

## CAN-Sim/Innov2Learn Scenario

<b>SCENARIO TITLE</b>	<b>Care of the Deteriorating Patient with Septic Shock</b>
<b>TARGET LEARNERS</b>	Senior Nursing Students
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<b>DATE OF DEVELOPMENT</b>	2025 March 19

### SCENARIO SYNOPSIS

**65-year-old male with past medical history of T2DM, HTN and recent surgical history of perforated appendix with appendectomy. He required laparoscopic surgery which was then converted to a laparotomy due to complications. He has now been on the medical-surgical unit for 48 hours and initially stable. As the scenario progresses, on POD3 the patient progressively deteriorates into septic shock. Learners must assess the patient, recognize signs of deterioration, initiate sepsis protocols, and collaborate with the interprofessional team.**

## KEY REFERENCES

**BC Sepsis Network. (2022).** Emergency Department Sepsis Guidelines. BC Emergency Medicine Network. <https://emergencycarebc.ca/wp-content/uploads/2022/03/2022-Emergency-Department-Guidelines-FINAL.pdf>

**Emergency Nurses Association. (2020).** *Trauma Nurse Core Course: Provider Manual 8th(ed).* ENA Course. Burlington, MA. Jones & Bartlett Learning.

**Evans, L., Rhodes, A., Alhazzani, W. et al. (2021).** Surviving sepsis campaign: international guidelines for management of sepsis and septic shock 2021. *Intensive Care Medicine*, 47, 1181–1247. <https://doi.org/10.1007/s00134-021-06506-y>

**Health Quality British Columbia (HQBC). (2022).** *Inpatient sepsis toolkit: Speed is life 2022 update.* [2022-Inpatient-Sepsis-Toolkit-Health-Quality-BC.pdf](https://www.hqbc.ca/2022-Inpatient-Sepsis-Toolkit-Health-Quality-BC.pdf)

**Peate, I., & Brent, D. (2021).** Using the ABCDE approach for all critically unwell patients. *British Journal of Healthcare Assistants*, 15(2), 84-89. <https://doi.org/10.12968/bjha.2021.15.2.84>

**Schorr, C. A., Seckel, M. A., Papathanassoglou, E., & Kleinpell, R. (2022).** Nursing Implications of the Updated 2021 Surviving Sepsis Campaign Guidelines. *American Journal of Critical Care*, 31(4), 329–336. <https://doi.org/10.4037/ajcc2022324>

**Society of Critical Care Medicine. (2021).** *Surviving Sepsis Campaign Guidelines 2021.* <https://www.sccm.org/survivingsepsiscampaign>

**Urden, L., Stacy, K. M., & Lough, M. E. (2022).** *Critical Care Nursing, 9th Edition.* Elsevier.

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**PART 1: LEARNER PACKAGE Deteriorating Patient LEARNING OUTCOMES ASSESSMENT RUBRIC**

