SIMULATION

# Sepsis Secondary to an Abdominal Wound Infection

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ABSTRACT:

**Audience:** This simulation was created for medical students and interns to teach the surviving sepsis guidelines.

**Introduction:** Infections and sepsis are common diagnoses seen in the emergency department (ED). It is important for physicians to recognize, differentiate and treat systemic inflammatory response syndrome (SIRS), sepsis, severe sepsis and septic shock. This case allows learners a safe environment in which to examine, diagnose and treat a patient with septic shock.

**Objectives:** At completion of this case learners should be able to:

1. Recognize and differentiate between systemic inflammatory response syndrome, sepsis, severe sepsis, and septic shock.
2. Prepare an appropriate differential diagnosis for a patient with sepsis.
3. Demonstrate appropriate fluid resuscitation and antibiotic therapy for a septic patient.
4. Demonstrate appropriate vasopressor therapy for a septic patient.
5. Understand and apply the Surviving Sepsis Guidelines.

**Method:** This case can use a high, medium or low fidelity simulation mannequin or a standardized patient. Alternatively, this case can also be used as an oral boards case.

**Topics:** Sepsis, wound infection, infectious disease, dermatology, shock.

# USER GUIDE

**List of Resources:**



**Learner Audience:**
Medical students and interns

**Time Required for Implementation:**
Instructor Preparation: 20-30 minutes
Time for case: 10-15 minutes
Time for debriefing: 10-30 minutes

**Recommended Number of Learners per Instructor:**
2-5

**Topics:**
Sepsis, wound infection, infectious disease, dermatology, shock.

**Objectives:**
By the end of this simulation session, the learner will be able to:

1. Recognition and differentiation of systemic inflammatory response syndrome, sepsis, severe sepsis, and septic shock
2. Prepare an appropriate differential diagnosis of a patient with sepsis
3. Demonstrate appropriate fluid resuscitation and antibiotic therapy for a septic patient
4. Demonstrate appropriate vasopressor therapy for a septic patient
5. Understand and apply the Surviving Sepsis Guidelines

**Linked objectives and methods:**
Early recognition and treatment of sepsis, severe sepsis and septic shock is imperative for patient survival.[1] This simulation allows learners to diagnose and treat a patient with septic shock in a safe environment. During this case the learners will learn how quickly a patient with sepsis can decompensate into shock. If the patient is managed appropriately she will improve with vasopressors; however, if not managed appropriately she will decompensate and lose pulses. This simulation case is based on the 2016 Surviving Sepsis Campaign recommendations for treatment of sepsis.

**Recommended pre-reading for instructor:**

- It is recommended that the instructor read the most recent "Surviving Sepsis Guidelines." At the time this simulation was created:
  Rhodes A, Evans LE, Alhazzani W, Levy MM, Antonelli M, Ferrer R, et al. Surviving Sepsis Campaign: international guidelines for management of sepsis and septic shock: 2016. *Intensive Care Med.* 2017;43(3):304-377. doi: 10.1007/s00134-017-4683-6.

**Learner responsible content:**

- After the case we strongly recommend you discuss the "Surviving Sepsis Campaign: International Guidelines for Management of Sepsis and Septic Shock: 2016" and have your student review appendix 1.

**Results and tips for successful implementation:**
This case can use a high, medium or low fidelity simulation mannequin or a standardized patient. Alternatively, this case can also be used as an oral boards case. The main objective of the case is to expose the learner to a septic patient in a safe environment. This case allows the learner to recognize SIRS, find the source of infection and recognize sepsis, severe sepsis and septic shock, as well as apply the Surviving Sepsis Guidelines. If the learners are having difficulty managing the patient's hypotension the nurse can help prompt the learner for fluid boluses and vasopressors when the patient is unresponsive to the fluid challenge. This case was initially piloted with 100+ fourth year medical students; some adjustments were made in the case to allow for easier diagnosis to allow the learners to focus on the treatment of septic shock. The students had very positive responses to the case and felt that the case was an important learning opportunity prior to the start of their intern year.

**References/suggestions for further reading:**


1. Rhodes A, Evans LE, Alhazzani W, Levy MM, Antonelli M, Ferrer R, et al. Surviving Sepsis Campaign: international guidelines for management of sepsis and septic shock: 2016. *Intensive Care Med.* 2017;43(3):304-377. doi: 10.1007/s00134-017-4683-6.

