WOUND MANAGEMENT

Estimated Time: 45 minutes • Debriefing Time: 60 minutes

Scan to Begin

Patient Name: Clint D. Fullerton

SCENARIO OVERVIEW

Clint D. Fullerton is a 67-year-old male who was admitted to the medical/surgical floor 2 days ago for treatment of a left ankle ulceration and is on contact precautions for CDiff. He has a past medical history of diabetes, venous insufficiency and self-care deficits. He has a PICC line in the left brachial for Vancomycin, but the Vancomycin was held last night secondary to an elevated peak level. Last night he had difficulty breathing so labs were ordered, Lasix 40 mg was given and RT was consulted. He refused BiPAP despite multiple attempts by RT. Upon assessment, the student(s) discover the patient is significantly worse secondary to renal failure and fluid overload. When the MD is notified, new orders for a chest x-ray, ABG's and to transfer to ICU are given.

LEARNING OBJECTIVES

1. Demonstrate proper infection control
2. Recognize and respond to abnormal findings
3. Correctly interpret laboratory and diagnostic test results
4. Document accurately
5. Demonstrate appropriate therapeutic and interprofessional communication

CURRICULUM MAPPING

WTCS NURSING PROGRAM OUTCOMES

- Demonstrate appropriate written, verbal, and nonverbal communication in a variety of clinical contexts
- Provide patient centered care by utilizing the nursing process across diverse populations and health care settings
- Minimize risk of harm to patients, members of the healthcare team and self through safe individual performance and participation in system effectiveness
- Integrate social, mathematical, and physical sciences, pharmacology, and pathophysiology in clinical decision making
- Lead the multidisciplinary health care team to provide effective patient care throughout the lifespan

NURSING FUNDAMENTALS

- Use appropriate communication techniques
- Use the nursing process
- Adapt nursing practice to meet the needs of diverse patients in a variety of settings
- Provide nursing care for patients with integumentary disorders
- Provide nursing care for patients with infection
- Maintain a safe, effective care environment for adults of all ages

- Provide nursing care for patients with alterations in oxygenation

COMPLEX HEALTH ALTERATIONS 1

- Evaluate nursing care for patients with other alterations in the cardiovascular system
- Evaluate nursing care for patients with alterations in the endocrine system
- Evaluate nursing care for patients with acute alterations in the respiratory system
- Evaluate nursing care for patients with alterations in fluid and electrolyte balance
- Evaluate nursing care for patients with alterations in acid-base balance

COMPLEX HEALTH ALTERATIONS 2

- Evaluate nursing care for patients with alterations in the renal/urinary system
- Evaluate nursing care for patients with critical/life threatening situations

SIMULATION LEARNING ENVIRONMENT & SET-UP

ENVIRONMENT

Inside room: Patient lying in bed, IV pump, BiPAP machine and mask (if available)

Inside or outside room: Modified Contact Precautions cart and sink

Outside room: Computer or form(s) for documentation

PATIENT PROFILE

Name: Clint D. Fullerton

DOB: 02/26/19XX

Age: 67

MR#: 0508

Gender: Male

Height: 173 cm (68 inches)

Weight: 65 kg (143 lbs)

Code Status: Full code

Primary Language spoken: English

Current Medications: None

Allergies: None

Admitting Diagnosis: wound, open, ankle (S91.00)

Medical History: Diabetes Mellitus (E11.9), HTN (I87.33), Venous Insufficiency (I87.2)

EQUIPMENT/SUPPLIES/SETTINGS

Patient

- Hospital gown
- Pad, chux placed under patient or adult brief on
- No moulage
- ID band present with QR code
- IV in left hand
- Double PICC in left arm (set up for blood draw and medication administration)
- Nasal cannula @ 4lpm

Monitor Settings

- Vitals: BP 110/54, P 118, RR 32, O2 86% on 4lpm nasal cannula, T 38.2C (100.8)

Supplies

- General
    - Phone
    - Modified or CDiff precaution door sign
    - Contact precaution cart/supplies
    - Various O2 delivery devices (simple mask, non-rebreather, etc...)
    - I & O monitoring equipment/forms
- Medications
    - None required, but all on the MAR should be available
    - IV Pump
    - 0.9% NaCl running at TKO (1000ml bag)

QR CODES

START	PATIENT	REPORT	PATIENT ID
CHEST	LEG	IV	PICC

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:
    - 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.
    - 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.
    - Describe how a QR Code sound will work in the scenario. Show them how to use the ARISE "stethoscope" and the symbol on the QR Code that signifies when a QR Code is audio 🔊. Example: **QR Code: Chest** 🔊
    - 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.
    - 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...
- Discuss the simulation "Learning Objective(s)" (on iPad) as well as any other Prebrief materials
- Get "Report" on iPad
    - Possible Facilitator Questions
        - What is clinically significant in this shift-to-shift report?
        - What focused assessments to you plan to complete based on report?

        - What are your priorities for this patient?