Learning Outcome	Competency Indicators	Competent Learner	Intermediate Learner	Novice Learner			
<b>Perform appropriate assessments on a post-operative patient to identify abnormal findings.</b>	<ul style="list-style-type: none"> <li>uses a systematic approach to identify and respond to abnormal findings</li> <li>conducts a comprehensive assessment</li> <li>performs focused assessment based on symptoms</li> <li>utilizes appropriate tools to assess pain, LOC,</li> <li>assesses pain regardless of LOC</li> <li>monitors for hemodynamic stability</li> <li>Interprets lab values</li> <li>anticipates relevant diagnostic tests</li> </ul>	Independently uses a systematic approach to assess post-operative patients, integrates multiple assessment tools, and anticipates potential complications in a timely manner.	With minimal support and guidance, conducts a focused assessment based on the patient's presenting symptoms and identifies abnormal findings using validated tools in a timely manner.	With support, supervision and prompting, performs a basic head-to-toe assessment.			
Comments	Likert Scale	6	5	4	3	2	1
<b>Identify signs of clinical deterioration in a postoperative patient to promote early intervention.</b>	<ul style="list-style-type: none"> <li>Identifies abnormal values for diagnostic tests</li> <li>identifies hemodynamic instability</li> <li>identifies early indicators of progression towards sepsis</li> <li>Identifies system-based abnormal findings consistent with deterioration</li> </ul>	Independently identifies system-based abnormal findings, factors and indicators contributing to hemodynamic instability and sepsis.	With minimal support and guidance, it seeks to identify system-based abnormal findings, factors and indicators contributing to hemodynamic instability and sepsis.	With support, supervision and prompting, attempts to identify system-based abnormal findings, factors and indicators contributing to hemodynamic instability and sepsis.			
Comment	Likert Scale	6	5	4	3	2	1
<b>Prioritize interventions based on key assessment findings to prevent further deterioration.</b>	<ul style="list-style-type: none"> <li>interprets vital signs, lab results, diagnostic tests, and clinical symptoms to determine the severity of the patient's condition</li> <li>utilizes clinical prioritization (ABCDE, GCS)</li> <li>Identifies and recognizes signs of deterioration (e.g., sepsis, shock, respiratory distress).</li> <li>implements timely evidence-based knowledge (CPR, med admin,</li> <li>communicates urgency with interprofessional healthcare team</li> <li>anticipates potential complications</li> <li>understands scope of practice</li> </ul>	Independently identifies abnormal assessment findings from multiple sources to prioritize the implementation of interventions and communicate the urgency of the situation in a timely manner.	With minimal support and guidance, identify abnormal assessment findings, prioritize interventions in a timely manner.	With support, supervision and prompting,, identifies some abnormal assessment findings and needs supervision in determining priorities.			
Comment	Likert Scale	6	5	4	3	2	1
<b>Evaluate the effectiveness of treatments for a critically ill patient to inform ongoing decision-making.</b>	<ul style="list-style-type: none"> <li>identifies expected versus unexpected responses to interventions, such as resolving or deteriorating markers</li> <li>performs ongoing systematic reassessment</li> <li>Interprets clinical data accurately (lab results, VBGs or ABGs, GCS, ECG, fluid balance)</li> <li>applies critical thinking to adjust care plan</li> <li>conveys and documents treatments and outcomes concisely and clearly</li> </ul>	Independently anticipates and adjusts interventions based on ongoing systematic reassessment, interpretation of clinical data, and communicates/ documents treatment approaches and outcomes clearly and concisely.	With minimal support and guidance anticipates and adjusts interventions, based on ongoing systematic reassessment, interpretation of clinical data, and communicates/ documents treatment approaches and outcomes clearly and concisely.	With support, supervision and prompting, attempts to anticipate and adjust interventions, based on ongoing systematic reassessment, interpretation of clinical data, and communicates/documen ts treatment approaches and outcomes clearly and concisely.			
Comments	Likert Scale	6	5	4	3	2	1
<b>Communicate with the interprofessional team when caring for a critically ill patient to optimize team performance and patient outcomes.</b>	<ul style="list-style-type: none"> <li>clearly and concisely conveys patient status, needs, and updates to the interprofessional team.</li> <li>demonstrates active listening to the interprofessional teams; input and responds appropriately to ensure mutual understanding.</li> <li>effectively used closed loop communication</li> <li>accurately, concisely documents interventions and patient updates</li> </ul>	Independently communicates patient status concisely, accurately, and effectively using closed-loop communication, and ensures mutual and team understanding in a timely manner.	With minimal support communicates essential patient information using structure communication tools to ensure mutual and team understanding in a timely manner.	Requires support and/or prompting to communicate patient status and updates.			

## PRESIMULATION PREPARATION ACTIVITIES

ACTIVITY	DESCRIPTION
LECTURE CONTENT	Sepsis lecture
READINGS	<p>Guidelines:</p> <p>Health Quality British Columbia (HQBC). (2022). <i>Inpatient sepsis toolkit: Speed is life 2022 update</i>. <a href="#">2022-Inpatient-Sepsis-Toolkit-Health-Quality-BC.pdf</a></p> <p>Sepsis Protocol: <a href="#">2022-Emergency-Department-Guidelines-FINAL.pdf</a></p> <p><a href="#">The Sepsis Manual</a> pages 13-20 (definitions, screening), page 31-38 (sources of sepsis, including a review of intra-abdominal sepsis); 43-51 (sepsis pathophysiology explained using the ABCDE approach)</p> <p>Schorr, C. A., Seckel, M. A., Papathanassoglou, E., &amp; Kleinpell, R. (2022). Nursing Implications of the Updated 2021 Surviving Sepsis Campaign Guidelines. <i>American Journal of Critical Care</i>, 31(4), 329–336. <a href="https://doi.org/10.4037/ajcc2022324">https://doi.org/10.4037/ajcc2022324</a></p>
QUIZ	
CASE STUDY	
ONLINE ACTIVITY	
SELF-ASSESSMENT	Complete the learning outcomes assessment rubric
OTHER	

### SCENARIO SUMMARY

<b>SETTING</b>	<b>Medical surgical unit</b>
<b>PATIENT PROFILE</b>	NAME: Nivian Boosh AGE: 55 years old SEX/GENDER: Male cis-gender MARITAL STATUS: Divorced CULTURAL BACKGROUND: OCCUPATION: Highschool Teacher for 20 years OTHER: Son is a nursing student
<b>PATIENT HISTORY</b>	Medical history: Type 2 diabetes, hypertension  Surgical History: Ruptured appendectomy with peritonitis (post-op day 3)  Medications: Insulin (Regular & Lantus) subcut per sliding scale Metformin 1000mg PO twice daily Enalapril 5.0mg PO daily Acetaminophen 500mg-1000mg PO every 4 to 8 hours as needed  Rosuvastatin 40mg PO daily 1700  Lasix 20 mg PO daily at noon
<b>CURRENT STATUS</b>	Vital Signs: Temp: 38.8°C HR: 112 bpm  <ul style="list-style-type: none"><li>● RR: 26 bpm</li><li>● BP: 102/60 mmHg</li><li>● O2 Sat: 94% on RA</li><li>● Pain: 7/10 (abdominal pain)</li></ul>