# INSTRUCTOR MATERIALS

**Case Title:** Sepsis Secondary to an Abdominal Wound Infection

**Case Description & Diagnosis (short synopsis):** The patient is a 75-year-old female who presents to the emergency department with complaints of fevers. She is post-op day 8 status post a total abdominal hysterectomy and bilateral salpingo-oopherectomy (TAHBSO) for endometrial hyperplasia and abnormal uterine bleeding. On arrival to the emergency department the patient is awake and able to provide her history. She is found to be febrile and hypotensive. Physical exam reveals that her abdominal incision is erythematous, indurated and has purulent discharge draining from the central portion of the incision. Given the abnormal vital signs and the physical exam consistent with an infected surgical site, the learners should recognize that the patient meets criteria for sepsis. Surviving Sepsis Guidelines should be initiated, with the learner requesting blood work, blood cultures, urine, chest x-ray, a 30cc/kg bolus of fluids and administration of antibiotics. When the patient's blood pressure does not improve with fluid bolus and she does not produce urine, the learner should recognize that the patient meets criteria for septic shock; they should place a central line and initiate vasopressor therapy, preferably with norepinephrine (levophed). The patient will require admission to the intensive care unit (ICU).

**Equipment or Props Needed:**
High, moderate or low fidelity mannequin
Infusion pumps
Normal saline
Prop antibiotics
Cardiac monitor
Intravenous (IV) catheter and lines
Pulse oximeter
Blood pressure cuff
Crash Cart with defibrillator

Optional:
Central line kit
Central line task trainer
Arterial line kit
Arterial line task trainer

# INSTRUCTOR MATERIALS

**Confederates needed:**
If no simulation mannequin is available a standardized patient or faculty member could be used as the patient
Nurse to assist with the management of the patient
Intensivist (via phone)

**Stimulus Inventory:**
#1 Chest X-ray (CXR)
#2 Electrocardiogram (ECG)
#3 Complete blood count (CBC)
#4 Comprehensive metabolic panel (CMP)
#5 Lactate
#6 Urinalysis
#7 Wound photograph

**Background and brief information:** The scenario takes place in an ED at a tertiary care teaching hospital. The patient is a 75-year-old female who presents with complaints of fever and "just not feeling well." The patient is febrile and hypotensive on arrival.

**Initial presentation:** The patient presents from home, by herself with no family present.

**How the scenario unfolds:** On arrival the patient will be awake but lethargic; she is initially able to provide her history and answers questions with only mild difficulty. Learners should recognize the patient as unstable or sick, and request the patient be placed on the monitor, given oxygen and have an IV placed with blood work drawn. Initial vitals will reveal that the patient is febrile, tachycardic and mildly hypotensive. Participants should recognize that the patient meets SIRS criteria and consider that the patient could be septic, prompting them to perform a thorough history and physical exam and consider possible sources of infection—they may request blood cultures and initiate fluids at this time. The patient will note that she has few medical problems aside from her TAHBSO 8 days prior. On physical exam the patient will be found to have an erythematous and indurated incision that is leaking purulent material. After discovery of the infectious source the learners should request antibiotics be given. Complete blood count will reveal an elevated white blood cell count; complete metabolic profile will be concerning for end organ damage with an elevated creatinine, as well as an elevated lactic acid.

# INSTRUCTOR MATERIALS

Despite appropriate fluids and antibiotics, the patient will remain hypotensive, anuric and continue to decompensate. Learners may request additional fluids; however, the patient's blood pressure will not improve. Ultimately the patient will require placement of a central line and initiation of vasopressors, preferably norepinephrine (if the learner requests alternative vasopressors the examiner may decide that they are not available to encourage the learner to choose norepinephrine, which is the appropriate first line pressor). If the examiner wishes to make the case more complicated, a task trainer could be provided to the learner to place a central line on, or the learner could be asked to verbally walk through the steps of central line placement. If the patient is managed properly her blood pressure will improve with appropriate vasopressor initiation, and she will require admission to the ICU.

