

Radford University Clinical Simulation Center

Presented by: Clinical Simulation Center Faculty

RADFORD
UNIVERSITY



Welcome to the Radford University Clinical Simulation Center (CSC)

The CSC was established as a collaboration between nursing education programs and public/private healthcare facilities in southwest Virginia in 2006. The CSC has two sites located on the third floor of Cook on the Radford University main campus and another site at the Roanoke Higher Education Center. The CSC supports the following area nursing programs: Radford University, Radford University Carilion, New River Community College, Wytheville Community College, and Patrick Henry Community College.

PURPOSE

Undergraduate:

The CSC provides hands on clinical learning experiences that meet the rigor of Society of Simulation in Healthcare (SSH) accreditation standards and Virginia Board of Nursing regulations to qualify for direct clinical hours. The CSC is an accredited center by the Society of Simulation in Healthcare in Teaching/Education.

MISSION

The Program is committed to:

- **Deliver** a simulation environment that is safe and realistic.
- **Integrate** innovation and evidence-based practice into simulation teaching strategies.
- **Incorporate** state-of the art technologies in clinical education.
- **Promote** interprofessional education.
- **Provide** active learning experiences that foster student reflection and self-discovery.
- **Produce** quality healthcare professionals with enhanced critical thinking abilities, communication and teamwork skills and clinical competence.



VISION

The Clinical Simulation Center aspires to be the premier, innovative and **student-centered simulation program** with a keen focus on **teaching, research and interprofessional education preparing competent, compassionate, professional clinicians** to meet the needs of the local and global community.

RADFORD UNIVERSITY CSC BASIC ASSUMPTION STATEMENT

“We believe that everyone is intelligent, capable, cares about what they are doing.”

“We recognize you are trying to do your best to learn and improve, any mistake made will help in your learning and self improvement process”.

RADFORD UNIVERSITY CSC FICTION STATEMENT

“As your instructors, we have done everything to make the simulation as real as possible with resources and technology constraints. We ask that you do the best you can to act as if the simulation is real treating the patient as you would a real person”.



PARKING

- Cook Hall (RU main campus, Radford):

<https://www.radford.edu/content/parking-transportation/home/information/maps.html>

- Roanoke Higher Education Center (RHEC): your campus faculty will email a parking pass to you. You **MUST** park in designated student parking to avoid receiving a parking ticket.

STUDENT EXPECTATIONS

- **Session times – posted per campus faculty (in learning management system or student email)**
 - **MUST arrive 30 minutes prior to start of session.**
 - **Late arrivals will be sent home.**
- **Prepare**
 - **Complete admission tickets - Admission tickets are required to participate. Students must bring individually completed, printed copies on the day of simulation.**



STUDENT EXPECTATIONS

- **Dress Code**

- Follow SON dress code

- **Participate**

- Buy-in to the simulation experience
- Accept as real
- Engage in debriefing (reflection on performance)