- Play the "Patient" video (on iPad)
    - Possible Facilitator Questions
        - How will you respond therapeutically to Mr. Fullerton's concerns?
- 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.
    - You should give student some time (5 minutes) to review this content now, prior to entering the patient's room.
- Now, students can enter the room and begin the next state of the simulation.

HISTORY & PHYSICAL

Name: Clint D. Fullerton

MR#: 0508
DOB: 02/26/19XX

DATE OF ADMISSION: two days ago

CHIEF COMPLAINT: Ulceration Left Lower leg

HISTORY OF PRESENT ILLNESS: This is a 67-year-old male who resides at a local skilled nursing facility due to self-care deficits. He has a stage 2 ulceration on his left medial lower leg superior to ankle. He has been previously treated by Dr. Paulson who ordered multiple rounds of antibiotic treatment with no successful results. He is a brittle diabetic with his last HgbA1c being 9.2%.

PAST MEDICAL HISTORY: History of diabetes, HTN, venous insufficiency.

MEDICATIONS:

- Lisinopril 20mg PO daily
- Lantus insulin 0.2 units/kg/daily subcutaneously
- Novolin R insulin sliding scale subcutaneously with meals

ALLERGIES: None

SOCIAL HISTORY: Divorced; No children; Lived in LTC for 5 years. History of extensive alcohol use prior to LTC admission. Refuses to quantify current use but states LTC staff will take it away if they find it.

FAMILY HISTORY: Father - died in MVA at age 59. Mother – living, diabetic, age 91. Brothers – 2, status unknown.

REVIEW OF SYSTEMS:
Obtained From patient General: Current state of health described as fine.

Integument: Denies itching, dryness, rashes, pigmentation changes. Denies recent changes in birthmarks, moles, nails, or hair. Describes a sore above left ankle that has been present for several months. He has taken several antibiotics but it won't heal.

Lymph Nodes: Denies enlargement or tenderness

Head: Denies injury, change in level of consciousness, or headaches.

Eyes: Denies change in vision. Denies diplopia, eye pain, eye redness/inflammation. Denies glaucoma or cataracts. Wears glasses.

Ears: Denies hearing loss, change in acuity, tinnitus, vertigo, infection, or ear pain.

Nose: Denies sinusitis, nasal discharge or obstruction, post nasal drip, or epistaxis.

Mouth: Denies bleeding gums, mouth pain, oral cavity sores or growths, difficulty swallowing, sore throat, or hoarseness.

Respiratory: Denies excessive snoring, orthopnea, hemoptysis, productive cough, shortness of breath or wheezing. Denies history of pulmonary embolism, sleep apnea, bronchitis, pneumonia, recurrent infections or TB exposure. Denies occupational exposure to asbestosis or pneumoconiosis.

Cardiovascular: Denies chest pain or pressure. Denies palpitations or orthopnea. No history of murmur or valve disorder. History of hypertension for which he takes lisinopril.

Peripheral Vascular: Denies claudication, leg cramps, varicose veins, phlebitis, cramping. History of venous insufficiency and paresthesias in lower legs. States my legs get swollen every now and then, but it gets better when I sit in my recliner and put them up, and it used to feel like pins and needles in my feet but now I can't really feel my toes anymore.

Gastrointestinal: Denies change in appetite, weight gain/loss, abdominal pain, constipation, diarrhea, nausea or vomiting. Denies bloody or tarry stools. Denies change in bowel habits. Bowel movements occurring every 1-2 days. Denies history of colon polyps, hemorrhoids, liver problems, jaundice, or hepatitis. Denies symptoms of GERD.

Genitourinary: Denies dysuria, hematuria, hesitancy or change in stream. Denies history of infections or stone. Denies incontinence or nocturia.

Males: Denies history of hernias, testicular masses, prostatitis, STDs, or BPH. Denies current testicular pain, penile discharge/lesions or sexual dysfunction.

Musculoskeletal: Denies joint pain or stiffness. Normal ROM. Denies myalgias. No history of gout, osteopenia/ osteoporosis or osteoarthritis. Denies back pain. Denies history of compression fractures, broken bones, falls or amputations.

Hematopoietic: Denies easy bruising or bleeding. Denies anemia or prolonged bleeding. Denies history of previous transfusions or blood dyscrasias.

Endocrine: Denies polydipsia or polyuria. Denies heat or cold intolerance. Denies tremors. Denies history of thyroid disorder. History of diabetes for which he is taking Lantus and sliding scale regular insulin. Last HgbA1c was 9.2%.

Nervous System: Denies dizziness, syncope, vertigo, sensory or motor disturbances, tremor or weakness.

Psychiatric: Denies depression, anxiety, or panic attacks. Denies memory concerns. Denies history of mania. No recent personality changes. No history of previous psychiatric care.

LABORATORY AND DIAGNOSTIC STUDIES: Pending

ASSESSMENT: Ulceration, left lower leg.

RECOMMENDATIONS/PLAN: Admit to med/surg floor. Orders will include wound culture, wound nurse consult, and dietitian consult. I discussed with him the exact nature of the wound and his risk factors including diabetes management and personal hygiene. Patient will be continued on his medication regiment from long term care until his diabetic status can be reviewed. Wound treatment regimen will be determined once culture results are back. All questions were answered and he agreed with treatment plan.

