

SECTION I: SCENARIO OVERVIEW

Scenario Title:	Community Acquired Pneumonia_Case B – allergic reaction to IV antibiotic		
Original Scenario Developer(s):	Marjorie A. Miller, MA, RN, CHSE		
Date - original scenario	3-15-07		
Validation:	5/07		
Revision Dates:	6/09, 7/11, 3/18 (MMiller)		
Pilot testing:	5/07		
QSEN revision:	7/11 Marjorie A. Miller, MA, RN, CHSE; Colleen O’Leary-Kelley, PhD, RN, CNE		
<u>Estimated Scenario Time:</u>	15-20 min	<u>Debriefing time:</u>	30-40 min
<u>Target group:</u> Fundamentals, beginning med-surg students; staff nurses			
<u>Core case:</u> Allergic Reaction to IV antibiotic in patient with Community Acquired Pneumonia			
<u>QSEN Competencies:</u>			
<ul style="list-style-type: none"> • Patient Centered Care • Safety • Teamwork and Collaboration 			
<u>Brief Summary of Case:</u> Patient is a homeless middle aged woman with acute respiratory distress brought in by homeless shelter workers due to increasing productive cough, fever and respiratory distress. R/O Community Acquired Pneumonia. She had a severe episode of respiratory distress and high anxiety that was resolved with a nebulizer treatment in the first scenario.			
The second scenario begins with IV Ceftriaxone infusing. Learners begin assessment. Patient complains of itching and heat on chest area. Learners are to assess chest, stop IV antibiotic infusion, call for charge nurse assistance, carry out new provider for orders and administer IV Benadryl. If learners are at a higher level, can call provider, obtain new orders according to agency protocol.			
To increase complexity, scenario can be initiated or progress to full anaphylaxis, requiring IV or inhaled steroids, epinephrine, respiratory and circulatory support.			

EVIDENCE BASE / REFERENCES (APA Format)
Black, J.M. and Hawks, J. H. (2009) <i>Medical Surgical Nursing, Clinical Management for Positive Outcomes</i> (8 th ed.). St Louis: Elsevier. Saunders
Gahart, B & Nazareno, A. (2018) <i>Intravenous Medications</i> (34 th Edition). St. Louis: Elsevier. Mosby
Cronenwett, L., Sherwood, G., Barnsteiner, J. et al. (2007). Quality and safety education for nurses. <i>Nursing Outlook</i> , 55(3), 122-131. doi:10.1016/j.outlook.2007.02.006

SECTION II: CURRICULUM INTEGRATION

A. SCENARIO LEARNING OBJECTIVES	
Learning Outcomes	
1. Apply clinical decision making skills in analyzing and interpreting complex data.	
2. Provide care to patients utilizing principles of safety.	
3. Apply principles of pharmacology and safety to patient situation.	
4. Integrate understanding of multiple dimensions in patient care.	
Specific Learning Objectives	
1. Reassess patient on return to unit.	
2. Gather relevant patient, environmental and contextual data.	
3. Recognize change in patient condition (signs allergic reaction to antibiotic) and stop infusion.	
4. Position patient for airway safety and optimal circulation.	
5. Recognize and initiate request for assistance and further orders.	
6. Communicate using SBAR appropriate data to obtain necessary orders for interventions.	
7. Administer medications following all safety procedures and appropriate assessments.	
8. Reassure patient throughout care with clear, calm statements.	
9. Communicate significant data to interprofessional team member(s).	
Critical Learner Actions	
1. Recognize signs of allergic reaction to antibiotic and stop infusion.	
2. Perform hand hygiene, don gloves, contain biohazards.	
3. Introduce self and role, and identify patient using 2 identifiers	
4. Communicate calmly with patient while performing assessment	
5. Reassess available orders; recognize need for additional health care provider orders,	
6. Provide information to health care provider using SBAR to obtain medication orders.	
7. Obtain new orders using agency approved procedures.	
8. Administer interventions including IV medications utilizing principles of safety.	
9. Reassess patient and document findings appropriately.	