- **Maintain scenario confidentiality**



TYPES OF MANIKINS

Task trainers

- IV arms, Airway trainer, Torsos

Full Bodied Manikin - no chest rise or fall

- Nursing Kid, Nursing Anne, Sim Jr

Full Bodied Manikin - chest rise & fall & more

- SimMan 3G, SimMom, SimBaby, Victoria, Newborn Tory

SIMULATION SPECIFIC ASSESSMENT FEEDBACK

□ Respiratory Rate

Auscultate to count

□ No Response

□ Assessing Movement

□ POC Testing

Complete test as normal

Results will show on patient monitor

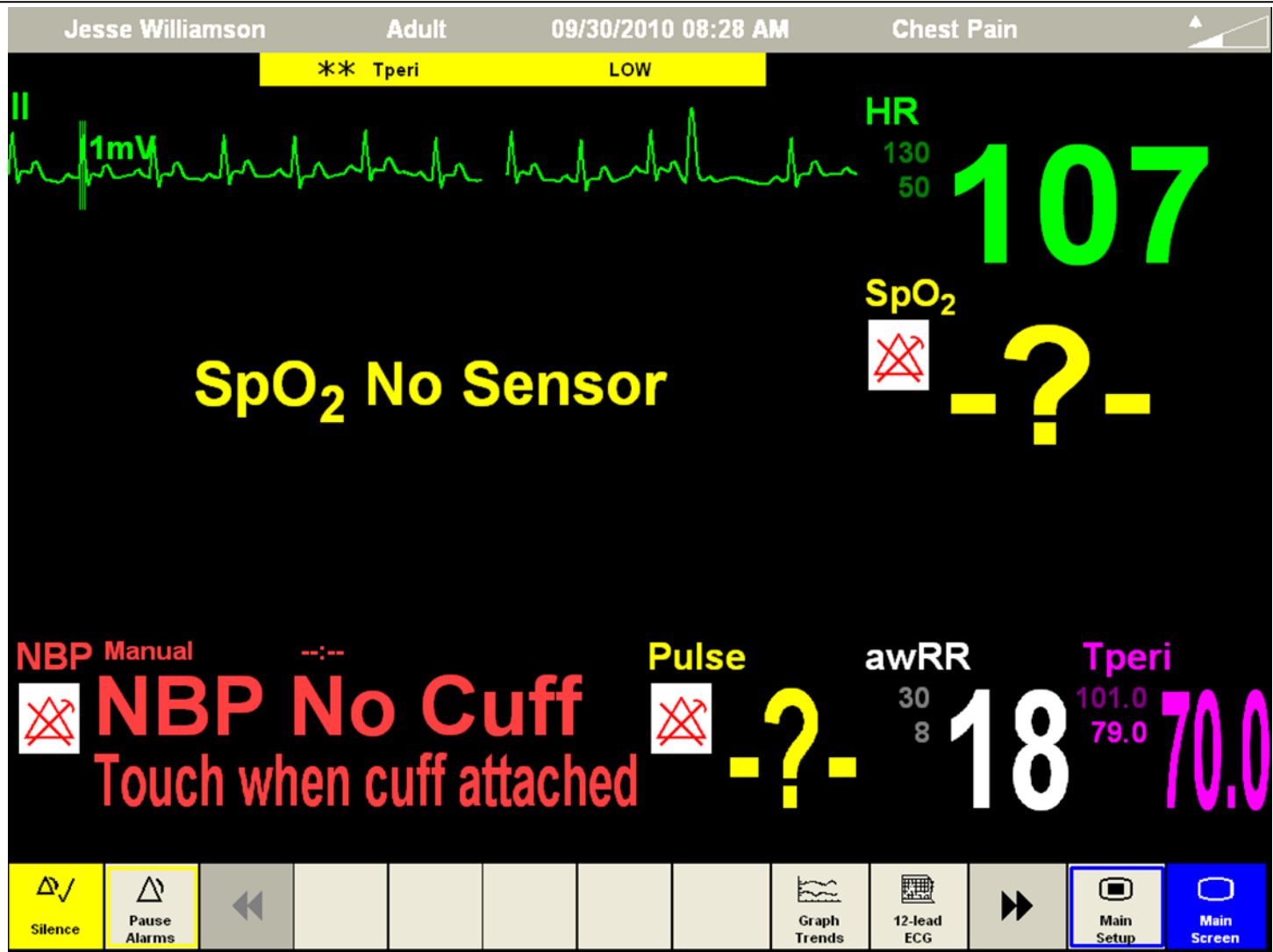
□ Temperature

Use temperature probe as normal

Results will show on patient monitor



PATIENT MONITOR



INCLEMENT WEATHER POLICY

RADFORD

COOK HALL

CLINICAL SIMULATION CENTER

- Follow your SON closings/delays
- If your SON is open
 - Follow Radford University closings/delays

ADMISSION TICKETS

Learning Objectives

Patient Information and Demographics

Potential Skills

Medication List

Lab Work

Simulation Learning Objectives:

1. Complete focused respiratory assessment and reassessments on a patient with a chest tube.
2. Prioritize & perform interventions based on patient's problems and physician orders, including blood transfusion administration.
3. Evaluate effectiveness of interventions and revise the plan of care to treat actual patient problems.