Electronically Signed – Dr. Robert Bennett

ORDERS

Orders

Date	Time	Order
Admit	1800	Admit to Med Surg
		CBC with differential, Stool and Wound culture STAT
		Diabetic Diet
		Lisinopril 20mg PO daily
		Ibuprofen 200mg PO 1-2 tablets Q 4-6 PRN for pain or fever
		Saline lock flush 10mL IVP PRN
		0.9% Normal Saline IV at 75mL/hr
		Call if CDiff positive
		Lantus insulin 0.2 units/kg/daily subcutaneously
		Novolin R insulin Sliding Scale subcutaneously with meals:

Fingerstick glucose level (mg/dL)	Novolin R (units)
150-200	4
201-250	8
251-300	12
301-350	16
351-400	20

		Dress L ankle wound with Tegaderm and compressive ACE wrap and consult wound care nurse. ----------Dr. Robert Bennett
Yesterday	0800	Chem 7 STAT
		Vancomycin 25 mg/kg IVPB over 1 hour x 1 dose STAT then
		Vancomycin 15 mg/kg IVPB over 1 hour every 12 hours
		PICC line
		Heparin 100IU/mL flush 10mL IVP PRN
		Peak Vancomycin levels x 1, trough Vancomycin levels daily
		Contact precautions ---------Dr. Robert Bennett

Yesterday	2350	CBC, Chem 7 & eGFR STAT
		Consult Nephrology
		Hold Vancomycin. Call with trough result.
		Consult Infectious Disease
		Monitor I&O
		Change NS IV to TKO
		Lasix 40mg IVP STAT
		O2 to keep Sat >90% & RT Consult ---------- ----------Dr. Robert Bennett

Continue >

MAR

Facilitator Note: Students may click on each underlined medication for a hyperlink with medication information provided by National Library of Medicine.

MAR

Patient Name: Clint Fullerton
DOB:02/26/19XX Weight(kg):65
MR#: 0508
Provider: Dr. Robert Bennett
Allergies: None

Order	Sch. Time	Dose
Lisinopril 20mg PO daily	Last given 0730	20mg
Lantus insulin 13 units daily subcutaneously	Last given 0730	13 units
0.9% Normal Saline IV at 75 mL/hour	Last bag 0330	
0.9% Normal Saline IV at 75 mL/hour		
Ibuprofen 200 mg PO 1-2 tablets Q 4-6 PRN for pain or fever	Last given 0730	400mg
Ibuprofen 200 mg PO 1-2 tablets Q 4-6 PRN for pain or fever		
Saline lock flush 10mL IVP PRN		

Novolin R insulin Sliding Scale subcutaneously with meals PRN: Fingerstick glucose level (mg/dL) / Novolin R (units) 150-200 / 4 201-250 / 8 251-300 / 12 301-350 / 16 351-400 / 20	Last given 0730	8 units
Novolin R insulin Sliding Scale subcutaneously with meals PRN:		
Vancomycin 15 mg/kg IVPB over 1 hour Q12 hours	Given ystrdy 2030	975mg
Vancomycin 15 mg/kg IVPB over 1 hour Q12 hours	HOLD	
Heparin 100 IU/mL flush, 10 mL IVP PRN	Given ystrdy 2140	10mL
Heparin 100 IU/mL flush, 10 mL IVP PRN		
Lasix 40 mg IV STAT	Given today 0015	40mg

Continue >

VITALS

Today – 10 minutes ago

BP 102/62
P 114
RR 26
O2 91% on 4lpm
T 38.2C (100.8)
Pain: 3/10

PROGRESS NOTES

Progress Notes

Patient Name: Clint D. Fullerton
DOB:02/26/19XX MR#: 0508

Progress Notes

Date & Time	Note
Yesterday 0945	Wound Care Nurse Initial Consult: Here to see Mr. Fullerton at the request of Dr. Bennett secondary to an ulceration of the left lower extremity. Patient agrees to let me assess the wound although he states, "It has been there for a while. I don't know what you think you're going to do about it." Assessment: This venous ulcer is located on the medial malleus of the left lower extremity with a dimension of approximately 8cm x 5cm x 1.5cm. A moderate amount of serous exudate without odor is noted on wound dressing. It is unstageable secondary to yellow slough and brown/tan eschar that covers most of the wound base. There is some granulation and epithelium around the wound edges from approximately 1300 to 1000. Wound edges are irregular with macerated periwound area and dry, flaky skin present. Patient states no pain during assessment. Culture already sent for analysis. Recommendation: I agree with MD ordered dressing choice and will await culture results. ---------- Maryann Klement, RN, WCC
Yesterday 1430	C.Diff positive. Vancomycin started. Full dictation to follow. ---------- Dr. Robert Bennett