Should the learner fail to initiate the appropriate therapy at any step, the patient will decompensate acutely with worsening tachycardia and hypotension. If the step is corrected she will improve mildly; however, the course will remain the same. If the learners do not correct their mistake the patient will degrade, becoming unresponsive and requiring intubation, and then further into pulseless electrical activity, requiring CPR and ACLS. Despite appropriate care at this time she will expire.

**Critical Actions:**

1. Assess airway, breathing, circulation.
2. Establish intravenous access.
3. Place the patient on a cardiac monitor and pulse oximeter.
4. Recognize that the patient meets SIRS criteria.
5. Initiate empiric antibiotic therapy.
6. Ensure aggressive fluid resuscitation at 30cc/kg.
7. Recognize that the patient's blood pressure does not improve after fluid boluses, and initiate vasopressors.
8. Place a central line.
9. Admit the patient to the MICU.

# INSTRUCTOR MATERIALS

**Case Title:** Sepsis Secondary to an Abdominal Wound Infection

**Chief Complaint:** Fevers and "just not feeling well"

**Vitals:** Heart Rate (HR) 132 Blood Pressure (BP) 98/45 Respiratory Rate (RR) 20
Temperature (T) 39.5°C Oxygen Saturation ($O_2$Sat) 98% on room air

**General Appearance:** lethargic appearing, diaphoretic

**Primary Survey:**

- **Airway:** patent
- **Breathing:** clear bilaterally with shallow respirations
- **Circulation:** delayed capillary refill

**History:**

- **History of present illness:** Ms. Mendes is a 75-year-old Hispanic female is POD #8 from a total abdominal hysterectomy. She presents to the ED with complaints of fevers. The patient states that she "just doesn't feel good." She reports that she has been having subjective fevers for the last 2 days. Today she checked her temperature and it was 102.0°F orally. She reports mild nausea, but no vomiting and keeps repeating that she "just does not feel well." The patient endorses mild dysuria, she denies any cough, shortness of breath, chest pain, sore throat, leg pain, leg swelling or history of deep venous thrombosis or pulmonary embolism.
- **Past medical history:** hypertension (HTN), vaginal bleeding, fibroids
- **Past surgical history:** total abdominal hysterectomy and bilateral salpingo-oophorectomy (TAHBSO) 8 days ago
- **Patients medications:** atenolol 25mg daily, Norco 5/325 q4h PRN pain
- **Allergies:** No known drug allergies
- **Social history:** denies smoking, alcohol or drugs. Lives alone at home with no family near by
- **Immunizations**: up to date
- **Family history:** denies any pertinent family history

**Secondary Survey/Physical Examination:**

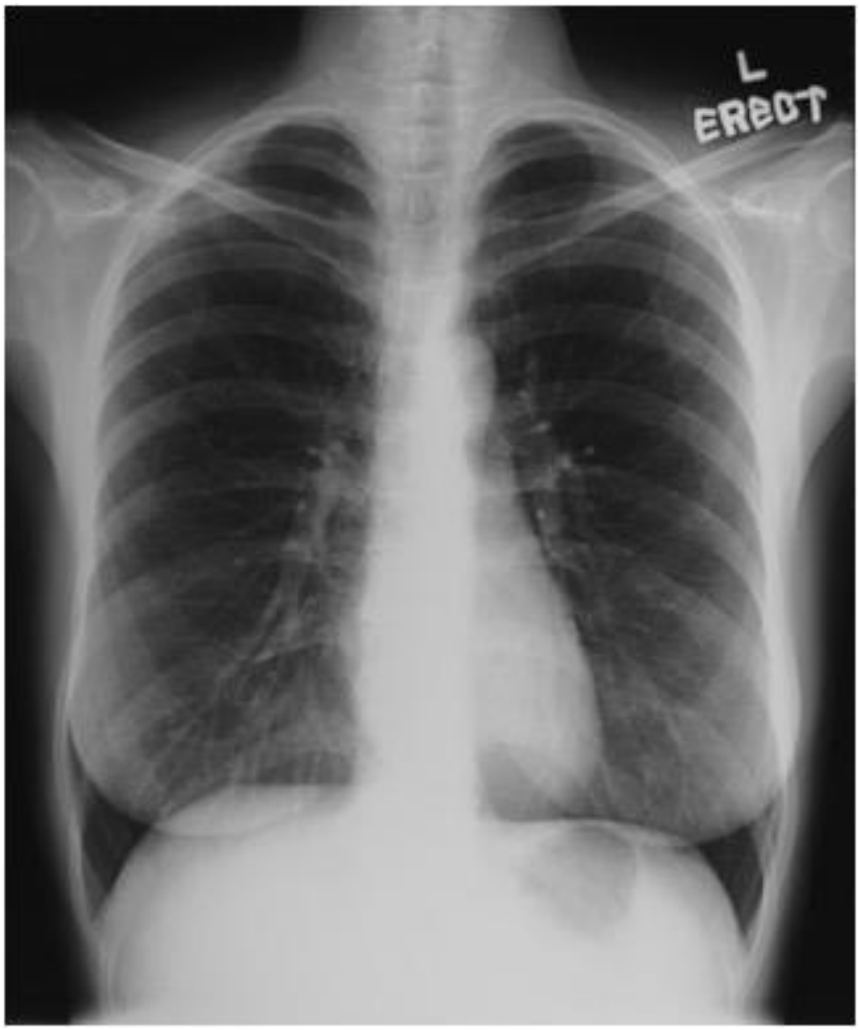
- **General appearance:** lethargic, mild distress, diaphoretic
- **Head, ears, eyes, nose and throat (HEENT):** within normal limits

