SIMULATION

SKILL FOCUS: Complete Pulmonary Exam & O2 Titration   DISCIPLINE: Respiratory Therapy   LEVEL: 1

HEART FAILURE

Estimated Time: 30 minutes • Debriefing Time: 30 minutes

Scan to Begin

Patient Name: Hector Fernandez

SCENARIO OVERVIEW

This patient was admitted to the medical telemetry floor for an exacerbation of his known end-stage congestive heart failure as well as cellulitis in his right lower extremity. He also has obstructive sleep apnea, a history of COPD, and multiple other comorbidities. He arrives to the unit on a non-rebreather mask. Student receive a phone call from the RN asking for the patient's O2 to be weaned to a high-flow nasal cannula, if possible. The nurse also mentions that the MD wrote orders for a "respiratory therapy consult and to call with recommendations." Students should perform a complete pulmonary exam and take a complete patient history. During history taking, students learn that Hector uses Spiriva and Albuterol inhalers at home and he wears a CPAP at night for OSA. Student must recommend the inhalers and CPAP to the provider using SBAR format.

LEARNING OBJECTIVES

1. Demonstrate proper infection control

2. Obtain accurate vital signs

3. Evaluate oxygenation status and adjust oxygen as necessary

4. Perform a complete pulmonary exam

5. Obtain a focused health history

6. Evaluate patient data

7. Recommend appropriate treatment(s) to provider

8. Effectively communicate with the patient and interprofessional team

9. Document accurately

CURRICULUM MAPPING

WTCS RESPIRATORY THERAPY PROGRAM OUTCOMES

- Apply respiratory therapy concepts to patient care situations

- Demonstrate technical proficiency required to fulfill the role of a respiratory therapist

- Practice respiratory therapy according to established professional and ethical standards

RESPIRATORY SURVEY

- Perform pulse oximetry

- Review the medical record utilizing medical record keeping and charting methods consistent with hospital policy and procedures

- Utilize infection control principles

- Obtain a focused health history

- Evaluate patient data

- Perform a basic cardiovascular assessment

- Perform a respiratory assessment

- Obtain vital signs

RESPIRATORY THERAPEUTICS II

- Perform procedures to assess oxygenation

- Evaluate oxygenation

- Demonstrate the use of medical gas equipment

- Assess the need for medical gas therapy

RESPIRATORY DISEASE

- Analyze signs, symptoms, etiology, pathogenesis and treatment for cardiovascular diseases/disorders

CLINICAL PRACTICE

- Apply standard precautions

- Assess vital signs

- Perform pulse oximetry

- Perform chart review

- Perform a pulmonary exam

- Administer oxygen therapy

SIMULATION LEARNING ENVIRONMENT & SET-UP

ENVIRONMENT

Inside room: Patient in bed, as close to fowlers position as possible

Inside or outside room: Hand sanitizer and/or sink

Outside room: Computer or form(s) for documentation

PATIENT PROFILE

Name: Hector Fernandez

DOB: 09/06/19XX

Age: 62

MR#: 41219

Gender: Male

Height: 175 cm (5'10")

Weight: 86.4 kg (195#)

Allergies: penicillin (hives)

Admitting Diagnosis: Right lower extremity cellulitis and CHF

Medical History: congestive heart failure, coronary artery disease, anterior MI with stenting – 4 years ago, chronic atrial fibrillation, hypertension, chronic renal insufficiency, COPD, OSA, restless leg syndrome, hypothyroidism, diabetes mellitus 2, chronic constipation

Surgical History: R TKR – 15 years ago

Code Status: Full

Ethnicity: Hispanic

Spiritual Practice: Christian, Catholic

Primary Language: Spanish

Secondary Language: English

EQUIPMENT/SUPPLIES/SETTINGS

Patient

- Hospital gown
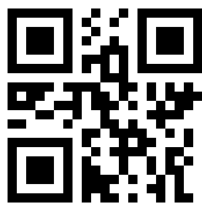- No moulage
- ID band present with QR code