Continue >

LAB-DIAGNOSTICS

Labs-Diagnostics

Patient Name: Clint D. Fullerton **DOB: 02/26/19XX** **MR#: 0508**

Blood Glucose

Date	Y-day	Today		Units	Reference Range
Time	AM	AM			
Glucose	210	208		mg/dL	Fasting 70-105

Chem 7

Date	Y-day	Today		Units	Reference Range
Time	AM	0030			
Glucose	210	115		mg/dL	Fasting 70-105
BUN	28	31		mg/dL	10-25
Creatinine	1.4	1.7		mg/dL	F: 0.4-1.4/M: 0.5-1.5
Sodium	156	146		mEq/L	135-145
Potassium	3.8	3.9		mEq/L	3.5-5.3
Chloride	98	101		mEq/L	98-108
Carbon Dioxide	26	27		mEq/L	23-27

CBC with Differential

Date	Y-day	Today		Units	Reference Range
Time	AM	0030			
WBC	13.2	11.4		$x10^3uL$	4.5-11
RBC	3.9	4.2		$x10^6uL$	F: 4.2-5.4/M: 4.6-6.2
HgB	12.1	12.6		g/dL	F:13.0-15.0/M:14.0-17.0
HCT	38.1	38.7		%	F: 38-47/M: 42-52
MCV	85.3	84.6		fL	80-90
MCH	27.8	28.2		pg	27-32
MCHC	33.6	33.9		g/dL	32-36
RDW	13.2	13.0		%	11.5-14.5
Platelet	204	196		$x10^9uL$	150-450
MPV	7.8	7.2		fL	6.0-12.0
Neutro	74			%	40-70
Lymph	21.5			%	22-40
Mono	2.3			%	1-10
Eos	1.4			%	1-7
Baso	0.8			%	0-2

Wound Culture

Date	Y-day	Today		Units	Reference Range
Time	AM	AM			
Bacterial Growth	0	0			No growth

Stool Culture

Date	Y-day			Units	Reference Range
Time	AM				
Clostridium difficile	Positive				Negative

Vancomycin Peak Level

Date	Y-day			Units	Reference Range
Time	2315				
Vancomycin	76			mcg/mL	15-20

eGFR

Date	Today			Units	Reference Range
Time	0030				
eGFR	31			mL/min	90-120

Continue ›

NURSING | LEVEL: 4

IMAGING

No reports available.

LEVEL UP

Option not available yet.

SCANNER

STATE 1

PATIENT ASSESSMENT

- Patient Overview
    - Patient is sarcastic and gruff. It is apparent that he does not care for medical personnel or medical facilities. He is very short of breath this morning and only speaking in one or two word sentences. He continues to refuse BiPAP.
- Expected Student Behaviors
    - Perform hand hygiene and appropriate infection control
    - Introduce themselves
    - Verify patient
    - Communicate therapeutically
    - Perform focused respiratory assessment: crackles (**Scan QR Code: Chest**) (After the **QR Code: Chest** is scanned; this automatically causes the "Level Up" option to appear.)
    - May assess leg wound: (**Scan QR Code: Leg**)
    - May assess IV Site (**Scan: QR Code: IV**) and/or PICC Site (**Scan QR Code: PICC**)
    - Respond to abnormal findings and intervene appropriately: increase O2 (nasal cannula from 4 lpm to 6 lpm) and put HOB up
    - Analyze the lab/diagnostic results
    - Communicate with the provider using SBAR format
- Technician Prompts
    - Patient is a quite short of breath. When he does speak, it is in short one to two word statements. He is gruff.
    - Patient responses can include:
        - "I can't breathe."
        - "Help me."
        - "Am I dying?"

        - "I will not **gasp** wear that **gasp** machine!"
    - When the O2 is increased to 6 lpm, change the monitor to reflect an increased SpO2, but do not go above 91%.
    - When the provider is called (technician or facilitator is playing this role):
        - Student(s) should communicate using SBAR format.
            - Ensure assessment findings and the vitals they provide are accurate.
            - If lab results are not provided, ask student for them.
        - Give student(s) the following orders:
            - STAT portable chest x-ray, ABG's and Blood Cultures x 2
            - Place on non-rebreather mask
            - Transfer to ICU
            - Consult Pulmonology
        - Student(s) should repeat orders back using closed-loop communication.
- Possible Facilitator Questions
    - What infection control measures are required based on Mr. Fullerton's condition?
    - Analyze the vital signs: do you have any concerns?
    - Analyze your physical assessment findings: do you have any concerns?
    - What do you think is the underlying pathophysiology causing Mr. Fullerton's current state?
    - How will you prioritize your actions based on your findings? What is most important to do first and why?
    - In report, the nurse mentioned that Mr. Fullerton was incontinent. How can you improve I&O monitoring?
    - Why was the Vancomycin held?
    - Why is an elevated peak Vancomycin level concerning and how does it affect the nursing management of this patient?

  - It is important to do a focused wound assessment at this time? Why or why not?
  - How does the SBAR format facilitate interprofessional communication?