# INSTRUCTOR MATERIALS

- **Neck:** within normal limits
- **Heart:** tachycardic, regular rhythm, no murmurs
- **Lungs:** clear to auscultation, shallow respirations, mildly tachypneic, no rhonchi, no wheezes, no crackles
- **Abdominal/GI:** the patient's abdominal incision is erythematous, indurated and mildly dehisced in the middle. When pressed 2-3 cc of purulent drainage is expressed. The patient reports pain with palpation of the area; however, there is not rebound or guarding on general abdominal examination
- **Genitourinary:** within normal limits
- **Rectal:** within normal limits
- **Extremities:** delayed capillary refill, no edema, otherwise within normal limits
- **Back:** within normal limits
- **Neuro:** awake, lethargic, GCS 15, moving all extremities, sensation intact
- **Skin:** dry, abdominal incision per above
- **Lymph:** within normal limits
- **Psych:** within normal limits

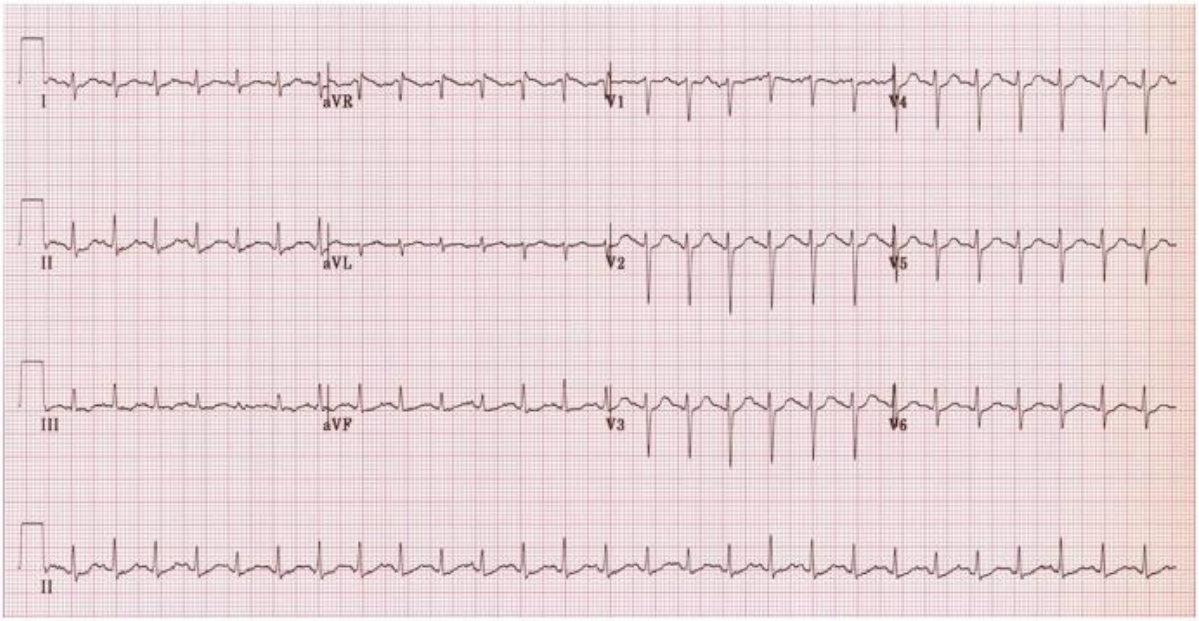
**Results:**

*Chest X-ray:* Normal (author's own image)