Monitor Settings

- No monitor

- Simulator vitals: HR 78, RR 24, BP 128/84, Temp 37.1, Sat = 100 % on 10-15 lpm NRB mask

Supplies

- General

    o Respiratory Equipment

        ▪ Pulse oximeter

        ▪ High-flow nasal cannula and/or other devices to facilitate O2 titration

- Medications

    o None needed

QR CODES

START	PATIENT	REPORT	PATIENT ID

SBAR	RIGHT LEG	LEFT LEG	RIGHT IV

LEFT IV			

CHEST QR CODES

Cut along the dotted lines. Fold along the solid line to create a bi-fold of the diagram and QR code.

ANTERIOR 2	ANTERIOR 3	ANTERIOR 6	ANTERIOR 7

POSTERIOR 0	POSTERIOR 1	POSTERIOR 4	POSTERIOR 5

RIGHT AXILLARY 1

LEFT AXILLARY 1

TEACHING PLAN

PREBRIEF

The facilitator should lead this portion of the simulation. The following steps will guide you through Prebrief.

- Scan the **QR Code: "Scan to Begin"** while students are in Prebrief.

- "Meet Your Patient" (on iPad) and explain how the iPad works in the simulated learning environment including:

  o Explain how to use the iPad scanner and QR codes. Remind students that there are multiple QR codes in the simulation, but they should only scan them if they think it will provide data necessary for their assessment and evaluation of the patient.

  o For some scenarios, it may be helpful to tell students where the QR code are located. For others, you may want students to "find" the QR codes during their assessments. This is your choice.

  o Describe how a QR code sound will work in the scenario. For the most authentic sound experience, student should use ear buds or the ARISE "stethoscope" for all QR codes with the following symbol: 🔊. Example: **QR Code: Chest Anterior 1** 🔊

  o As the facilitator, you should be aware that throughout the simulation some QR codes are necessary to the programming of the iPad content. Directions for which QR codes are required (to be scanned) in each state are listed under each state of the documentation below. The QR codes are also in **BOLD** type.

  o Level Up tab – This tab "tells" the content in the iPad to change to what is needed for the next state of a simulation. It is used a few times in this scenario after the provider is notified to display new orders (those just given over the phone) and lab results, etc.

  o Medication QR Codes – The student(s) must scan **QR Code: Patient ID** prior to scanning any medication. That scan is valid for 2 minutes and then it "times out." The student(s) will need to scan **QR Code: Patient ID** again to give more medications.

  o MAR Hyperlinks – On the MAR all medications are underlined and hyperlinked to DailyMed, which is a medication reference housed by the

National Library of Medicine. Students can click on these links during the simulation for up-to-date medication content, labels, and package insert information.

- Discuss the simulation "Learning Objective(s)" (on iPad) as well as any other Prebrief materials

- Get "Report" on iPad

    o Possible Facilitator Questions

        ▪ What are your priorities for this patient?

- View "Patient" video on iPad

    o Possible Facilitator Questions

        ▪ What communication strategies could you employ when you assess and evaluate Hector?

- Advance to the "Patient Profile" screen (on iPad). This will act as a simulated patient chart.

- Students can view the tabbed content on the iPad (see below) prior to entering the patient's room and throughout the simulation as needed.

    o You should give student some time (5 minutes) to review this content now, prior to entering the patient's room.

    o Facilitator Note: There are a lot of medications in the MAR and all are linked to Dailymed. This may be a good opportunity to review general pharmacology.

H&P

No reports available.