- Tabbed iPad Prompts & Content
  - Leveling Up to State 2: After the **QR Code: Chest** is scanned, the tabbed Level Up option will become available (students are not prompted about this).
  - When the Level Up tab is tapped, the tabbed content will read, "Have you called the provider?"
    - If "No" is selected, the iPad will read, "You need to call the provider to advance to Level 2."
    - If "Yes" is selected, the iPad will read, "The iPad is now set to Level 2. You have new orders to review."

LEVEL UP

- The **QR Code: Chest** must be scanned for the Level up option to appear.
- When the Level Up tab is tapped, the tabbed content will read, "Have you called the provider?"
  - If "No" is selected, the iPad will read, "You need to call the provider to advance to Level 2."
  - If "Yes" is selected, the iPad will read, "The iPad is now set to Level 2. You have new orders to review."

STATE 2

INTERVENTIONS & REASSESSMENT

- Patient Overview
    - Patient is somewhat less short of breath after the O2 is increased. However, he is anxious and scared about his current condition and the transfer to ICU.
- Expected Student Behaviors
    - Perform appropriate infection control
    - Communicate therapeutically
    - Apply non-rebreather mask
    - Notify radiology and laboratory about new orders and confirm completion
    - Interpret ABG's and review chest x-ray results
    - Notify ICU about impending patient transfer and provide handoff report to ICU nurse.
    - Call for pulmonology consult
- Technician Prompts
    - Patient is still short of breath, but after non-rebreather applied, it is a little better. He is less gruff and more worried.
    - Patient responses can include:
        - "I can't breathe."
        - "I don't want a mask. I feel like I'm suffocating."
        - "Am I going to die?"
        - "I'm scared."
    - When radiology and laboratory are called, ensure student(s) gives the correct patient information, orders, etc...
    - When ICU is notified of the patient transfer:
        - Student(s) should give the correct patient information and inform them of the pulmonology consult.
    - When the ICU nurse is called:

        - Student(s) should provide handoff report.
            - Ensure assessment findings and vitals are accurately communicated.
            - If students don't provide lab results including ABG's and x-ray results, ask for them.

- Possible Facilitator Questions
    - How will you prioritize the new orders you've received?
    - How will you communicate new orders/consults appropriately?
    - After reassessing the patient, do you have any concerns? If so, how will you address them?
    - How often should the patient be reassessed/monitored? Why?
    - How will you address Mr. Fullerton's concerns therapeutically?
    - Describe how you will maintain proper infection control during the transfer to ICU?
    - Interpret the ABG results: how will the results affect the nursing management of this patient?
    - How does the SBAR format facilitate nurse-to-nurse report?
- Tabbed iPad Prompts & Content
    - Orders
        - When the Orders tab is tapped student(s) see new orders.
            - The orders include:
                - STAT portable chest x-ray, ABG's and Blood Cultures x 2
                - Place on NRB mask now
                - Transfer to ICU
                - Consult Pulmonology
    - Lab/Diagnostics
        - When the Lab/Diagnostics tab is tapped, the iPad will read, "Has the ABG been drawn?"

- If "No" is selected, the iPad will read, "An ABG needs to be drawn per the new provider orders."
- If "Yes" is selected, the iPad will read, "ABG results will be available soon."
- When tapped after this, the Lab/Diagnostics tabbed content will change to the content below.

- Imaging
  - When the Imaging tab is tapped, the iPad will read, "Has an x-ray been taken?"
    - If "No" is selected, the iPad will read, "An x-ray needs to be taken per the new provider orders."
    - If "Yes" is selected, the iPad will read, "X-ray results will be available soon."
    - When tapped after this, the Imaging tabbed content will change to the content below.
- Level Up/Exit
  - The Level Up tab changes to an Exit tab after both the Lab/Diagnostics and Imaging results have been reviewed by the student(s).
  - When the Exit tab is tapped, the iPad will read, "Have you updated the provider?"
    - If "No" is selected, the iPad will read, "You must update the provider before exiting."
    - If "Yes" is selected, the iPad will read, "Are you sure you have completed the simulation? When you exit, all iPad progress 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.

ORDERS

Orders

Date	Time	Order
Admit	1800	Admit to Med Surg
		CBC with differential, Stool and Wound culture STAT
		Diabetic Diet
		Lisinopril 20mg PO daily
		Ibuprofen 200mg PO 1-2 tablets Q 4-6 PRN for pain or fever
		Saline lock flush 10mL IVP PRN
		0.9% Normal Saline IV at 75mL/hr
		Call if CDiff positive
		Lantus insulin 0.2 units/kg/daily subcutaneously
		Novolin R insulin Sliding Scale subcutaneously with meals:

Fingerstick glucose level (mg/dL)	Novolin R (units)
150-200	4
201-250	8
251-300	12
301-350	16
351-400	20

		Dress L ankle wound with Tegaderm and compressive ACE wrap and consult wound care nurse. ----------Dr. Robert Bennett
Yesterday	0800	Chem 7 STAT
		Vancomycin 25 mg/kg IVPB over 1 hour x 1 dose STAT then
		Vancomycin 15 mg/kg IVPB over 1 hour every 12 hours
		PICC line
		Heparin 100IU/mL flush 10mL IVP PRN
		Peak Vancomycin levels x 1, trough Vancomycin levels daily
		Contact precautions ---------Dr. Robert Bennett