# INSTRUCTOR MATERIALS

*Electrocardiogram (EKG):* sinus tachycardia (author's own image)




*Complete blood count (CBC)*

| | |
|---|---|
| White blood count (WBC) | 16 x1000/mm$^3$(H) |
| Hemoglobin (Hgb) | 13.9 g/dL |
| Hematocrit (HCT) | 40.2% |
| Platelet (Plt) | 467 x1000/mm$^3$ |
| Differential | |
| PMN | 85% |
| Bands | 10% |
| Lymphocytes | 5% |
| Basophils | 0% |
| Eosinophils | 0% |

*Complete metabolic panel (CMP)*

| | |
|---|---|
| Sodium | 135 mEq/L |
| Chloride | 105 mEq/L |
| Potassium | 4.0 mEq/L |
| Bicarbonate ($HCO_3$) | 12 mEq/L (L) |
| Blood Urea Nitrogen (BUN) | 22 mg/dL (H) |
| Creatine (Cr) | 2.1 mg/dL (H) |
| Glucose | 115 mg/dL |

# INSTRUCTOR MATERIALS

*Lactic Acid*

| | |
|---|---|
| Lactate | 4 mmol/L |

*Urinalysis*

| | |
|---|---|
| Color | dark |
| Protein | trace |
| Leukocyte esterase | moderate |
| Nitrite | moderate |
| Red blood cells (RBC) | 26 /HPF |
| White blood cells (WBC) | >182 /HPF |
| Squamous epithelial | < 1 /HPF |

*Wound Photograph* (author's own image)

# OPERATOR MATERIALS

## SIMULATION EVENTS TABLE:

| Minute (state) | Participant action/ trigger | Patient status (simulator response) & operator prompts | Monitor display (vital signs) |
|---|---|---|---|
| 0:00 (Baseline) | Obtain history, examine patient, evaluate symptoms, notice fever | The patient reports not feeling well. Abdominal exams pain near the wound. The patient denies cough, SOB, headache, or chest pain | T 39.5<br>HR 132<br>BP 98/45<br>RR 20<br>O2 98% RA |
| 2:00-3:00 | Send off labs: CBC, CMP, CXR, UA, ECG, lactate<br><br>Place 2 large bore IVs Give fluid bolus | If fluids are initiated, patient maintains level of consciousness, but becomes more hypotensive<br><br>If fluids are not initiated, patient becomes less responsive (moaning, etc) | T 39.5<br>HR 132<br>BP 78/40<br>RR 20<br>O2 98% RA |
| 3:00-5:00 | Initiate antibiotics (broad spectrum)<br><br>Repeat blood pressure, consider IVC ultrasound or additional fluids | Patient remains responsive if team is managing patient appropriately<br><br>Becomes unresponsive requiring intubation if not managing patient correctly | T 39.5<br>HR 132<br>BP 78/40<br>RR 20<br>O2 98% RA<br><br>T 39.5<br>HR 142<br>BP 70/40<br>RR 20<br>O2 95% RA |
| 5:00-7:00 | Initiate antibiotics (broad spectrum)<br><br>Initiate norepinephrine for shock | Remains responsive if team is managing patient appropriately<br><br>Becomes unresponsive requiring intubation if not managing patient correctly | T 38<br>HR 121<br>BP 95/65<br>RR 20<br>O2 98% RA HR (if proper management)<br><br>T 39.5<br>HR 141<br>BP 62/39<br>RR 20<br>O2 98% RA |