**PART 2: LAB SETUP PACKAGE****HUMAN RESOURCE REQUIREMENTS**

<b>STANDARDIZED PARTICIPANTS</b>	Embedded actor or mannequin
<b>SIMULATOR OPERATORS</b>	Control patient vitals
<b>FACILITATORS</b>	1
<b>OTHER</b>	1 - RN Race Team 1 - Offgoing RN

**SUPPLY AND EQUIPMENT REQUIREMENTS**

<b>ROOM REQUIREMENTS</b>	<b>Medical surgical unit</b>
<b>SIMULATOR REQUIREMENTS</b>	High-fidelity patient simulator (if not using an embedded actor)
<b>MEDICAL EQUIPMENT</b>	Stretcher with pillow and sheets IV pump (3 chambers) Cardiac monitor with 12 lead capability? (Spacelab?) Innov2Learn simulated blood glucose meter Innov2Learn simulated pulse oximeter (12L Innov2Learn simulated thermometer Innov2Learn simulated vital signs monitor overlay Vital signs machine
<b>MEDICAL SUPPLIES</b>	IV fluids (NS, RL 1L) minibags (NS 50ml and 100ml) Insulin regular, glargine Vancomycin Ondasetron Morphine Acetaminophen Levophed IV lines (primary and secondary) 3-way stop cock
<b>PROPS &amp; MOULAGE</b>	Perc drain <b>Saline lock x 1; something small like a 22g</b>
<b>DOCUMENTATION FORMS</b>	Medication orders In and Out Flowsheet Master Signature Sheet  Best practice guidelines: <b>Suspected Sepsis Medical Directive (Appendix)</b> Or HQBC (2022) Inpatient Sepsis Toolkit (pages 20-26)
<b>DESCRIPTION OF SETUP</b>	Mannequin or standardized participant in hospital bed with IV infusing and abdominal dressings

### HEALTHCARE PROVIDER ORDERS

<b>PATIENT NAME:</b> Nivian Boosh		<b>DOB:</b> 65 years old	<b>ROOM NUMBER:</b> 415
<b>ID#</b>		<b>DIAGNOSIS:</b> Rupture appendix	<b>ALLERGIES:</b> Penicillin
<b>DATE:</b>	<b>TIME:</b>	<b>HEALTHCARE PROVIDER ORDERS AND SIGNATURE</b>	
		<p>Diet: Increase Diet as Tolerated (DAT)                      Activity as tolerated                      POD 0: Minimum dangle at bedside                      POD 1 onwards: Minimum up to chair                      Vital signs every 4 hours x 24 hours then every 8 hours x24 hours, then twice daily.                      IV RL at 75ml/hr                      Saline lock IV when eating and drinking, flush with 1-2mL N/S q 8 hours and before and after medication administration                      Jackson-Pratt drain flush every 12 hours                      Blood cultures x2 if febrile                      CBC, Lytes, Urea, Cr, Glucose, daily                      Abdominal dressing daily</p> <p><u>Medications</u>                      Regular insulin - sliding scale                      Insulin Glargine 10 units/OD                      Meropenem 1g IV stat followed by 1gm IV q8 hours                      Cefazolin 2g IV q8hr                      Metronidazole 500mg IV q 8 hours                      Zofran 8mg/4ml IV over 15minutes                      Metoclopramide 5-10mg PO/IV                      Gravol 25mg-50mg PO/IV q4h PRN                      Acetaminophen 650mg PO                      Morphine 5-10mg PO Q4H PRN for pain.                      Morphine 2.5-10mg IV Q4H PRN.. Do not exceed 20mg in 24 hours without notifying the prescriber.                      Ketorlac 15-30mg PO/IV q 6 h PRN                      Lasix 20mg PO at noon daily                      Enalapril 5mg PO at BID 0800 1700                      Rosuvastatin 40mg PO daily 1700</p>	
		Dr. Collins Pete	