Today		CBC, Chem 7 & eGFR STAT
		Consult Nephrology
		Hold Vancomycin. Call with trough result.
		Consult Infectious Disease
		Monitor I&O
		Change NS IV to TKO
		Lasix 40mg IVP STAT
		O2 to keep Sat >90% & RT Consult ---------- ----------Dr. Robert Bennett
Today	Now	STAT portable chest x-ray, ABG's and Blood Cultures x 2
		Place on NRB mask now
		Transfer to ICU
		Consult Pulmonology -------- Dr. Robert Bennett

Continue >

LABS-DIAGNOSTICS

Labs-Diagnostics with ABG

Patient Name: Clint D. Fullerton **DOB: 02/26/19XX** **MR#: 0508**

Blood Glucose

Date	Y-day	Today		Units	Reference Range
Time	AM	AM			
Glucose	210	208		mg/dL	Fasting 70-105

Chem 7

Date	Y-day	Today		Units	Reference Range
Time	AM	0030			
Glucose	210	115		mg/dL	Fasting 70-105
BUN	28	31		mg/dL	10-25
Creatinine	1.4	1.7		mg/dL	F: 0.4-1.4/M: 0.5-1.5
Sodium	156	146		mEq/L	135-145
Potassium	3.8	3.9		mEq/L	3.5-5.3
Chloride	98	101		mEq/L	98-108
Carbon Dioxide	26	27		mEq/L	23-27

CBC with Differential

Date	Y-day	Today		Units	Reference Range
Time	AM	0030			
WBC	13.2	11.4		$x10^3uL$	4.5-11
RBC	3.9	4.2		$x10^6uL$	F: 4.2-5.4/M: 4.6-6.2
HgB	12.1	12.6		g/dL	F:13.0-15.0/M:14.0-17.0
HCT	38.1	38.7		%	F: 38-47/M: 42-52
MCV	85.3	84.6		fL	80-90
MCH	27.8	28.2		pg	27-32
MCHC	33.6	33.9		g/dL	32-36
RDW	13.2	13.0		%	11.5-14.5
Platelet	204	196		$x10^9uL$	150-450
MPV	7.8	7.2		fL	6.0-12.0
Neutro	74			%	40-70
Lymph	21.5			%	22-40
Mono	2.3			%	1-10
Eos	1.4			%	1-7
Baso	0.8			%	0-2

Wound Culture

Date	Y-day	Today		Units	Reference Range
Time	AM	AM			
Bacterial Growth	0	0			No growth

Stool Culture

Date	Y-day			Units	Reference Range
Time	AM				
Clostridium difficile	Positive				Negative

Vancomycin Peak Level

Date	Y-day			Units	Reference Range
Time	2315				
Vancomycin	76			mcg/mL	15-20

eGFR

Date	Today			Units	Reference Range
Time	0030				
eGFR	31			mL/min	90-120

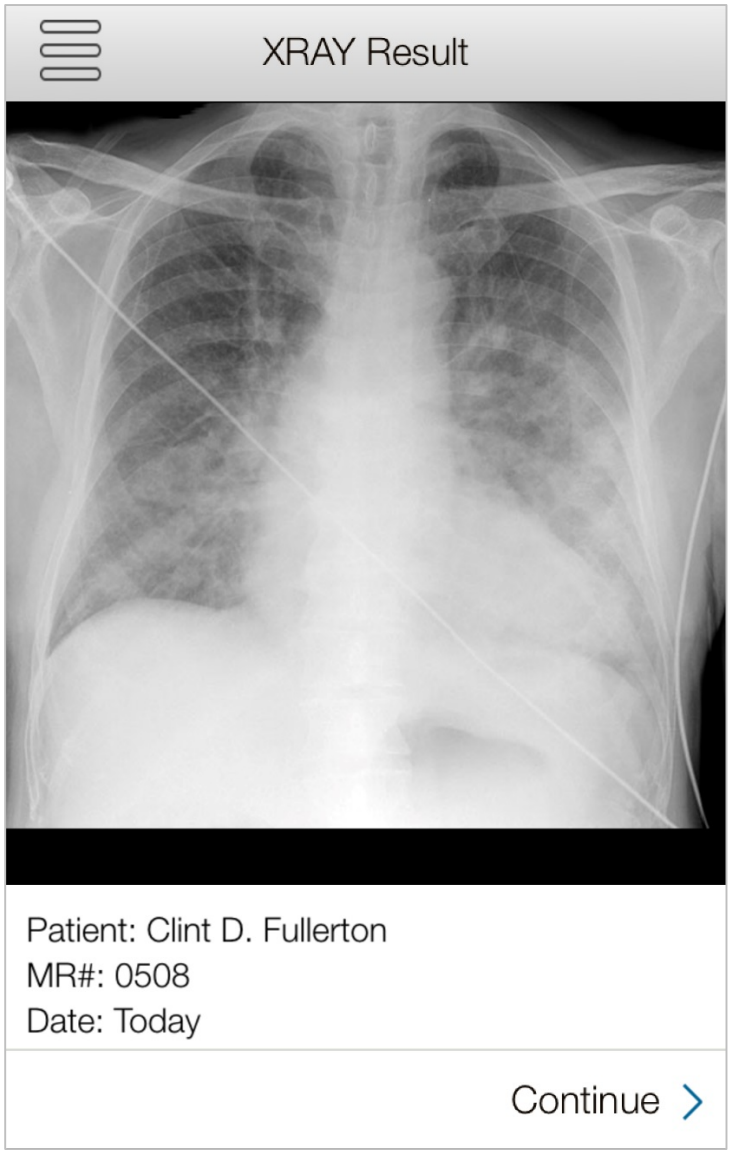
Arterial Blood Gas (ABG)

