

## SECTION I: SCENARIO OVERVIEW

<b>Scenario Title:</b>	Symptomatic Bradycardia in the ICU/PCU		
Original Scenario Developer(s):	Vicki Casella-Gordon RN, MS, CNS, CCRN Lindsey Shank RN, MS, CNS, CCRN Mary Pieper-Warren RN, BA		
Date - original scenario			
Validation:	Anne Lucero, MSN 04/10		
Pilot testing:			
Revisions:	01/15, 03/18 Melissa Punnoose, MSN, RN-BC, CHSE melissa.punnoose@providence.org		
<u>Estimated Scenario Time:</u>	20 minutes	<u>Debriefing time:</u>	40 minutes
<u>Target group:</u> New grads or seasoned RNs transitioning to the ICU/PCU			
<u>Core case:</u> Management of symptomatic bradycardia in the post PCI patient.			
<u>Brief Summary of Case:</u> This case presents Mr. Turner, who was admitted to the ICU status post PCI of the LCA for an anterior wall MI. On admission his vital signs are stable and he is alert and oriented, denies CP. He has a history of DM and HTN and smokes 1 pack of cigarettes a day for the last 30 years. He begins to complain of chest pain, SOB, and becomes diaphoretic and pale. HR 35. Atropine does not resolve the symptomatic bradycardia and transcutaneous pacing is necessary.			
<u>QSEN Competencies</u> X Patient Centered Care X Patient Safety <input type="checkbox"/> Quality Improvement X Teamwork and Collaboration			

EVIDENCE BASE / REFERENCES (APA Format)
Berg, R.A., Hemphill, R., Abella, B. S., Aufderheide, T. P., Cave, D. M., Hazinski, M. F., Lerner, E. B., Rea, T. D., Sayre, M. R., and Swor, R. A. (2015). 2015 American heart association guidelines update for cardiopulmonary resuscitation and emergency cardiovascular care. <i>Circulation</i> , 132(18), S315-S367.
Bucher, L. (2017). Dysrhythmias. In Dirksen, L. and Bucher, H. (Eds.). <i>Medical-surgical nursing: Assessment and management of clinical problems</i> ( 10th ed.), (pp. 757-779). St. Louis: Elsevier.
Dolansky M.A., Moore, S.M. (2013). Quality and safety education for nurses (QSEN) The key is systems thinking. <i>Online Journal of Issues in Nursing</i> , 2013; Vol 18, No. 3, Manuscript 1.

## SECTION II: CURRICULUM INTEGRATION

### A. SCENARIO LEARNING OBJECTIVES

#### Learning Outcomes

1. Manage patient with symptomatic bradycardia according to current ACLS guidelines
2. Demonstrate timely decision making and initiate emergency procedures
3. Accurate communicate with team members (SBAR and closed loop communication) to assure safety of patient

#### Specific Learning Objectives

1. Recognize patient is unstable / acute change in condition
2. Focused Assessment to determine priority symptoms
3. Recognize symptomatic bradycardia and intervene appropriately
4. Correctly identifies Second degree AV block Type II
5. Understand how to prepare for initiation of transcutaneous pacing
6. Keeps team members informed through focused communication

#### Critical Learner Actions

1. Performs BLS Primary Survey and ACLS Secondary Survey
2. Obtains and reviews 12 lead ECG
3. Administers appropriate bradycardia drugs/doses for treatment of bradycardia including atropine
4. Initiates ACLS Bradycardia Algorithm
5. Performs role of team leader and directs team appropriately
6. Communicates clearly with MD, Patient, and nursing colleagues
- 7.
- 8.
- 9.

### B. PRE-SCENARIO LEARNER ACTIVITIES

#### Prerequisite Competencies

Knowledge	Skills/ Attitudes
<input type="checkbox"/> Knowledge of current AHA ACLS protocols	<input type="checkbox"/> Able to apply and troubleshoot transcutaneous pacer equipment
<input type="checkbox"/> Knowledge of agency based emergency system	<input type="checkbox"/> Perform BLS primary survey
<input type="checkbox"/> SBAR communication	<input type="checkbox"/> Perform ACLS secondary survey
<input type="checkbox"/> ACLS protocols	<input type="checkbox"/> Interdisciplinary communication skills (SBAR, Closed loop)
<input type="checkbox"/>	<input type="checkbox"/> Demonstrate ACLS protocols

### SECTION III: SCENARIO SCRIPT

#### A. Case summary

This case presents Mr. Turner was admitted to the ICU status post PCI of the LCA for and anterior wall MI. On admission his vital signs are stable and he is alert and oriented, denies CP. He has a history of DM and HTN and smokes 1 pack of cigarettes a day for the last 30 years.