**PART 3: FACILITATOR PACKAGE (Facilitator should receive all packages for their preparation)**

**PREBRIEFING SCRIPT**

COMPONENT	DESCRIPTION
<b>PSYCHOLOGICAL SAFETY</b>	<p>Welcome everyone. The purpose of today’s pre-briefing is to create a <b>psychologically safe learning environment</b> where you feel comfortable participating, asking for help, and reflecting openly—without fear of judgment or penalty. Mistakes are viewed as valuable learning opportunities.</p> <p><b>1. Objectives and Expectations</b> Today’s simulation is a <b>formative learning activity</b>, not a graded assessment. The goal is to help you identify strengths and areas for growth. After each scenario, we’ll hold a <b>group debriefing</b> to reflect on your reasoning, actions, and decisions. Feedback is collaborative and focused on improvement.</p> <p><b>2. Simulation Process</b> Here’s what to expect:</p> <ul style="list-style-type: none"><li>• <b>Pre-briefing:</b> about 10-15 minutes (more time required if learners unfamiliar with environment)</li><li>• <b>Scenario:</b> about 20-30 minutes</li><li>• <b>Debriefing:</b> about 45 minutes</li></ul> <p><b>3. Fiction Contract</b> Although we strive for realism, some aspects of simulation are limited. Please agree to engage <b>“as if” the situation is real</b> and respond authentically to the scenario.</p> <p><b>4. Respect and Learner-Centered Approach</b> Throughout the session, we value your perspectives. During debriefing, we’ll explore not just what you did, but <b>how and why</b> you made certain decisions. We believe that each of you is <b>capable, thoughtful, and doing your best to learn and improve</b>.</p> <p>Let’s begin by reviewing today’s objectives and addressing any questions you may have.</p>
<b>ORIENTATION</b>	<p><b>LEARNING OBJECTIVES/OUTCOMES:</b></p> <ul style="list-style-type: none"><li>• Perform appropriate assessments on a post-operative patient to identify abnormal findings.</li><li>• Identify signs of clinical deterioration in a postoperative patient to promote early intervention.</li><li>• Prioritize interventions based on key assessment findings to prevent further deterioration.</li><li>• Evaluate the effectiveness of treatments for a critically ill patient to inform ongoing decision-making.</li></ul>

	<ul style="list-style-type: none"> <li>Communicate with the interprofessional team when caring for a critically ill patient to optimize team performance and patient outcomes.</li> </ul> <p><b>ENVIRONMENT/EQUIPMENT:</b> mannequin or simulated patient</p> <p><b>SCENARIO/ROLES:</b> see scenario roles section</p>
<b>PLANNING</b>	<p><b>SHIFT/HANDOFF REPORT:</b></p> <p>Male patient, 65 years, (kg dependant upon actor) 225lbs (100.4kg)  Allergy: Penicillin (rash)  Type 2 diabetes, Hypertension  Post-op day 3 ruptured appendectomy with peritonitis - required lap and open surgery  Pre-surgery antibiotics were not given  Current medical treatment for infection: IV ceftriaxone and metronidazole  -full fluid diet, activity as tolerated  -Alert and Orientated X 4 (person, place, time, situation)  Vital Signs (VS):  HR: 117  BP 110/70 (MAP 83)  RR: 20  Temp 37.8C  O2: 96% on RA  Blood Glucose: 9 mmol/L  -abd dressings dry &amp; intact  -bowel sounds hypoactive x 4 quadrants  -received morphine 5 mg IV an hour ago  -nauseated overnight and received Zofran  -breath sounds adequate air entry to upper lobes, decreased to bases bilaterally  -Jackson Pratt drain - 20 mL serous fluid yesterday, no drainage overnight  -IV R/L at 75ml/hr  -voiding adequately in urinal  -planning for discharge today</p>
<b>OTHER</b>	

### PREBRIEFING ACTIVITIES

ACTIVITY	DESCRIPTION
<b>CONCEPT MAP</b>	
<b>NURSING CARE PLAN</b>	
<b>REVIEW CLINICAL CONTENT</b>	Review questions learners may have related to the presimulation preparation activities

<b>REVIEW SKILLS</b>	Review learning outcome assessment rubrics and learner perceived strengths and weaknesses related to meeting the expected competencies
<b>OTHER</b>	

### SCENARIO ROLES

ROLE	DESCRIPTION
<b>NURSING</b>	<p><b>TEAM LEADER:</b> Oversees the nursing team, delegates tasks, prioritizes care, and communicates with the interprofessional team. Coordinates team actions based on patient condition and clinical priorities.</p> <p><b>PRIMARY NURSE:</b> Performs initial and ongoing assessments, communicates findings to the team, and initiates interventions (e.g., vitals, pain assessment, focused abdominal assessment). Escalates concerns to the physician.</p> <p><b>TREATMENT NURSE:</b> Carries out clinical treatments such as starting IVs, drawing blood for labs/cultures, managing wound and drain care, and assisting with mobilization if needed.</p> <p><b>MEDICATION NURSE:</b> Prepares and administers medications safely and accurately, following orders and the "rights" of medication administration. Monitors for medication effects and side effects.</p> <p><b>DOCUMENTATION NURSE:</b> Documents assessments, interventions, vital signs, medication administration, and communication with the healthcare team in real time. Completes documentation of handoff.</p>
<b>EMBEDDED ACTORS</b>	<p><b>PATIENT:</b> Responds appropriately to questions and interventions. Provides information on symptoms (e.g., pain, nausea, chills). Shows signs of clinical deterioration as the scenario progresses (may include confusion, worsening pain, etc.).</p> <p><b>FAMILY MEMBER: Optional.</b> Can prompt learners to explain the situation in layman's terms, show empathy, and demonstrate therapeutic communication. May express concern, anxiety, or confusion about the patient's condition.</p> <p><b>OTHER HEALTHCARE PROVIDER: (Optional – e.g., RT or MD).</b> Responds to calls from the nursing team and provides additional orders or guidance based on what the learners report. Can be used to reinforce timely and accurate communication.</p>
<b>OBSERVERS</b>	<p><b>PEER ASSESSMENT:</b> Observes the scenario using a structured checklist or rubric. Focuses on teamwork, communication, and application of clinical knowledge. Participates in debrief.</p>