Date	Today			Units	Reference Range
Time	Now				
pH	7.36			units	7.35-7.45
$PaCO_2$	45			mmHg	35-45
PaO_2	58			mmHg	80-100
HCO_3	24			mmol/L	22-26
Base Excess (BE)	1			mmol/L	0+/-3
SaO_2	88			%	

Continue >

NURSING | LEVEL: 4

IMAGING



LEVEL UP/EXIT

- The Level Up tab changes to an Exit tab after both the Lab/Diagnostics and Imaging results have been reviewed by the student(s).
- When the Exit tab is tapped, the iPad will read, “Have you updated the provider?”
    - If “No” is selected, the iPad will read, “You must update the provider before exiting.”

- If “Yes” is selected, the iPad will read, “Are you sure you have completed the simulation? When you exit, all iPad progress 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.

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 Mr. Fullerton?
3. Review understanding of learning objective: demonstrate proper infection control.
    a. What infection control measures did you institute for Mr. Fullerton and why?
4. Review understanding of learning objective: recognize and respond to abnormal findings.
    a. What abnormal findings did you find in the vital signs, physical assessment or labs?
    b. What interventions did you make? Why?
    c. Did your interventions have any effect on Mr. Fullerton's current state? Why or why not?
    d. How did you prioritize which interventions to do first? Why?
    e. If you could "do over," is there anything different you would do in your care of Mr. Fullerton?
5. Review understanding of learning objective: correctly interpret laboratory and diagnostic test results.
    a. What lab results were concerning and how did they correspond to Mr. Fullerton's current state?
    b. Why were an ABG and chest x-ray indicated for this patient? How will the results affect the overall management of Mr. Fullerton's care?
6. Review understanding of learning objective: document accurately.
    a. What is important to document about your focused assessments and care?
7. Review understanding of learning objective: demonstrate appropriate therapeutic and interprofessional communication
    a. What "cues" did you notice that indicated therapeutic communication was needed with Mr. Fullerton?

b. Were your communication techniques effective?

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

d. Describe the information you included for SBAR communication with the provider and the ICU nurse.

e. How was it similar? How was it different? Why?

f. Was this communication effective? Why or Why not?

g. If you could change anything about your SBAR communications, what would it be and why?

h. Did you use SBAR when communicating new order/consults to the appropriate departments/people? Why or Why not?

8. Tie the scenario back to the nursing process in a large group discussion. Concept mapping can be used to facilitate discussion.

    a. List 3 priority nursing problems you identified for Mr. Fullerton.

    b. Create a patient centered goal for each nursing problem you identified.

    c. Discuss focused assessments for each nursing problem.

    d. Discuss nursing interventions for each nursing diagnosis.

    e. Re-evaluate the simulation in terms of the nursing process; what was actually accomplished? What could be improved in the future?

9. Summary/Take away Points

    a. "Today you cared for a patient with Cdiff and increasing respiratory distress as a result of renal failure and fluid overload. What is one thing you learned from participating in this scenario that you will take with you into your nursing 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. Questions

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

Chest x-ray used with permission from Dr. Jeremy Jones at https://commons.wikimedia.org/wiki/Category:X-rays_of_pulmonary_edema

Pictures from Shutterstock.com

Lung sounds used with permission from Vivek Kumar, Allergist and Immunologist at Dhanwantari Allergy & Asthma Clinic, Motihari, Bihar, India

STORYLINE REFERENCES

AARC - Adult Mechanical Ventilator Protocols. (September 2003). Retrieved from: https://c.aarc.org/resources/protocol_resources/documents/general_vent.pdf

Benner, Patricia (2015). Curriculum wide debriefing and reflection are essential to learning how to think critically, improve performance, improve outcomes and integrate experiential learning. Retrieved from http://www.educatingnurses.com/curriculum-wide-debriefing-and-reflection-are-essential-to-learning-how-to-think-critically-improve-performance-improve-outcomes-and-integrate-experiential-learning/