ORDERS

Patient Name	DOB	MR#
Hector Fernandez	*09/06/19XX*	*41219*
Allergies	**Height (cm)**	**Admission Weight (kg)**
Penicillin (hives)	*175*	*86.4*

Provider Orders

Date	Time	Order
Today	10 minutes ago	Admit to Virtual Medical Telemetry Unit
		Diagnosis: X lower leg cellulitis, mild exacerbation CHF
		Condition: Fair
		Code Status: Full Code
		Cardiac monitoring with vitals every 4 hours x 24 hours, then every 8 hours
		Call if BP <90/60 or > 170/90, HR <50 or > 120, RR <8 or >24, T > 38.5° C, SaO2 < 92% on 4 lpm or > O2
		Activity: Ambulate TID and as tolerated
		Diet: 2 g sodium, Carbohydrate controlled
		Dietary Consult
		2000 ml/24 hour fluid restriction
		Weight on admission and every AM
		Insert Foley catheter for strict I &O
		O2 to keep SaO2 > 90%
		If smoker within the last 12 months, provide smoking cessation
		Respiratory Therapy Consult. Call with recommendations.
		Continue these medications from the skilled nursing facility:
		1. Lisinopril 2.5 mg PO daily
		2. Metoprolol ER 100 mg PO daily
		3. Spironolactone 25 mg PO daily
		4. Coumadin 3 mg PO daily on M, W, F
		5. Atorvastatin 20 mg PO daily
		6. Diltiazem ER 120 mg PO mg daily
		7. Levothyroxine 100 mcg PO daily
		8. Glipizide and Metformin 2.5 mg/250 mg PO with breakfast
		9. Carbidopa and Levodopa ER 50 mg/200 mg PO at HS
		10. Aspirin enteric coated 81 mg PO daily
		11. Acetaminophen 500 mg PO 2 tabs every 4-6 hours for pain or fever PRN

		12. Nitroglycerin 0.4 mg SL every 5 minutes times 3 doses PRN for angina, if angina pain persists call Provider
		13. Milk of Magnesia 30 ml PO daily PRN for constipation, may repeat once per day if no relief
		14. Docusate sodium 100 mg PO 2 times per day PRN for constipation, hold if diarrhea or abdominal pain
		Medications: Cefazolin 2 g IV every 8 hours
		Clindamycin 900 mg IV every 8 hours
		Furosemide 40 mg PO every 12 hours
		K+ replacement per protocol
		Labs: (If not done in the ED) CBC with differential, Chem 7, Magnesium, BNP, Liver Enzymes, TSH, HbA1c, CK & Troponin, INR
		(If not done in ED) Blood cultures x 2, wound culture, urinalysis
		AM Labs: Chem 7, BNP, fasting lipid profile
		(If not done in ED) Chest x-ray on admission and in the AM
		(If not done in ED) ECG on admission and in the AM
		Obtain ECG for new onset chest pain STAT PRN
		Echocardiogram now
		Provide and document heart failure instructions: diet and fluid restrictions, activity, medications, daily weight recording, worsening symptoms, follow-up appointment after discharge
		Consult social worker for advanced directives
		Consult with cardiologist
		Consult for cardiac rehabilitation----------------Dr. Jacobson, MD

MAR

Patient Name	DOB	MR#
Hector Fernandez	*09/06/19XX*	*41219*
Allergies	**Height (cm)**	**Admission Weight (kg)**
Penicillin (hives)	*175*	*86.4*

Medication Administration Record

Scheduled			
Lisinopril 2.5 mg PO daily	**Due Today**		**Last Given**
	none		Today @ 0800
Metoprolol ER 100 mg PO daily	**Due Today**		**Last Given**
	none		Today @ 0800
Spironolactone 25 mg PO daily	**Due Today**		**Last Given**
	none		Today @ 0800
Atorvastatin 20 mg PO daily	**Due Today**		**Last Given**
	none		Today @ 0800
Diltiazem ER 120 mg PO mg daily	**Due Today**		**Last Given**
	none		Today @ 0800
Levothyroxine 100 mcg PO daily	**Due Today**		**Last Given**
	none		Today @ 0800
Glipizide and Metformin 2.5 mg/250 mg PO with breakfast	**Due Today**		**Last Given**
	none		Today @ 0800
Aspirin enteric coated 81 mg PO daily	**Due Today**		**Last Given**
	none		Today @ 0800
Coumadin 3 mg PO daily on M, W, F	**Due Today**		**Last Given**
	none		Yesterday
Furosemide 40 mg PO every 12 hours	**Due Today**		**Last Given**
		2230	Today – 1.5 hours ago
Cefazolin 2 g IV every 8 hours	**Due Today**		**Last Given**
	1700	0100	Today – 1.5 hours ago
Clindamycin 900 mg IV every 8 hours	**Due Today**		**Last Given**
	1700	0100	Today – 1.5 hours ago