#### B. Key contextual details

At shift change the off-going nurse reports that Mr. Turner is in stable condition, vital signs are stable and O2 sats are at 96% on room air. His monitor shows NSR at 86/min. When the nurse begins initial assessment Mr. Turner becomes SOB, dyspneic, diaphoretic, and pale. He is complaining of mid-sternal chest pain. When the RN looks at the monitor she sees a HR of 36 and 2nd degree HB Type II.

#### 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)
ICU/telemetry RN	Gives report/leaves	SP
RN 1/primary RN	Leads patient care	L
RN 2/backup RN	Takes direction from primary RN	L
Family member	Concerned, but not disruptive	SP
MD		SP
Charge RN		SP or L if experienced RN

D. Patient/Client Profile				
Last name:	Turner		First name:	Ronald
Gender:	Age: 68	Ht: 6, 2"	Wt: 187 (85kg)	Code Status: Full
Spiritual Practice: Atheist	Ethnicity: Caucasian		Primary Language spoken: English	
1. Past history				
Admitted through Emergency Department 8 hours ago. Dx anterior wall MI. Transferred to Cardiac Intervention for successful PCI. No previous history except for hypertension and diabetes Type 2 controlled with diet and exercise.				
<b>Primary Medical Diagnosis</b>	Anterior Wall MI/ post-PCI procedure			

2. Review of Systems	
CNS	VSS, a/o, denies CP
Cardiovascular	S <sub>1</sub> S <sub>2</sub> , 120/76, HR 96
Pulmonary	WNL
Renal/Hepatic	WNL
Gastrointestinal	WNL
Endocrine	Type 2 DM, diet controlled
Heme/Coag	ASA 81mg daily
Musculoskeletal	WNL
Integument	WNL
Developmental Hx	WNL
Psychiatric Hx	WNL
Social Hx	Married with 2 adult children, smoker
Alternative/ Complementary Medicine Hx	None

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

3. Current medications	Drug	Dose	Route	Frequency
	ASA	81mg	PO	Daily
	Diovan HCT	320/25	PO	Daily

4. Laboratory, Diagnostic Study Results					
Na: 144	K: 3.5	Cl: 100	HCO3:	BUN: 10	Cr: 0.5
Ca: 9.0	Mg: 2.5	Phos:	Glucose: 127	HgA1C: 7.1	
Hgb: 14	Hct: 40	Plt: 400	WBC: 10.2	ABO Blood Type: O+	
PT 12.5	PTT 30 seconds	INR	Troponin:	BNP:	
ABG-pH: 7.37	paO2: 90	paCO2: 28	HCO3/BE:	SaO2: 98%	
VDRL:	GBS:	Herpes:	HIV:		
CXR:	ECG:				

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): dressing to R groin from PCI			
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	X Monitor on, data displayed
BP: 120/84	HR: 86	RR: 26	T: 98
CVP:	PAS:	PAD:	PCWP:
AIRWAY:	ETCO <sub>2</sub> :	FHR:	CO:
Lungs: Sounds/mechanics	Left:	Right:	Clear
Heart:	Sounds:	S <sub>1</sub> S <sub>2</sub>	
	ECG rhythm:	SR 2 <sup>nd</sup> degree heart block type 2	
	Other:	Cool, clammy pale skin	
Bowel sounds:	normoactive	Other:	

3. Initial Intravenous line set up						
	<b>Saline lock #1</b>	Site:			IV patent (Y/N)	
	<b>IV #1</b>	Site:		Fluid type:	Initial rate:	y IV patent (Y/N)
x	Main	RA		NS	100ml/hr	
	Piggyback					
	<b>IV #2</b>	Site:		Fluid type:	Initial rate:	y IV patent (Y/N)
	Main	RA		integrilin	2mcg/kg/min	
x	Piggyback				170mcg/min	
4. Initial Non-invasive monitors set up						
x	NIBP		x	ECG First lead:	x	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:	
					.	
Environment, Equipment, Essential props						
1. Scenario setting: (example: patient room, home, ED, lobby)						
ICU/PCU						