# OPERATOR MATERIALS

| Minute (state) | Participant action/ trigger | Patient status (simulator response) & operator prompts | Monitor display (vital signs) |
|---|---|---|---|
| | | | (if not managing correctly) |
| 7:00-9:00 | Start central line, continue vasopressors<br><br>(May need intubation if case not going well) | Patient condition improves, mental status improves if all critical actions done<br><br>If the patient is not managed appropriately, the patient will degrade into PEA (pulseless electrical activity) | T 38<br>HR 103<br>BP 105/63<br>RR 18<br>O2 98% RA HR (if proper management)<br><br>T 39.5<br>HR PEA<br>BP --<br>RR --<br>O2 --<br>(if not managing correctly) |
| (Case Completion) | Admit patient to the ICU. | Patient condition improves, mental status improves if all critical actions done<br><br>If the patient is not managed appropriately, the patient will degrade into PEA. | T 38<br>HR 103<br>BP 105/63<br>RR 18<br>O2 98% RA HR (if proper management)<br><br>T 39.5<br>HR PEA<br>BP --<br>RR --<br>O2 --<br>(if not managing correctly) |

**Diagnosis:**
Septic shock from an abdominal wound infection

**Disposition:**
Admit the patient to the ICU

# DEBRIEFING AND EVALUATION PEARLS

## Sepsis

**SIRS**: Temperature >38°C (100.4°F) or < 36°C (96.8°F)
Heart rate > 90
Respiratory rate > 20 or $PaCO_2$ < 32 mm Hg
WBC > 12,000/$mm^3$, < 4,000/$mm^3$, or > 10% bands

**Sepsis:** SIRS + source of infection

**Severe sepsis:** sepsis + organ dysfunction

**Septic shock:** sepsis with hypotension despite adequate fluid resuscitation

**qSOFA:** a bedside assessment that can identify patients who are at greater risk for poor outcomes from sepsis. One point for low blood pressure (SBP≤100 mmHg), high respiratory rate (≥22 breaths per min) or altered mentation (Glasgow coma scale<15).

According to the "Surviving Sepsis Campaign: International Guidelines for Management of Sepsis and Septic Shock: 2016," crystalloid fluids should be given in boluses of 30 mL/kg within first 3 hours until perfusion improves or signs of fluid overload develop. Fluid may be given through two large-bore IVs.

Signs of improvement in perfusion include improved blood pressure, capillary refill, mental status, and urine output. Signs of fluid overload include crackles on lung examination, respiratory distress, and hepatomegaly.

The Surviving Sepsis Guidelines recommend an initial target mean arterial pressure of 65 mmHg in patients with septic shock requiring vasopressors, as well as guiding resuscitation to normalize lactate in patients with elevated lactate levels.

In patients with septic shock, the Surviving Sepsis Guidelines recommend the first line vasopressor be norepinephrine or levophed, and second line be dopamine.

Surviving Sepsis Guidelines recommend that broad spectrum IV antibiotics be given as soon as possible and preferably within one hour of recognition of severe sepsis and septic shock. Further, they recommend starting with broad spectrum antibiotics and then narrowing coverage when cultures are available.

# DEBRIEFING AND EVALUATION PEARLS

1. What are possible sources of infection in this patient and what are appropriate labs/imaging/other tests?
   - Urinary tract infection - UA, Urine culture with sensitivities
   - Pyelonephritis- UA, Urine culture, renal ultrasound looking for possible abscess, hydronephrosis, renal abnormalities
   - Pneumonia- chest x-ray, CBC with differential, sputum culture
   - Bacteremia - CBC with differential, Blood cultures from 2 sites
   - Meningitis- LP (lumbar puncture), CSF (cerebrospinal fluid) culture, physical exam findings: neurologic exam, Kernig, Brudzinski, nuchal rigidity
   - Wound Infection – Wound examination

2. What are possible causes of shock and what leads them to cause hemodynamic instability?
   - Septic shock - diffuse vasodilation due to cytokine release
   - Neurogenic shock- loss of muscular tone around arteries and veins
   - Anaphylaxic shock- histamine release leading to vasodilation
   - Cardiogenic- decreased cardiac output leading to hypotension
   - Hypovolemic shock- loss of blood volume

3. What are steps that need to be taken when a patient becomes hypotensive?
   - Place 2 large bore IVs, start fluid boluses
   - IV antibiotics within 1 hour
   - If the patient's BP doesn't improve after fluids, start pressors as necessary to maintain MAP (mean arterial pressure) >65mmHg (norepinephrine preferred)
   - Place central line for pressors
   - Place A-line to monitor BP closely