Continuous Infusion	

PRN	
	Last Given

Acetaminophen 500 mg PO 2 tabs every 4-6 hours for pain or fever PRN	Today – 2 hours ago
Nitroglycerin 0.4 mg SL every 5 minutes times 3 doses PRN for angina, if angina pain persists call Provider	**Last Given**
Milk of Magnesia 30 ml PO daily PRN for constipation, may repeat once per day if no relief	**Last Given**
Docusate sodium 100 mg PO 2 times per day PRN for constipation, hold if diarrhea or abdominal pain	**Last Given**
Discontinued	

DAILY RECORD

Patient Name	DOB	MR#
Hector Fernandez	*09/06/19XX*	*41219*
Allergies	**Height (cm)**	**Admission Weight (kg)**
Penicillin (hives)	*175*	*86.4*

Daily Record

Vitals	Today – 2 hours ago	Today – 30 minutes ago			
Pulse	72	74			
Resp. Rate	26	24			
BP Systolic	128	122			
BP Diastolic	72	74			
Temp (°C)	38.9	37.6			
O2 Saturation (%)	84	98			
Applied Oxygen	2 lpm	15 lpm			
Pain	0	0			

24 HR I & O (ml)					
Input					
Output					
Total					

Daily Weight (kg)	Today – 30 minutes ago				
	86.4				

VITALS

The iPad shows the "enterable" vitals screen.

PROGRESS NOTES

No reports available.

LABS-DIAGNOSTICS

Patient Name	DOB	MR#
Hector Fernandez	*09/06/19XX*	*41219*
Allergies	**Height (cm)**	**Admission Weight (kg)**
Penicillin (hives)	*175*	*84.6*

Laboratory Results

CBC with Differential					
	Today – 2 hours ago	[time]	[time]	Units	Reference Range
WBC	**11.8**			x10³uL	F: 4.7-10.3/M: 4.5-10.5
RBC	**3.6**			x10⁶uL	F: 4.0-4.9/M: 4.0-4.9
Hgb	**9.9**			g/dL	F:10.9-13.3/M:11.0-13.3
HCT	**30.2**			%	F: 33.0-39.6/M: 32.7-39.3
MCV	76.7			fL	F: 78.5-90.4/M: 76.5-90.6
MCH	25			pg	25-33
MCHC	**30**			g/dL	31-37
RDW	12.3			%	F: 11.6-13.4/M: 12.0-14.0
Platelet	**182**			x10⁹uL	F: 183-368/M: 194-364
MPV	7.5			7.4-10.4	7.4-10.4

Neutro	**72**			38-68	38-68
Lymph	25.7			25-54	25-54
Mono	0.3			0-0.8	0-0.8
Eos	1			1-5	1-5
Baso	1			0-2	0-2

Chem 7 with Magnesium

	Today – 2 hours ago	[time]	[time]	Units	Reference Range
Glucose	**162**			mg/dL	Fasting 70-150
BUN	**32**			mg/dL	10-25
Creatinine	**3.2**			mg/dL	F: 0.4-1.4/M: 0.5-1.5
Sodium	**134**			mEq/L	135-145
Potassium	3.8			mEq/L	3.5-5.3
Chloride	108			mEq/L	98-108
Carbon Dioxide	**28**			mEq/L	23-27
Magnesium	1.7			mEq/L	1.5-2.5