2. Equipment, supplies, monitors (In simulation action room or available in adjacent core storage rooms)						
	Bedpan/ Urinal			Foley catheter kit	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 kit
x	Defibrillator	x		Code Cart	x 12-lead ECG	Chest tube equip
	PCA infusion pump			Epidural infusion pump	Central line Insertion Kit	Dressing Δ equipment
x	IV fluid Type:	NS		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	x	Non re-breather mask
x	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
	Progress Notes	x	Graphic record		Anesthesia/PACU record		ED Record
	Medication reconciliation		Transfer orders		Standing (protocol) orders	x	ICU flow sheet (if in the ICU)
	Nurses' Notes		Dx test reports		Code Record		Prenatal record
x	Actual medical record binder, constructed per institutional guidelines				Other Describe: Can also use simulated EMR instead of paper chart		

5. Medications (to be available in sim action room)								
#	Medication	Dosage	Route		#	Medication	Dosage	Route
2	Nitroglycerine	0.4mg	PO		1	Versed	2mg/ml	IV
1	Morphine	2mg/ml	IV					
1	Integrilin drip	2mcg/kg/min	IV					
2	Atropine	1mg/10ml	IV					

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

**Initiation of Scenario :** Mr. Turner was admitted 1 hour ago to the ICU status post PCI of the LCA for an anterior wall MI. He has a history of HTN, and diet controlled type 2 DM. On admission his vital signs are stable at BP 120/84, T. 98, HR 86, RR 20, O<sub>2</sub> sats @ 96%. SR on the monitor. He is alert and oriented, full code, NKA. Denies pain. He is on an integrilin drip at 170mcg/hour. He is also getting NS @ 100ml. After this bag is complete the rate is to be lowered to 50ml/hour.

STATE / PATIENT STATUS	DESIRED LEARNER ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
<p><b>1. Baseline</b></p> <p>While RN begins to assess patient, he begins to c/o labored breathing, diaphoretic and pale. c/o mid sternal chest pain.</p>	<p><b>Operator</b></p> <p>HR – 36 BP - 78/40 RR - 28, dyspneic O<sub>2</sub>sats – 92%</p> <p>Monitor: 2nd degree Mobitz Type II</p> <p><b>Triggers:</b> Learner Actions completed in 2-3 minutes</p>	<p><b>Learner Actions</b></p> <ol style="list-style-type: none"> <li>1. Greet patient, identify</li> <li>2. Recognizes rhythm and alerts 2nd RN calling for help</li> <li>3. Complete primary survey &amp; focused assessment</li> <li>4. Directs 2nd RN to obtain Crash Cart (delegation of roles)</li> <li>5. O<sub>2</sub> to 4 L/min</li> <li>6. Assure patent IV</li> <li>7. Maintain airway</li> <li>8. Give report to backup help using SBAR or other agency specified format</li> <li>9. Call RRT</li> </ol>	<p><b>Debriefing Points:</b></p> <ul style="list-style-type: none"> <li>- Significance of clinical findings and patient complaint in Post PCI patient</li> <li>- Decision making in situation</li> <li>- Anticipated nursing interventions for a patient with 2nd degree heart block, type 2</li> <li>- rationale for not giving nitro for CP in this circumstance</li> <li>- Rationale for calling RRT</li> </ul>



STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
<p>2.</p> <p>Continues to be symptomatic.</p> <p>Becomes lethargic, but is still conscious.</p>	<p><b>Operator:</b></p> <p>HR – 30 RR – 24 BP 80/35 O<sub>2</sub> sats – 92% Monitor: 2nd degree Mobitz Type II</p> <p><b>Triggers:</b></p> <p>Learner actions completed in 4-5 minutes</p>	<p><b>Learner Actions:</b></p> <ol style="list-style-type: none"> <li>1. RN 1 assumes leadership role</li> <li>2. Obtains/interprets 12 lead EKG</li> <li>3. Prepares for TCP- high degree HB – Mobitz Type II - Applies multifunction pacer pads</li> <li>4. Administers Atropine 0.5 mg IV – can give 0.5 mg every 5 minutes to a total dose of 0.04 mg/kg (max total dose 3 mg)</li> <li>5. Reassesses</li> <li>6. Notify MD with SBAR communication- requests immediate response</li> </ol>	<p><b>Debriefing Points:</b></p> <ul style="list-style-type: none"> <li>- Importance of EKG for diagnosis prior to interventions</li> <li>- Use of pacer pads for monitoring EKG</li> </ul>

STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
<p><b>3.</b></p> <p>No response to Atropine.</p> <p>No change in LOC. Moans occasionally.</p>	<p><b>Operator:</b></p> <p>Captures @ 80 mA BP 98/45 HR – 60</p> <p><b>Triggers:</b></p> <p>Learner Actions completed within 5 minutes</p>	<p><b>Learner Actions:</b></p> <ol style="list-style-type: none"> <li>1. 2nd RN arrives with crash cart.</li> <li>3. MD arrives</li> <li>4. orders to administer versed 2mg IV now (or other medication per hospital protocol)</li> <li>5. Begins TCP immediately</li> <li>6. Turns on pacer</li> <li>7. Sets the demand rate to approx. 60/min</li> <li>8. Increases mA to capture               <ul style="list-style-type: none"> <li>- Sets the current mA to 2 mA above the dose at which consistent capture is observed</li> <li>- Checks patient's pulse</li> <li>- Checks vital signs</li> </ul> </li> </ol>	<p><b>Debriefing Points:</b></p> <ul style="list-style-type: none"> <li>- Pacer pads could be turned on by ICU nurse if patient condition deteriorates</li> <li>- Importance of sedation for patient comfort IF patient is conscious. Wide range of procedural sedation options available. Required charting.</li> </ul>

STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
<p><b>4.</b></p> <p>Patient is alert and oriented. Patient states “I feel better”,</p>	<p><b>Operator:</b></p> <p>Captures @ 80 mA BP 98/45 HR – 60 VS remain stable</p> <p><b>Triggers:</b></p>	<p><b>Learner Actions:</b></p> <ol style="list-style-type: none"> <li>1. Assesses pain</li> <li>2. Reassures patient</li> <li>3. Secures sedation orders from MD appropriately.</li> <li>4. Repeats order back for clarification.</li> </ol>	<p><b>Debriefing Points</b></p>
<p>Scenario End Point: Patient being prepared for insertion of transvenous pacemaker</p>			
<p>Suggestions to <u>decrease</u> complexity: patient responds to atropine and does not require TCP            Suggestions to <u>increase</u> complexity: progress to complete heart block and a full code requiring CPR, hysterical family member or patient becomes completely unresponsive while awaiting TCP.</p>			

## APPENDIX A: HEALTH CARE PROVIDER ORDERS

<b>Patient Name:</b>  <b>DOB:</b>  <b>Age:</b>  <b>MR#:</b>		<b>Diagnosis:</b>
† No Known Allergies † Allergies & Sensitivities		
<b>Date</b>	<b>Time</b>	<b>HEALTH CARE PROVIDER ORDERS AND SIGNATURE</b>
		Admit to inpatient ICU Cardiac Monitor Low cholesterol, low saturated fat, no added salt diet IV with 0.9 % Sodium Chloride at 100 ml/hr. Decrease rate to 50ml/hr after this bag Check vital signs, groin and pedal pulses every 15 minutes x4, every 30 minutes x2, then every hour until ambulating. OOB adlib when groin is stable Chest Pain: STAT 12-Lead ECG and notify physician NTG 0.4 mg SL q 5 minutes prn chest pain, maximum 3 doses. Hold for BP < 90 systolic Morphine Sulphate 2 mg every 5 minutes prn CP or Shortness of Breath not relieved by NTG and notify MD Clopidogrel (Plavix) 75 mg PO daily Clopidogrel (Plavix) 600 mg orally STAT x 1 dose IF NOT GIVEN IN THE CATH LAB. Aspirin enteric-coated 325 mg orally daily. Ranitidine 300 mg orally at bedtime Docusate Sodium 100 mg orally daily Metoprolol 50 mg orally every 12 hours. Hold for HR <50 beats/minute, SBP <100 mmHg, or for 2nd or 3rd degree heart block Insulin – (amend so that order reflects your institution) Eptifibatide (Integrilin) continuous IV infusion at 2 mcg/kg/min (85kg = 170mcg/min).
<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>			