Brochard, L., Abroug, F., Brenner, M., Broccard, R., Danner, R., Ferrer, M., Polderman, K. (2010). American thoracic society documents - An official ATS/ERS/ESICM/SCCM/SRLF statement: prevention and management of acute renal failure in the ICU patient. *American Journal of Respiratory and Critical Care Medicine*. 181, 1128-1155. DOI: 10.1164/rccm.200711-1664ST

Bronze, M. & Cunha, B. (2015). *Diabetic foot infections medication*. Retrieved from: http://emedicine.medscape.com/article/237378-medication#showall

Center for Disease Control and Prevention (2015). Health Care Associated Infections: Clostridium Difficile Infection. Retrieved from: http://www.cdc.gov/HAI/organisms/cdiff/Cdiff_infect.html

Craven, R. F., & Hirnle, C. J. (2013). *Fundamentals of nursing: Human health and function*. Philadelphia, PA: Wolters Kluwer Health/Lippincott Williams & Wilkins.

Dreifuerst, Kristina Thomas (2012). Using debriefing for meaningful learning to foster development of clinical reasoning in simulation. *Journal of Nursing Education, 51*(6), 326-333. doi:http://dx.doi.org/10.3928/01484834-20120409-02

Estimated Glomerular Filtration Rate (eGFR). (2016). Retrieved from: https://labtestsonline.org/understanding/analytes/gfr/tab/test/

Ignativicius, D. and Workman, L. (2016). *Medical Surgical Nursing: Patient Centered Collaborative Care* (8th ed.). St. Louis, MO: Elsevier.

International Nursing Association for Clinical Simulation and Learning. (2013). *Standards of best practice: simulation*. Retrieved from: http://www.inacsl.org/files/journal/Complete%202013%20Standards.pdf

Jarvis, C. (2016). *Physical examination & health assessment* (7th ed.). St. Louis, MO: Saunders.

Kimmel, H. & Robin, A. (2013). An evidence-based algorithm for treating venous leg ulcers utilizing the Cochrane database of systematic reviews. Wounds, 25 (9), 242-250. Retrieved from: http://www.woundsresearch.com/article/evidence-based-algorithm-treating-venous-leg-ulcers-utilizing-cochrane-database-systematic-r

Lemos J, Lau T, Legal M (2009). *Vancomycin therapeutic drug monitoring guidelines.* Vancouver Acute Pharmaceutical Sciences. Retrieved from: http://www.vhpharmsci.com/PageCPG/index.html

Lentino, J. (2013). *Clostridium difficile – induced diarrhea.* Retrieved from: https://www.merckmanuals.com/professional/infectious-diseases/anaerobic-bacteria/i-clostridium-difficile-i-induced-diarrhea

Lipsky, BA, Berendt, AR, Cornia, PB, Pile, JC, Peters, EJG, Armstrong, DG, Deery, HG, Embil, JM, Joseph, WS, Karchmer, AW, Pinzur, MS, and Senneville, E (2012). *2012 Infectious Diseases Society of America Clinical Practice Guideline for the Diagnosis and Treatment of Diabetic Foot Infections.* Retrieved from http://cid.oxfordjournals.org/content/54/12/e132.full.pdf+html doi: 10.1093/cid/cis346

McClain, C., Owing, R. & Bornhorst, J. (2001). Heterogeneity of publicly accessible online critical values for therapeutic drugs. Journal of Pathology Informatics, (2, 53). DOI: 10.4103/2153-3539.91131

Medscape. (2015). *Drugs, OTCs, & herbals*. Retrieved from: http://reference.medscape.com/drugs

Naughton, C. (2008, September 15). Drug-induced nephrotoxicity. American Family Physician, 78(6), 743-750. Retrieved from http://www.aafp.org/afp/2008/0915/p743.html

Persing, G. (2016). *Respiratory Care Exam Review*. St. Louis. Missouri: Elsevier

Pierson, D. (April 2002). Update on Weaning from Mechanical Ventilation. Retrieved from: https://www.ahcmedia.com/articles/75668-update-on-weaning-from-mechanical-ventilation

Quality and Safety Education for Nurses (QSEN) (2014). Pre-licensure KSAS. Reprinted from Cronenwett, L., Sherwood, G., Barnsteiner J., Disch, J., Johnson, J., Mitchell, P., Sullivan, D., Warren, J. (2007). Quality and safety education for nurses. *Nursing Outlook*, 55(3)122-131. Retrieved from: http://qsen.org/competencies/pre-licensure-ksas/

DeMarco, S. (n.d.). Wound and pressure ulcer management. Retrieved from: http://www.hopkinsmedicine.org/gec/series/wound_care.html#wound_assessment

Vanderbilt University Medical Center Division of Trauma and Surgical Critical Care Trauma/Burn/SICU Ventilator Management Protocol. (2016). Retrieved from: https://medschool.vanderbilt.edu/trauma-and-scc/trauma-and-surgical-critical-care-practice-management-guidelines

This workforce product was funded by a grant awarded by the U.S. Department of Labor's Employment and Training Administration. The product was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The U.S. Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership. This is an equal opportunity program. Assistive technologies are available upon request and include Voice/TTY (771 or 800-947-6644).