Liver Enzymes

	Today – 2 hours ago	[time]	[time]	Units	Reference Range
ALT	53			U/L	7-55
AST	36			U/L	8-48
ALP	102			U/L	45-115
Albumin	4.8			g/dL	3.5-5.0
Total Protein	6.9			g/dL	6.3-7.9
Bilirubin	0.9			mg/dL	0.1-1.2

BNP

	Today – 2 hours ago	[time]	[time]	Units	Reference Range
BNP	**2450**			pg/mL	< 75 years old = <125 > 75 years old = <450

TSH

	Today – 2 hours ago	[time]	[time]	Units	Reference Range
TSH	0.7			mlU/L	0.3-3

CK & Troponin

	Today – 2 hours ago	[time]	[time]	Units	Reference Range
CK	330			U/L	M: 52-336/F: 38-176
Troponin	0			ng/mL	<0.1

INR

	Today – 2 hours ago	[time]	[time]	Units	Reference Range
INR	**2.4**			seconds	< 1.1

HbA1c

	Today – 2 hours ago	[time]	[time]	Units	Reference Range
HbA1c	**10.3**			%	< 5.7

IMAGING

Patient Name	DOB	MR#
Hector Fernandez	*09/06/19XX*	*41219*
Allergies	**Height (cm)**	**Admission Weight (kg)**
Penicillin (hives)	*175*	*86.4*

Imaging Report

DESCRIPTION: Portable x-ray for shortness of breath

EXAM: Portable AP chest

REASON FOR EXAM: Shortness of breath

COMPARISON EXAM: None available

TECHNIQUE: 1.5 mAS @ 125 kvp

DISCUSSION: Dictation pending

IMPRESSION: Dictation pending

LEVEL UP

The iPad reads, "The iPad is at Level 1."

SCANNER

Use this to scan available QR Codes.

EXIT

The iPad reads, "Are you sure you want to exit? All data will be lost."

- If "No" is selected, the iPad will return to the tabbed content.

- If "Yes" is selected, the iPad will let the student(s) exit and prompt them to complete an embedded 3-5 minute survey.

STATE 1

PATIENT ASSESSMENT

- Patient Overview

    o Patient is on a NRB when students enter the room. Hector is tired and very irritated with his health. He is sick of being sick and will answer questions, but is not that thrilled about it. He is also wanting the NRB mask off. Students will perform a complete pulmonary exam, obtain a focused health history and wean O2.

- Expected Student Behaviors

    o Perform appropriate hand hygiene and infection control

    o Introduce themselves and verify the patient (can scan **QR Code: Patient ID**)

    o Accurately obtain vital signs and interpret for an adult patient

    ▪ Students must enter correct vitals in the iPad to advance.

    - The following vitals are used: HR = 78 (within 4 either way), RR = 24 (within 3 either way), BP 128/84 (within 5 either way), Temp = 37.1 (no limit), Sat = 100 % (no limit)

    - There is a place for students to document whether on RA or O2 applied as well as the device, FiO2 and/or liter flow being used. This is not tied to any programming.

    o Perform a complete pulmonary exam

    ▪ Inspection – Students will not find any abnormalities in the chest exam. When the extremities are evaluated, pitting edema and Right-lower extremity cellulitis is found. (Scan **QR Code: Right Leg** & **QR Code: Left Leg**)

    ▪ Palpation – Students will not find any abnormalities in the chest exam.

    ▪ Percussion – Students will not find any abnormalities in the chest exam.

    ▪ Auscultation – Scan **QR Code: Chest** 🔊

    - There are ten QR codes to apply to the chest – see above Chest QR Code chart for locations

- Students will hear the following breath sounds:
  - Anterior 2, Anterior 3, Posterior 0, & Posterior 1 = normal/clear
  - Anterior 6, Anterior 7, Posterior 4, Posterior 5, Right Axillary, & Left Axillary = fine crackles

- Perform a focused health history

  - As students perform the pulmonary exam, they should simultaneously collect the patient's history

  - Questioning may continue into State 2 of the scenario

  - Questions can include:

    - How are you feeling/how is your breathing right now?