B. PRE-SCENARIO LEARNER ACTIVITIES	
Prerequisite Competencies	
Required prior to participating in the scenario	
Knowledge	Skills/ Attitudes
1. Infection control measures for respiratory infections	1. General survey and focused Respiratory assessment
2. Pharmacology of antibiotic agents including dose, rates of administration, adverse reactions and precautions	2. Nursing interventions in acute allergic reactions 3. Patient communication skills in acute situations.
3. Nursing interventions for allergic reactions.	4. SBAR communication to MD to inform change of status and secure orders.
4. Criteria for verbal or telephone orders.	5. Verbal/telephone orders
5. Structured communication tools (SBAR)	6. Administration/documentation of PO and IV meds

SECTION III: SCENARIO SCRIPT

A. Case summary

Patient is a homeless middle aged woman with acute respiratory distress brought in by homeless shelter workers due to increasing productive cough, fever and respiratory distress. R/O Community Acquired Pneumonia. She had a severe episode of respiratory distress and high anxiety that was resolved with a nebulizer treatment in the first scenario.

The second scenario begins with IV Ceftriaxone infusing. Learners begin assessment. Patient complains of itching and heat on chest area. Learners are to assess chest, stop IV antibiotic infusion, call for charge nurse assistance, carry out new provider orders and administer IV Benadryl. If learners are at a higher level, can call provider, obtain new orders according to agency protocol.

B. Key contextual details

Day shift adequately staffed. Medications are available. Patient is resting post-respiratory distress episode on 2 L O₂ per nasal prongs with O₂ sat 95%. Charge nurse initiated IV Ceftriaxone while learners were on break. IV antibiotic is ½ finished.

C. Scenario Cast

Patient/ Client	<input 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)	Learner (L) or Standardized Participant (SP)
RN 1	Primary nurse	L
RN 2	New graduate	L
Charge Nurse	Gives handoff report to learners	SP

D. Patient/Client Profile				
Last name:	Hanover		First name:	Suzanne
Gender: Fe	Age: 45	Ht: 5'8"	Wt: 110	Code Status: Full
Spiritual Practice: None stated	Ethnicity: Caucasian		Primary Language spoken: English	
1. History of present illness				
Patient brought in by homeless shelter volunteers because of coughing and inability to catch her breath. She reports being sick for a week, getting worse in the last 2 days. She states that she has not been able to sleep or eat due to coughing. Shelter volunteers indicate that she is alcoholic.				
Primary Medical Diagnosis		Community Acquired Pneumonia		

2. Review of Systems	
CNS	Slight tremors of both hands/ anxious/ Alert and oriented.
Cardiovascular	Sinus rhythm @ 96; no murmurs, thrills or ectopy . B/P 136/90
Pulmonary	Smoker 30 pack years. Cough productive of thick greenish tinged mucous. RR-28, O2 sats 94% RA; Fine crackles over all lung fields; coarse rhonchi mostly over (R) base
Renal/Hepatic	No complaints of urinary difficulties. Slight liver tenderness to palpation. Daily ETOH (1 qt. whiskey per day) use when available. Last drink 12 hours ago
Gastrointestinal	Soft, non-tender. No history of bleeding reported.
Endocrine	Reports normal periods with dysmenorrhea; condoms for birth control. No hx of diabetes
Heme/Coag	States that she bruises easily; no evidence of bruising noted
Musculoskeletal	Moves all extremities with full range of motion
Integument	Clear and intact. No lesions noted.
Developmental Hx	College graduate. Unemployed. Lived on street x 10 years
Psychiatric Hx	None reported
Social Hx	Lived on street x 10 years since divorce. No contact with family
Alternative/ Complementary Medicine Hx	unknown

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

3. Current medications	Drug	Dose	Route	Frequency
	D5/0.45ns w/20 mEq KCL	125 m:/hr	IV	Every 8 hours
	Nicotrol Transdermal patch	15 mg	TD	daily
	Acetaminophen	650 mg	PO	Q4h PRN T over 101° F.
	Albuterol	2.5 mg	Neb	Q 1-4 h PRN resp. distress
	Ceftriaxone	1 gm	IV	Q 24 hours
	Azithromycin	500 mg	IV	Q 24 hours