## DEBRIEFING GUIDE

<b>DEBRIEFING FRAMEWORK</b>	<p><b>PEARLS Framework</b> (Promoting Excellence And Reflective Learning in Simulation)</p> <ol style="list-style-type: none"> <li>1. <b>Reactions</b> – Allow learners to express immediate thoughts or emotions.</li> <li>2. <b>Description</b> – Review what happened during the scenario.</li> <li>3. <b>Analysis</b> – Explore performance, decisions, and teamwork in depth.</li> <li>4. <b>Summary</b> – Identify takeaways and future clinical application.</li> </ol>
<b>DEBRIEFING QUESTIONS</b>	<ol style="list-style-type: none"> <li>1. <b>Reactions (Emotional Processing)</b> <ul style="list-style-type: none"> <li>● How did you feel during the scenario?</li> <li>● What was going through your mind when the patient's condition started to worsen?</li> <li>● Did anything surprise or frustrate you?</li> </ul> </li> <li>2. <b>Description (Establishing a Shared Mental Model)</b> <ul style="list-style-type: none"> <li>● Can someone summarize what happened in this case?</li> <li>● What was the patient's baseline presentation?</li> <li>● What key changes in the patient's status did you observe?</li> </ul> </li> <li>3. <b>Analysis (Critical Thinking and Clinical Judgment)</b> <p><b>Clinical Assessment:</b></p> <ul style="list-style-type: none"> <li>● What were the signs of deterioration you observed?</li> <li>● What led you to suspect sepsis or septic shock?</li> <li>● Were there any delays or missed cues?</li> </ul> <p><b>Communication and Teamwork:</b></p> <ul style="list-style-type: none"> <li>● How well did the team communicate?</li> <li>● Was the delegation of tasks effective?</li> <li>● How did you decide when and how to escalate to the physician?</li> </ul> <p><b>Interventions and Prioritization:</b></p> <ul style="list-style-type: none"> <li>● What interventions were initiated, and were they appropriate/timely?</li> <li>● How did you prioritize patient care?</li> <li>● How did medication administration (e.g., morphine, antibiotics) align with the patient's condition?</li> </ul> <p><b>Documentation and Handoff:</b></p> <ul style="list-style-type: none"> <li>● Was the documentation complete and accurate?</li> <li>● What could have been improved in the shift handoff or provider communication?</li> </ul> </li> <li>4. <b>Summary (Takeaway and Application)</b> <ul style="list-style-type: none"> <li>● What did you learn about managing sepsis in a deteriorating patient?</li> <li>● How can this experience influence your future practice?</li> <li>● What will you do differently next time you're in a similar situation?</li> </ul> </li> </ol>

**PART 4: OPERATOR PACKAGE**

**CASE FLOW**

STATE	PATIENT DATA	INSTRUCTIONS FOR OPERATOR	EXPECTED LEARNER BEHAVIOURS	PROMPTS, QUESTIONS & TEACHING POINTS
<p><b>#1</b> <b>Baseline:</b> <b>Post-op</b> <b>day 3</b></p>	<p><b>REPORT FROM OFFGOING RN</b> Male patient, 65 years, (kg dependant upon actor) 225lbs (100.4kg) Allergy: Penicillin (rash) Type 2 diabetes, Hypertension Post-op day 3 ruptured appendectomy with peritonitis - required lap and open surgery Current medical treatment for infection: IV cefazolin and metronidazole pre-surgery was not given -perc drain, not draining -on medical/surgical unit, NPO - Midline incision + lap site dressings D&amp;I One IV site: RL infusing @75ml/hr</p> <p><b>Baseline vital signs</b> HR: 117 BP 110/70 (MAP 83) RR: 20 Temp 37.8C O2: 96% on RA BG 9 mmol/L</p>	<p><b>Operator:</b></p> <p><b>Triggers:</b></p> <p><b>Cues:</b></p>		