    - Have you ever been a smoker?

    - Do you have any lung diseases like asthma or emphysema?

    - Do you take any medications for your breathing?

    - Do you use any machines to help you breathe while you sleep?

    - Your legs look pretty puffy, how long have they been this way?

- Recognize and respond to abnormal findings

- Demonstrate appropriate communication with the patient

- Technician Prompts

  - Patient is tired and very irritated with his health. He is almost defeated. He is sick of being sick and will answer questions, but is not that thrilled about it. He is constantly pulling at the NRB mask and wants it off.

  - Patient response can include:

    - "Do I really need this mask? Can't you take it off now?"

    - "I'm so sick of being in the hospital."

    - "I'm never going to get better…"

  - When asked patient history questions, responses can include:

- How are you feeling/how is your breathing right now?

    o Answer: "Better than before."

- Have you ever been a smoker?

    o Answer: "Of course! Who wasn't?"

    o Students should probe further: If asked, he states he started smoking when he was about 14 years old and quit when he was 56 years old – although, he still likes to have an occasional cigar. He smoked 1-2 packs per day.

- Do you have any lung diseases like asthma or emphysema?

    o Answer: "They tell me I have that COPD thing."

- Do you take any medications for your breathing?

    o Answer: "Yeah. I take a couple puffer things."

    o Students should probe further: If asked, he takes:

        ▪ 2 puffs Albuterol as needed – He states he takes it a few times every day when he is short of breath.

        ▪ 1 puff Spiriva in the morning

- Do you use any machines to help you breathe while you sleep?

    o Answer: "I have one of those CPAK things at night."

    o Student should probe further: If asked, he uses ARISE Homecare and his settings are +8 cwp. He does not have anyone that can bring his machine to the hospital. He is OK with using the hospitals machine.

- Your legs look pretty puffy, how long have they been this way?

    o Answer: "It seems like they've been this way for years. The right one is always infected."

    o When students wean the O2, gradually change SpO2 to 95%.

- Facilitator Questions

- o Analyze the vital signs: are they within normal limits?

- o Analyze the findings from the pulmonary exam: do you have any concerns?

- o Analyze the patient history: do you have any concerns?

- o Based on your finding from both the pulmonary exam and focused health history, what would you like to do now and why?

- Tabbed iPad Prompts and Content

LEVEL 1/2

- When the Level 1 tab is tapped, the iPad reads, "The iPad is at Level 1."

- The Level 1 tab will automatically change to a Level 2 tab (students are not prompted about this) when:

  - o Student(s) enters vital signs correctly

    AND

  - o Student(s) scans ANY **QR Code: Chest** 🔊

- When the Level 2 tab is tapped, the iPad reads, "The iPad is at Level 2."

STATE 2

REASSESSMENT & PROVIDER NOTIFICATION

- Patient Overview

  - The patient is much happier with a nasal cannula device. However, he is done talking and just wants to rest. Students need to reassess SaO2 to ensure adequate oxygenation. Then, they should call the provider to recommend Spiriva and Albuterol inhalers as well as a CPAP at night for OSA using SBAR format. This can be done as a phone call or face-to-face with the technician, facilitator, or designee playing the provider role. Students should also document per facility guidelines.

- Expected Student Behaviors

  - Reassess patient after weaning/changing O2 device

    - When vitals are rechecked, all are essentially the same except the Sat = 95%.

    - Vitals may be entered on the iPad again at this time, but they are not tied to iPad programming.

    - If students listen to breath sounds again, nothing has changed from State 1.

  - Demonstrate appropriate communication with the provider

    - Students may scan **QR Code: SBAR**

  - Document accurately

- Technician Prompts

  - Nothing is needed from the patient anymore.

  - If playing the role of the Provider, ask appropriate questions related to the information being relayed by the student.

    - Students should update the provider using SBAR format.