4. Laboratory, Diagnostic Study Results					
Na: 138	K: 3.8	Cl: 100	HCO ₃ : 24	BUN: 22	Cr: 0.8
Ca: 9.0	Mg: 1.2	Phos:	Glucose:98	HgA1C:	
Hgb: 11.2	Hct: 32	Plt: 145	WBC: 12.4	ABO Blood Type:	
PT	PTT	INR	Troponin:	BNP:	
Ammonia:	Amylase:	Lipase:	Albumin:	Lactate:	
ABG-pH:	paO ₂ :	paCO ₂ :	HCO ₃ /BE:	SaO ₂ :	
VDRL:	GBS:	Herpes:	HIV:		
CXR: (L) consolidation		ECG: 12 lead - NSR			
CT:		MRI:			
Other: Sputum + (Group A Streptococcus)					

E. Baseline Simulator/Standardized Patient State (This may vary from the baseline data provided to learners)			
1. Initial physical appearance			
Gender: Fe	Attire: hospital gown		
Alterations in appearance (moulage): Long unkempt black wig, torn sweater or shawl, purse Moulage: <ul style="list-style-type: none"> rash on chest (cream of wheat cereal, let cool, spread on chest, dust with powdered blush) (recipe available in scenario box) used tissues on bed stained with green-gray colored secretions; kidney basin also on chest of patient with same stained tissues in basin. 			
x	ID band present, accurate information	ID band present, inaccurate information	ID band absent or not applicable
	Allergy band present, accurate information	Allergy band present, inaccurate information	x Allergy band absent or not applicable

	No monitor display		Monitor on, no data	x	Monitor on, standard display
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BP: 130/85	HR: 96	RR: 24	T:101.4	SpO ₂ : 94%
CVP:	PAS:	PAD:	PCWP:	CO:
AIRWAY:	ETCO ₂ :	FHR:		
Lung Sounds	Left: crackles throughout		Right: crackles throughout	
Heart:	Sounds:	S ₁ S ₂		
	ECG rhythm:	Sinus tachycardia		
	Other:			
Bowel sounds:	Active bowel sounds x 4		Other:	

3. Initial Intravenous line set up						
	Saline lock #1	Site:				IV patent (Y/N)
x	IV #1 Main Piggyback	Site: RA		Fluid type: D5/0.45 NS w/20 mEqKCL	Initial rate: 125 mL	IV patent (Y/N)
	IV #2 Main Piggyback	Site:		Fluid type: Ceftriaxone	Initial rate: 50 mL/hr	IV patent (Y/N)
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	x	Infusion pump:	Pump settings: Primary Piggyback (2 nd channel)	125 mL/hr 100 mL/hr	
	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)						
Monitored medical-surgical 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	x Wall suction
x	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
x	IV fluid Type:	D5/0.45 NS w/20 mEq KCL	IV fluid additives:		IV medication in 50 NS Ceftriaxone 1G Azithromycin 500 mg	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		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		Prenatal record
x	Actual medical record binder, constructed per institutional guidelines			x	Other EMR		

5. Medications (to be available in sim action room)								
#	Medication	Dosage	Route		#	Medication	Dosage	Route
6	Acetaminophen	325 mg	PO		1	Nicotrol	15 mg	transderm
1	Ceftriaxone	1 gm/50 mL NS	IV		4	Saline flushes		
1	Azithromycin	500 mg/50 mL	IV					

CASE FLOW / TRIGGERS/ SCENARIO DEVELOPMENT STATES			
Initiation of Scenario : Charge nurse reports to Primary Nurse, new graduate and medication nurse			
SH is resting better now with O ₂ sat at 95% with 2L O ₂ per NC and I'm pretty sure she will keep it on now.... She was pretty scared when she couldn't breathe. Her antibiotics came up and so I have her Ceftriaxone going. When that finishes you can get her Azithromycin going. You can go ahead and re-assess her.... You were in there so you have the rest of the data. Be sure to call me if she gets worse.			
STATE / PATIENT STATUS	DESIRED LEARNER ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
1. Baseline Patient lying in semi fowler's position 2L O ₂ per NC on Coughing As nurses enter room, says "Oh, what now? I am so tired....just let me rest."	Operator O ₂ sat – 94% - RR – 26 HR –98 BP 134/88 Triggers: To perform expected actions within 5 minutes	Learner Actions 1. Acknowledge that patient has had a rough morning 2. Identify self, co-worker and roles 3. Give brief explanation of plan for reassessment and administration of IV antibiotics to treat pneumonia 4. Check vital signs and O ₂ sat.	Debriefing Points: 1. National Patient Safety Goals to minimize risk of error 2. Factors that decrease O ₂ sats 3. Skills for obtaining patient cooperation

STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
<p>2.</p> <p>Patient agrees with plan, but requests that nurses work quickly. States "moving around makes me.... breathe harder."</p> <p>After assessment started, starts to complain of shortness of breath; then complains of itching and heat on her chest</p>	<p>Operator:</p> <p>O₂ sat - 92% Slight crackles RR - 28 HR -102 BP - 138/88 T - 100.6°F.</p> <p>Triggers: To perform expected action within 5 minutes</p>	<p>Learner Actions:</p> <p>Primary Nurse reassures using clear, calm statements of action</p> <p>Medication nurse performs safety checks on IV medication running, including history of allergies</p> <p>Primary nurse checks patient's chest to examine site/source of itching and discovers rash.</p> <p>Stops IV infusion ↑ O₂ liter flow</p>	<p>Debriefing Points:</p> <ol style="list-style-type: none"> 1. Communication with irritable, critical patient 2. Signs of allergic reaction 3. Immediate nursing actions in allergic reactions 4. Significance of VS changes

STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
<p>3.</p> <p>I can't breathe and I'm itching all over. What is the matter with me?</p> <p>When med nurse asks about allergies, patient states "I can't remember ... I'm going to die... I can't breathe"</p>	<p>Operator:</p> <p>↓ O₂ sat – 89%, ↑ RR = 32 HR = 130 BP = 100/88 ,</p> <p>Crackles diminished to slight over all lung fields Audible wheezes – high pitched wheezes both lungs</p> <p>Triggers: Performs action within 5 minutes</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Provider Orders:</p> <ol style="list-style-type: none"> 1. DC ceftriaxone 2. Benadryl 50 mg IV push </div>	<p>Learner Actions:</p> <p>Stops antibiotic.</p> <p>Reasses patient/ Recognizes deteriorating condition</p> <p>Calls RT. Increases O₂ liter flow if RT not in attendance.</p> <p>Checks health care provider's orders.</p> <p>Recognizes that orders do not cover current change in status.</p> <p>Notifies charge nurse or MD giving SBAR communication, requesting emergency Benadryl.</p> <p>Takes order and repeats back. (depending on level of learner)</p>	<p>Debriefing Points:</p> <ol style="list-style-type: none"> 1. Communication with irritable, critical patients 2. Communication strategies to minimize risks of error during reporting change of status 3. Factors indicating need for a higher or different level of care 4. Criteria for taking verbal/ telephone orders 5. Significance of respiratory findings 6. Standards of practice for treatment of allergic reactions

STATE / PATIENT STATUS	DESIRED ACTIONS & TRIGGERS TO MOVE TO NEXT STATE		
<p>4.</p> <p>Patient begins to relax after Benadryl</p> <p>Wonders why she is so sleepy</p>	<p>Operator:</p> <p>After Benadryl given: O₂ sats 92% BP 126/80 HR 100 RR 28</p> <p>Triggers:</p>	<p>Learner Actions:</p> <p>Administer IV Benadryl accurately</p> <p>Note patient's decrease in respiratory distress, increasing sats, stabilizing vital signs.</p> <p>Increase O₂ flow rate if RT not in attendance</p> <p>Reassess changes</p>	<p>Debriefing Points</p> <p>Recognition of factors involved in increasing respiratory distress</p> <p>Parameters for increasing O₂ flow rate</p>
<p>Scenario End Point: Learners called to another room for an emergency</p>			
<p>Suggestions to <u>decrease</u> complexity: Patient complains of itching, but no increase in respiratory distress</p> <p>Suggestions to <u>increase</u> complexity: No improvement after treatment; order ABG demonstrating respiratory failure, intubation required</p> <p>Patient becomes increasingly agitated entering ETOH withdrawal syndrome</p>			

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

Insert digital photo here

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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"> 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:			