<p><b>#2 Initial Assessment (~5 min)</b></p>	<p><b>CNS:</b> Oriented x 3 but drowsy (GCS 14 – drifted off to sleep but eyes open to voice/ "Verbal" AVPU), POC BG 9.1</p> <p><b>Pain:</b></p> <ul style="list-style-type: none"> <li>- <b>Onset:</b> got worse overnight</li> <li>- <b>Provocation/palliation:</b> the pain medicine didn't help much, feels worse when they touch my abdomen</li> <li>- <b>Region/radiation:</b> Right over the middle of my stomach, where the wound is</li> <li>- <b>Severity:</b> 6/10 still</li> <li>- <b>Timing:</b> Constant</li> </ul> <p><b>CV:</b> Skin warm, dry, pulses equal and bounding, brisk cap refill</p> <p><b>Resp:</b> room air, increased RR but no increased WOB, chest clear, decreased to bases, no cough</p> <p><b>GI:</b> remains nauseous, no emesis, abdomen tender near midline incision, hypoactive BS, passing flatus</p> <ul style="list-style-type: none"> <li>- Drain: no output</li> </ul>	<p><b>Operator:</b></p> <ul style="list-style-type: none"> <li>-Answer phone call as MRP, prompt students for various S/S as identified, prompt learners "Okay, what do you think is going on?"</li> <li>-Give orders for blood cultures, a lactate level, and VBGs or ABGs when learners verbalize concerns for sepsis no orders for antibiotics yet as the patient is already on them, will be by later this morning to check on them</li> <li>-If students ask about a fluid bolus, give order for 500mL normal saline, otherwise no fluid order.</li> </ul> <p><b>Cues:</b></p> <ul style="list-style-type: none"> <li>- "Are you going to look at my wound like the night nurse did?" -&gt; Drawing attention to potential infection source</li> <li>- "Oh wow that looks really red and swollen compared to yesterday"</li> <li>-Nod off and then reply when spoken to "Oh sorry, I just can't seem to stay awake..." -&gt; Drawing attention to altered LOC</li> <li>-"I'm surprised the doctor hasn't been by yet today... the residents have been checking on me pretty early in the mornings" -&gt; To prompt MD communication</li> </ul>	<ul style="list-style-type: none"> <li>-PERFORM FOCUSED ASSESSMENT + FULL SET OF VITAL SIGNS</li> <li>-ASSESS WOUND AND DRAIN OUTPUT</li> <li>-RECOGNIZE POSSIBLE SIGNS AND SYMPTOMS OF INFECTION/SEPSIS: GCS 14, INCREASED RR, INCREASED HR, BOUNDING PULSES, WOUND ERYTHEMA/EDEMA AND PAIN, QUERY DECREASED URINE OUTPUT, ELEVATED WBC ON AM BLOODWORK</li> <li>-COMMUNICATES INFORMATION TO THE HEALTHCARE TEAM</li> <li>-OBTAIN BLOODWORK AND BLOOD CULTURES (2 SETS!)</li> </ul>	<ul style="list-style-type: none"> <li>-Systematic approach to head-to-toe</li> <li>-Systematic, focused pain assessment</li> </ul>
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	<ul style="list-style-type: none"> <li>- Abdo dressings: D+I, when dressings are taken down - Lap sites: no issues; Midline incision: periwound erythema and edema noted</li> </ul> <p><b>GU:</b> Last voided sometime overnight, cannot recall when or the quality</p> <p><b>Vital signs:</b> Temp: 37.9 (when checked with probe) HR: 120 on auscultation/palpation RR: 22 BP: 102/68 (79) when applied SPO2: 95% on RA when oximeter applied</p>	<p><b>Triggers:</b> -Learners call MRP -Verbalize they suspect the patient has sepsis -Call the lab for STAT cultures/lactate/VBG or ABG or draw cultures/ lactate/VBG or ABG</p>		
<p><b>#3 Deterioration (~10 min)</b></p>	<p><b>CNS:</b> Confused, unable to remember family member's name. Not appropriately answering questions or repeating answers. Still nodding off and then waking up to questions (GCS 13, E3, V4, M6).</p> <p><b>Pain:</b> Remains unchanged</p> <p><b>CV:</b> Diaphoretic, hot/flushed, thready pulses, prolonged cap</p>	<p><b>Operator:</b> -Increase RR to 28 -Answer phone call Rapid response team/MRP according to student actions -If calling MRP; Give order for fluid bolus (500mL normal saline bolus, or instructions to give an additional 500mL if the first bolus is not effective), suggest they call the rapid</p>	<p>-RAPID RESPONSE TEAM CALLED -UTILIZE SEPSIS PROTOCOL, PRIORITIZING IV BOLUS MAY ALSO DO THE FOLLOWING INTERVENTIONS PER THE MEDICAL DIRECTIVE: OBTAIN 12-LEAD ECG, APPLY CARDIAC MONITOR, ORDER ADDITIONAL LABS, INSERT FOLEY CATHETER</p>	<p>-Importance of re-assessment in response to changes -Using medical directives -Monitoring signs of end-organ perfusion</p>