- Facilitator Questions

  - Why is it necessary to reassess the patient?

- Describe how SBAR communication improves the interprofessional communication process.

LEVEL 2/EXIT

- When the Level 2 tab is tapped, the iPad displays a plaque the reads, "Have you updated the provider?"

  - If "No," the iPad reads, "You must update the provider before exiting."

  - If "Yes," the iPad reads, "Scenario objectives have been met. Are you sure you want to exit the game?"

    - If "No" is selected, the iPad will return to the tabbed content.

    - If "Yes" is selected, the iPad will let the student(s) exit and prompt them to complete an embedded 3-5 minute survey.

DEBRIEF

Nothing needed from the iPad.

QUESTIONS

1. How did you feel this scenario went?

2. What were the main issues you had to deal with when caring for Hector?

3. Review understanding of learning objective: Demonstrate proper infection control.

    a. What infection control issues did you encounter with Hector?

    b. What about Hector increases his risk for infections?

4. Review understanding of learning objective: Obtain accurate vital signs.

    a. What, if any, challenges did you encounter in obtaining Hector's vitals?

5. Review understanding of learning objective: Evaluate oxygenation status and adjust oxygen as necessary.

    a. Is Hector's oxygenation status normal or abnormal and why?

    b. Is this what you would expect in a patient with congestive heart failure? Why or why not?

6. Review understanding of learning objective: Perform a complete pulmonary exam.

    a. What concerns did you find during your physical assessment and evaluation?

    b. Is this what you would expect in a patient with congestive heart failure? Why or why not?

7. Review understanding of learning objective: Obtain a focused health history.

    a. What pieces of data were significant in Hector's health history?

    b. If you could "do over" any part of getting Hector's history, what would it be and why?

8. Review understanding of learning objective: Evaluate patient data.

    a. What abnormal findings did you find in the vital signs and/or physical assessment? How did you respond to these findings?

9. Review understanding of learning objective: Recommend appropriate treatment(s) to provider.

10. Review understanding of learning objective: Effectively communicate with the patient and interprofessional team.

   a. Were the communication techniques you used with Hector effective? Why or Why not?

   b. If Hector was unable to speak English, how would you have adapted you communication techniques?

   c. If you could "do over," how would you change your communication with Hector?

11. Review understanding of learning objective: Document accurately.

   a. What is important to document in your assessments and interventions?

12. Summary/Take Away Points

   a. "Today you cared for a Hispanic patient who was experiencing an exacerbation of his known congestive heart failure. What is one thing you learned from participating in this scenario that you will take with you into your respiratory therapy practice?" (Each student must share something different from what the others' share.)

Note: Debriefing technique is based on INASCL Standard for Debriefing and NLN Theory Based Debriefing by Dreifuerst.

SURVEY

Print this page and provide to students.

Students, please complete a brief (2-3 minute) survey regarding your experience with this ARISE simulation. There are two options:

1. Use QR Code: Survey

    a. Note: You will need to download a QR Code reader/scanner onto your own device (smartphone or tablet). There are multiple free scanner apps available for both Android and Apple devices from the app store.

    b. This QR Code will not work in the ARIS app.

SURVEY

2. Copy and paste the following survey link into your browser.

    a. https://ircvtc.co1.qualtrics.com/SE/?SID=SV_6Mwfv98ShBfRnBX

CREDITS

BiPAP Protocool adapted from RES Non-Invasive Positive Pressure Ventilation Guideline from

http://www.aast.org/Assets/5e4309dd-c952-4a56-b2c9-7060670a7573/635376719195570000/non-invasive-positive-pressure-ventilation-guideline-3-26-14-june-2014-pdf and BiPAP/CPAP Protocol from

http://desmondallen.com/Parent/Archived%20Articles/Advance%20RCP/BiPAP%20Protocols.htm