Patient Overview:

Client Name: William Allison Gender: Male Race: Caucasian
Age: 63 Weight: 249 lbs Height: 6'3" Location: Med-Surg Unit
Physician: Dr. Minichan

Client Information: Mr. Allison presented to the ED with abdominal pain that migrated to the RLQ with associated vomiting. A CT scan and physical exam were consistent with Acute Appendicitis. His appendix was found to be perforated. He underwent an appendectomy approximately 24 hrs ago with placement of a JP drain for drainage. The wound was left open to heal by secondary intention.

Past Medical History: NKDA. Obesity, hypertension, venous insufficiency, COPD, BPH, hypercholesterolemia

Social History: Mr. Allison is a truck driver. Divorced. No children. Denies alcohol use. Positive for tobacco-smokes 1 ½ packs per day x 40 yrs.

Surgeries/Procedures: Emergency appendectomy 24 hrs ago; surgical wound open to heal by secondary intention.

Potential Skills for Scenario: Sterile dressing change, assessment of post-operative client, incentive spirometer, nasogastric tube insertion, medication administration, care of JP drain, application of T.E.D. compression stockings and sequential compression devices (SCDs) *Students are expected to review these skills prior to simulation in order to perform them independently during scenario.

Medication List: ~~ertapenem IV, D5 ½ NS IV, enoxaparin SC, furosemide po, K-Dur po, promethazine IM/IV, ketorolac IM/IV, omeprazole po~~

Initial Lab Work:

CBC with Differential: WBC-18.6, RBC-4.8, Hgb-13.4, Hct-38.5, MCV-83, MCH-28, MCHC-32.9, RDW-13.1, Platelets-234, Bands-1, Segs-88, Lymph-8, Mono-3

CMP: Na+-132, K+-3.5, Cl--98, CO2-26.0, BG-103, BUN-15, Creatinine-0.8, Ca+-8.6, AST-35, ALT-42, ALK Phos-65, Total Bili-0.48, Total Prot-6.6, Albumin-3.8

ADMISSION TICKETS

Must individually complete tickets to be admitted into simulation experience

Pathophysiology/Clinical Reasoning

Medication Administration Preparation

Lab Work Analysis and Procedure preparation

Admission tickets will be reviewed by simulation faculty prior to simulation activity. You must have the following documents complete to participate:

Pathophysiology:

1. Explain the pathophysiology of appendicitis in your own words. What are the complications associated with a ruptured appendix?
2. What are the most common causes and risk factors for appendicitis?
3. What potential problems is William Allison at risk for post-operatively?
4. Explain the difference between primary intention and secondary intention wound healing?

Medications


5. List the drug classes of the patient's medications (See medication list below).
Medication List: ertapenem IV, enoxaparin SC, furosemide PO, K-Dur PO, promethazine IM/IV, ketorolac IM/IV, omeprazole PO
6. What is the mechanism of action of each medication?
7. Why do you think William Allison was prescribed each medication?
8. What physiological effects will these medications have on William Allison?
9. What side effects will you teach William Allison about before administering these medications?
10. For William Allison's IV medications, answer the following questions:
 - a. Do they need to be diluted?
 - b. How fast should they be administered?
 - c. Are they compatible with his IV fluids and other medications?

Labs/Procedures

11. Discuss abnormal findings from patient's initial labs.
12. Review all of the "possible interventions" in the patient overview section. You are expected to read and make notes about these nursing actions/procedures and perform them during the simulation (with assistance as needed).

PRE/POST ENCOUNTER QUESTIONNAIRE

- Pre-Encounter Questionnaires are completed prior to the simulation experience.
- Post-Encounter Questionnaires are completed post simulation experience.