	<p>refill. ECG shows sinus tachycardia in the 130's, cardiac monitor, if applied, will show the same.</p> <p><b>Resp:</b> increased RR, chest auscultation unchanged</p> <p><b>GI:</b> remains unchanged</p> <p><b>GU:</b> Has not voided. If learners insert a foley catheter, 90mLs of amber urine is returned</p> <p><b>Vital signs:</b>  Temp: 38.2  HR: 134 on auscultation/palpation  RR: 28  BP: 94/54 (67)  SPO2: 91% on RA when oximeter applied</p>	<p>response team for prompt assessment</p> <p>-If calling Rapid Response Team, instruct to follow sepsis medical directive, inform learners that RRT will be by shortly.</p> <p>-If O2 is applied via nasal prongs, SPO2 increases to &gt;93%, if applied via NRB, SPO2 increases to 98%, if no O2 is applied, SPO2 will continue to drift</p> <p><b>Cues:</b></p> <p>- "Can you take these blankets off? I feel really flushed and sweaty"</p> <p>-After labs have been drawn/the lab has been called, patient can vocalize make a comment about not feeling well "Can you call my (daughter/son/spouse, etc.) and ask them to come in?" -&gt; Unable to remember family member's name.</p> <p><b>Triggers:</b></p> <p>Once the learners have called the rapid response team, accessed the sepsis medical directive and started the bolus, the lab can call to communicate critical results: the lactate level is 4.2, the pH is 7.12, pCO2 is 28, and the Bicarb is 15</p>	<p>-APPLY SUPPLEMENTAL OXYGEN</p>	
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<p><b>#4</b> <b>Further deterioration, rapid response team involvement (~5 min)</b></p>	<p><b>CNS:</b> Difficult to rouse, GCS 11 (E3, V3, M5). POC BG 10.1. <b>Pain:</b> unable to answer pain assessment. <b>CV:</b> Skin is now cool and mottled, cap refill is prolonged. Pulses thready. Sinus tachycardia (140s) if on monitor. <b>Resp:</b> Increased WOB/accessory muscle use, RR increased, chest remains clear but decreased to bases <b>GI:</b> remains unchanged <b>GU:</b> No further urine output if a foley has been inserted <b>Vital signs:</b> Temp: 38.3 HR: 143 RR: 32 BP: 88/48 (61) SPO2: 93% if on supplemental O2, high 80's if not previously started on supplemental O2</p>	<p><b>Operator:</b> -Increase RR to 32 -Answer phone call to MRP, once learners express concerns for septic shock, provide orders for vancomycin 1.5g STAT and an additional 1L bolus of Ringer's lactate to be rapidly infused. Inform the learner that they think the patient may require ICU consult and transfer to start on a vasopressor  <b>Cues:</b> -Patient to respond with more nonsensical answers/inappropriate words -RRT nurse to prompt learner to call MRP and share the indications of septic shock if not already done so -RRT nurse to prompt that we may need to ask the provider about different antibiotics  <b>Triggers:</b> -After administration of antibiotics, RRT nurse to state "I talked with my ICU physician and they want him brought down for further monitoring and to likely start on vasopressors. I am going to mix up norepinephrine, can you phone report to the ICU?"</p>	<p>-COMMUNICATES WITH MRP REGARDING INDICATIONS OF SEPTIC SHOCK (LACTATE &gt;2MMOL/L, SBP &lt;90 MMHG) AND ADVOCATES FOR APPROPRIATE ANTIBIOTIC THERAPY AND ESCALATION OF CARE. -COLLABORATES WITH RAPID RESPONSE TEAM UPON ARRIVAL, PROVIDING SBAR AND COMMUNICATING ASSESSMENT FINDINGS USING ABCDE APPROACH -PREPARE AND ADMINISTER IV ANTIBIOTICS (NEW ORDER FOR VANCOMYCIN) -PREPARE FOR ICU TRANSFER, PROVIDE REPORT TO ICU STAFF</p>	<p>-Warm shock (previous states) vs cool shock (current state)</p>
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## **PART 5: OPTIONAL APPENDICES**