CXR image from: https://commons.wikimedia.org/wiki/File:Pulmonary_oedema.jpg

Lung sounds used with permission from Thinklabs Medical, LLC, Centennial, CO at

www.thinklabs.com

Medication information from National Library of Medicine: Daily Med at

http://dailymed.nlm.nih.gov/dailymed/

Pitting Edema picture from https://en.wikipedia.org/wiki/Heart_failure

Pitting Edema picture with cellulitis from

https://commons.wikimedia.org/wiki/File:Pitting_Edema2008.jpg

REFERENCES

American Heart Association (2016). Get with the Guidelines: Heart Failure. Retrieved from

http://www.heart.org/HEARTORG/Professional/GetWithTheGuidelinesHFStroke/Get-With-The-Guidelines---HFStroke_UCM_001099_SubHomePage.jsp

Cleveland Clinic. (2017). B-type Natriuretic Peptide (BNP) Blood Test. Retrieved from

https://my.clevelandclinic.org/health/articles/b-type-natriuretic-peptide-bnp-bloodtest

Colucci, MD, W. (April 2017). Treatment of Acute Decompensated Heart Failure: Components of Therapy. Retrieved from https://www.uptodate.com/contents/treatment-of-acute-decompensated-heart-failure-components-of-therapy?source=search_result&search=chf&selectedTitle=3~150

Fonarow, MD, G. C. & Weber, DO, J.E. (2004). Rapid Clinical Assessment of Hemodynamic Profiles and Targeted Treatment of Patients with Acutely Decompensated Heart Failure. Clinical Cardiology, 27 (Supplement V). Retrieved from https://deepblue.lib.umich.edu/bitstream/handle/2027.42/107535/4960271702_ftp.pdf?sequence=1

Hyzy, MD, R. (April 2017). Noninvasive Ventilation in Acute Respiratory Failure in Adults. Retrieved from https://www.uptodate.com/contents/noninvasive-ventilation-in-acute-respiratory-failure-in-adults?source=search_result&search=noninvasive%20positive%20pressure%20ventilation&selectedTitle=1~150

Joint Commission (2016). Specifications Manual for Joint Commission National Quality Measures. Downloaded from: https://manual.jointcommission.org/releases/TJC2016A/AdvancedCertificationHeartFailure.html

Mayo Foundation for Medical Education and Research. (1995-2017). Test ID: CK. Retrieved
from http://www.mayomedicallaboratories.com/test-
catalog/Clinical+and+Interpretive/8336

Nohria, A., Lewis, E., & Stevenson, L. (2002). Medical Management of Advanced Heart Failure.
Journal of the American Medical Association, 287 (5), 628-640. Retrieved from
http://jamanetwork.com/journals/jama/fullarticle/194604

Stella, L. (2013). Understanding Measures for Heart Failure Treatment, American Nurse Today,
8(2). Retrieved from https://americannursetoday.com/understanding-core-measures-
for-heart-failure-treatment/

Tleyjeh, MD, I., Burdetter, MD, S., & Baddour, MD, L. Cellulitis. Anitmicrobe. Retrieved from
http://www.antimicrobe.org/e1.asp

WebMD, Inc. (2017). Hemoglobin A1c (HbA1c). Retrieved from
http://www.emedicinehealth.com/hemoglobin_a1c_hba1c/page2_em.htm#what_are_n
ormal_levels_of_hba1c_hemoglobin_a1c_chart

Yancy CW, Jessup M, Bozkurt B, Butler J, Casey DE Jr, Drazner MH, Fonarow GC, Geraci SA,
Horwich T, Januzzi JL, Johnson MR, Kasper EK, Levy WC, Masoudi FA, McBride PE,
McMurray JJV, Mitchell JE, PetersonPN, Riegel B, Sam F, Stevenson LW, Tang WHW,
Tsai EJ, Wilkoff BL. (2013) ACCF/AHA guideline for the management of heart failure: a
report of the American College of Cardiology Foundation/American Heart Association
Task Force on Practice Guidelines. Circulation. 2013;128:e240–e327. DOI:
10.1161/CIR.0b013e31829e8776

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