Learner Pre-Encounter		
BC Fund_Appy_Pneum_Fx		
		
Clinical Simulation Center - Radford		
Evaluator _____	Learner _____	Role _____
PRE ENCOUNTER		
1. Assessment-What components should be included in an abdominal open wound assessment? (Select all that apply)		
<input type="checkbox"/> Movement of extremities	<input type="checkbox"/> Inspect (location, color, wound bed, wound edge)	<input type="checkbox"/> Exudate (amount, color, odor)
<input type="checkbox"/> Condition of surrounding skin for edema and temperature	<input type="checkbox"/> Sensation of extremities	<input type="checkbox"/> Measure size (length, width, depth)
<input type="checkbox"/> Patient's nutritional status		
2. A patient has an appendectomy following a ruptured appendix. During the post-op care, the nurse's notes in this patient's record should include documentation of:		
<input type="radio"/> Teaching to prevent dumping syndrome and bed rest	<input type="radio"/> Bed rest and shallow breathing exercises	<input type="radio"/> Shallow breathing exercises and teaching a low-residue diet
<input type="radio"/> Dressing changes, intake and output, bowel sounds and use of incentive spirometer		
3. How comfortable are you in managing a Jackson Pratt (JP) Drain?		
<input type="radio"/> Able to perform independently	<input type="radio"/> Able to perform with assistance	<input type="radio"/> Not comfortable performing at this time

Electronic Health Record (EHR)

DocuCare

DocuCare is a simulated EHR utilized by the CSC. You will need to log in with your name and school.

The screenshot shows a simulated EHR interface for a patient named Carl Shapiro. The patient's medical history includes Angina - Coronary Artery Disease. The interface is divided into several sections: Patient Information, Assessment, Notes, Nursing Dx, Orders, MAR, I/O, Vital Signs, Diagnostics, and Flowsheet. The Assessment section is currently active, showing a respiratory assessment. The assessment includes sections for Oxygen Delivery, Breath Sounds, Sputum, and Respiratory Symptoms. The Breath Sounds section is further divided into Right Upper Lobe and other lung lobes, with checkboxes for various findings such as Clear, Decreased, Rales, Absent, Rhonchi, Stridor, Wheeze, Anterior, Coarse, Posterior, Inspiratory, and Expiratory. The Sputum section includes checkboxes for Color (None, Purulent, Bloody, Blood Tinged, Serosus, Brown, White, Tan, Creamy, Black, Green, Serosanguinous, Clear, Yellow) and Amount (None, Thin, Tenacious, Moderate, Copious). The Respiratory Symptoms section includes checkboxes for Regular, None, Epistaxis, and other symptoms.

Angina - Coronary Artery Disease

Started on: 11/15/2011 09:40 [Discard](#) [Review](#)

Shapiro, Carl Gender: Male, DOB: 7/19/1957 (54y) Height: 69 in Weight: 242 lb MRN: PCS71900 [Allergies: Penicillin, Eggs, Latex](#)

Adm DX: Angina-Coronary Artery Disease Location: Emergency Department Rm: 2
Adm Provider: Revis, Chin A. MD, Admitting Adm On: 11/15/2011 09:10 (0.24 d)
Contact Precaution: Standard
Adv Directive: Full Code

Assessment Time: 11/15/2011 15:07 [Save Respiratory Assa](#)

Oxygen Delivery

- Room Air
- Nasal Cannula
- Venturi Mask
- Mist Tent
- Trach Collar
- T-Piece
- Ambu Bag
- NRB Mask
- ETT
- Other

FI_O₂

Breath Sounds

RUL RML RLL LUL LLL

Right Upper Lobe

- Clear Decreased
- Rales Absent
- Rhonchi Stridor
- Wheeze Anterior
- Coarse Posterior
- Inspiratory
- Expiratory

Sputum

Color

- None Purulent
- Bloody Blood Tinged
- Serosus Brown
- White Tan
- Creamy Black
- Green Serosanguinous
- Clear
- Yellow

Amount

- None
- Thin
- Tenacious
- Moderate
- Copious

Respirations

- Regular
- None
- Epistaxis
- Other

Respiratory Symptoms

- None
- Epistaxis
- Other

Med/Surg Room



OB Room



Pediatric Room



Intensive Care Room



Sim Home



Mental Health



Exam Room



CONCLUSION

Thank you for your time! We look forward to meeting each of you and cannot wait to be part of your learning experience!

See you soon!