### **DIAGNOSTIC TEST RESULTS**

	<b>T: 0600</b>	<b>T -1: 0615</b>	<b>T-2: 0545</b>	<b>T-3: 1635</b>	<b>Reference Values</b>
<b>Hematology</b>					
RBC	4.68	4.91	4.67	5.29	4-5.5 x10 <sup>12</sup> /L
Hb	145	146	145	155	125-170g/L
HCT	.44	.44	.43	.46	0.38-0.50L/L
MCV	85	84	85	85	80-100 fL
RDW	12.3	12.8	12.5	12.7	11.5-15.5%
Platelet	232	240	237	245	150-400x10 <sup>9</sup> /L
WBC	14.2	8.5	13.2	16.6	3.5-10.5x10 <sup>9</sup> /L
Neuts	9.56	4.54	8.7	11.65	2.0-7.5x10 <sup>9</sup> /L
Lymphs	3.7	3.0	3.6	3.85	0.8-3.5x10 <sup>9</sup> /L
Mono	.46	.45	.49	.63	0.1-1.0x10 <sup>9</sup> /L
Eosino	.38	.4	.41	.42	0-0.5x10 <sup>9</sup> /L
Baso	.02	.01	.01	.02	<0.02x10 <sup>9</sup> /L
<b>Chemistry</b>					
Glucose, random	9.0	11.1	10.2	11.7	4.0-11.0 mmol/L
Na	141	140	138	139	135-145 mmol/L
K	3.9	3.8	3.9	4.2	3.5-5.0 mmol/L
Cl	103	102	101	102	98-107 mmol/L
HCO <sub>3</sub>	25	29	29	28	22-30 mmol/L
BUN	3.9	4.0	4.1	3.8	2.5-6 mmol/L
Cr	98	91	95	90	62-106 µmol/L
GFR	66.6	72.5	69.0	73.5	mL/min/1.73 m <sup>2</sup>

### **IMAGES, XRAYS AND ECGS**

### **DEBRIEFING TOOLS**

### **EMBEDDED ACTOR SCRIPTS**

## CLINICAL ASSESSMENT TOOLS AND GUIDELINES

<b>Suspected Sepsis Medical Directive</b>
<b>Who may initiate</b>
- Any Registered Nurses (RNs) or Practical Nurses (LPNs/RPNs) on inpatient units
<b>Patient Criteria</b>
<ul style="list-style-type: none"> <li>- Adult inpatient (&gt;18 years of age)</li> <li>- With two or more of the following criteria: <ul style="list-style-type: none"> <li><input type="checkbox"/> Heart rate greater than 90 bpm</li> <li><input type="checkbox"/> Respiratory rate greater than 20 breaths per minute</li> <li><input type="checkbox"/> Temperature greater than or equal to 38C or less than 36C</li> <li><input type="checkbox"/> WBC greater than 12 or less than <math>4.0 \times 10^9/L</math></li> <li><input type="checkbox"/> Altered mental status</li> </ul> </li> </ul> <p>And a suspected source of infection</p>
<b>Interventions</b>
<ul style="list-style-type: none"> <li>- <b>The following lab investigations should be completed STAT if not already done so:</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> 2 sets of peripheral blood cultures</li> <li><input type="checkbox"/> 1 set of blood cultures from any indwelling central venous access device</li> <li><input type="checkbox"/> Urine C&amp;S</li> <li><input type="checkbox"/> Venous blood gas</li> <li><input type="checkbox"/> Venous lactate – <i>notify MRP immediately if lactate is greater than 2mmol/L</i></li> <li><input type="checkbox"/> CBC, INR, PTT, Electrolytes, BUN, creatinine, glucose, LFTS, lipase, troponin</li> </ul> </li> <li>- <b>Initial intravenous infusion and hydration orders</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Ensure at least one 20-gauge IV is in place. Consider insertion of second IV access.</li> <li><input type="checkbox"/> Start IV bolus: 500ml of 0.9% sodium chloride over 30 minutes, may repeat once</li> </ul> </li> <li>- Repeat vital signs, chest auscultation, and documentation prior to and after completion of each fluid bolus. Contact MRP if any change in vitals or clinical status.</li> <li>- <b>Antibiotics:</b> MRP to initiate appropriate antibiotic therapy within three hours of suspected sepsis identification, if deemed appropriate.</li> </ul>
<b>Monitoring</b>
<ul style="list-style-type: none"> <li>- 12-lead ECG, STAT and continuous cardiac monitoring if available</li> <li>- Vital signs q1h x 6h, then q4h x 12h</li> <li>- GCS q1h x 6h</li> <li>- Monitor urine output, may insert a foley catheter if necessary</li> <li>- Call MRP is any deterioration in vital signs or if urine output is less than 30ml/hr</li> <li>- Call MRP and rapid response team if: <ol style="list-style-type: none"> <li>1) Resp rate less than 10 or greater than 30</li> <li>2) O2 saturation is less than 90%</li> <li>3) Heart rate is less than 40 or greater than 140</li> <li>4) Systolic blood pressure is less than 90 mmHg</li> <li>5) Sudden change in LOC</li> <li>6) Urine output is less than 100mL in 4 hours</li> </ol> </li> </ul>

### **Urgent Considerations**

**Patient may have septic shock if they have a systolic blood pressure less than 90mmHg and/or a MAP of less than 65, and/or a lactate greater than 2 mmol/L.**

**In the presence of any of these findings, call the MRP and inform them that the patient may be in SEPTIC SHOCK and needs IMMEDIATE ASSESSMENT.**

**In suspected SEPTIC SHOCK, appropriate antibiotic therapy should be initiated within ONE HOUR.**

**Consider escalation of care through rapid response team or ICU consult if not already completed**