing Points:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> SBAR communication</li> <li><input type="checkbox"/> Importance of delegating and seeking help as needed</li> <li><input type="checkbox"/> Common diagnostic tests for DVT and treatment options</li> <li><input type="checkbox"/> Dangers of DVT</li> <li><input type="checkbox"/> Strategies for incorporating patient and family in treatment plan to decrease anxiety</li> </ul>
STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
<p>3.</p> <p>Continues to complain of pain to calf. Asking what is causing it.</p> <p>VS remain unchanged</p>	<p><b>Operator:</b></p> <p>Minimal changes in vital signs</p> <p><b>Triggers:</b> Administration of pain medication</p>	<p><b>Learner Actions:</b></p> <ol style="list-style-type: none"> <li>1. Administer pain medication observing the 6 rights of medication administration</li> <li>2. Explain pain medication, onset, and potential side effect.</li> <li>3. engage patient and family in active partnership with care</li> <li>4. explain interventions and upcoming tests to pt and family</li> </ol>	<p><b>Debriefing Points:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Nursing care for the patient receiving opioids</li> </ul>

STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
<p><b>4.</b></p> <p>Pain level now 2/10 to r calf 0/10 to hip</p>	<p><b>Operator:</b></p> <p>VS return to baseline BP 136/88, HR 89, RR 18, O<sub>2</sub> sats 98%</p> <p><b>Triggers:</b></p>	<p><b>Learner Actions:</b></p> <ol style="list-style-type: none"> <li>1. evaluate patient response to pain medication</li> <li>2. explain that discharge will be delayed for patient safety</li> </ol>	<p><b>Debriefing Points</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Precautions for a patient suspected of VTE</li> <li><input type="checkbox"/> EBP for treatment of VTE if venous duplex is positive.</li> </ul>
<p>Scenario End Point: Once pain is under control or when max time has passed, transporter will come to take patient to ultra sound.</p>			
<p>Suggestions to <u>decrease</u> complexity: no active DVT or pain. Patient refusing to ambulate and refusing SCDs. Focus would be on education for VTE prevention.</p> <p>Suggestions to <u>increase</u> complexity: PE instead of DVT, distracting family member,</p>			

### APPENDIX A: HEALTH CARE PROVIDER ORDERS

<b>Patient Name: Mildred Weiman</b>  <b>DOB:</b>  <b>Age: 85</b>  <b>MR#:</b>	<b>Diagnosis:</b> Osteoarthritis right hip
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† No Known Allergies  
 † Allergies & Sensitivities

Date	Time	HEALTH CARE PROVIDER ORDERS AND SIGNATURE
		Hip precautions anterior; right
		Low sodium 1800kcal carb controlled diet
		Lovenox 30mg subcutaneous daily
		Morphine 2-4mg IV q4 hours PRN pain
		Norco 5/325mg 1-2 tabs PO q4 hour PRN pain
		Lisinopril 20mg PO daily
		Celebrex 200mg PO BID
		Metformin 500mg PO Qhs
		Protonix 40mg PO daily
		Acetaminophen 650mg PO q6 hours PRN Temp >101 or pain
		Incentive spirometer every hour while awake
		PT eval and treat
		Place sequential compression device bilateral lower extremities
		Weight bearing RLE: Weight bearing as tolerated
<b>Signature</b>		

**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

General Debriefing Plan			
<input type="checkbox"/> Individual	<input type="checkbox"/> Group	<input type="checkbox"/> With Video	<input type="checkbox"/> Without Video
Debriefing Materials			
<input type="checkbox"/> Debriefing Guide	<input type="checkbox"/> Objectives	<input type="checkbox"/> Debriefing Points	<input type="checkbox"/> QSEN
QSEN Competencies to consider for debriefing scenarios			
<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	
Sample Questions for Debriefing			
<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>			