**Other debriefing points:**

**1. How do you think it went?**

**2. What do you think was going on with the patient?**

**3. What possible differentials were you considering and how could you assess for each?**

**4. What made you think it was sepsis? How do you qualify a patient (their vitals and labs) as sepsis?**

**5. What are steps necessary to take in a patient with supposed sepsis?**

# DEBRIEFING AND EVALUATION PEARLS

**Wrap Up:** *We recommend reading Appendix 1 of the "*Surviving Sepsis Campaign: International Guidelines for Management of Sepsis and Septic Shock: 2016." Available at: https://www.ncbi.nlm.nih.gov/pubmed/28101605. doi: 10.1007/s00134-017-4683-6.

# SIMULATION ASSESSMENT

*Sepsis Secondary to an Abdominal Wound Infection*

Learner: _____

***Assessment Timeline***

This timeline is to help observers assess their learners. It allows observer to make notes on when learners performed various tasks, which can help guide debriefing discussion.

| **Critical Actions** | 0:00 |
|---|---|
| 1. Assess airway, breathing, circulation.<br>2. Establish intravenous access.<br>3. Place the patient on a cardiac monitor and pulse oximeter.<br>4. Recognize that the patient meets SIRS criteria.<br>5. Initiate empiric antibiotic therapy.<br>6. Ensure aggressive fluid resuscitation at 30cc/kg<br>7. Recognize that the patient's blood pressure does not improve after fluid boluses, and initiate vasopressors.<br>8. Place a central line.<br>9. Admit the patient to the MICU. | |

# SIMULATION ASSESSMENT

*Sepsis Secondary to an Abdominal Wound Infection*

Learner: _____

**Critical Actions:**

☐ Assess airway, breathing, circulation.
☐ Establish intravenous access.
☐ Place the patient on a cardiac monitor and pulse oximeter.
☐ Recognize that the patient meets SIRS criteria.
☐ Initiate empiric antibiotic therapy.
☐ Ensure aggressive fluid resuscitation at 30cc/kg.
☐ Recognize that the patient blood pressure does not improve after fluid boluses, and initiate vasopressors.
☐ Place a central line.
☐ Admit the patient to the MICU.

**Summative and formative comments:**

Standardized assessment form for simulation cases. JETem © Developed by: Megan Osborn, MD, MHPE; Shannon Toohey, MD; Alisa Wray, MD
Wray A. Sepsis Secondary to an Abdominal Wound Infection. JETem 2018. 3(2):S61-80.
https://doi.org/10.21980/J8PS60

# SIMULATION ASSESSMENT

*Sepsis Secondary to an Abdominal Wound Infection*

Learner: _____

**Milestones assessment:**

| | Milestone | Did not achieve level 1 | Level 1 | Level 2 | Level 3 |
|---|---|---|---|---|---|
| 1 | **Emergency Stabilization (PC1)** | ☐ Did not achieve Level 1 | ☐ Recognizes abnormal vital signs | ☐ Recognizes an unstable patient, requiring intervention<br><br>Performs primary assessment<br><br>Discerns data to formulate a diagnostic impression/plan | ☐ Manages and prioritizes critical actions in a critically ill patient<br><br>Reassesses after implementing a stabilizing intervention |
| 2 | **Performance of focused history and physical (PC2)** | ☐ Did not achieve Level 1 | ☐ Performs a reliable, comprehensive history and physical exam | ☐ Performs and communicates a focused history and physical exam based on chief complaint and urgent issues | ☐ Prioritizes essential components of history and physical exam given dynamic circumstances |
| 3 | **Diagnostic studies (PC3)** | ☐ Did not achieve Level 1 | ☐ Determines the necessity of diagnostic studies | ☐ Orders appropriate diagnostic studies.<br><br>Performs appropriate bedside diagnostic studies/procedures | ☐ Prioritizes essential testing<br><br>Interprets results of diagnostic studies<br><br>Reviews risks, benefits, contraindications, and alternatives to a diagnostic study or procedure |
| 4 | **Diagnosis (PC4)** | ☐ Did not achieve Level 1 | ☐ Considers a list of potential diagnoses | ☐ Considers an appropriate list of potential diagnosis<br><br>May or may not make correct diagnosis | ☐ Makes the appropriate diagnosis<br><br>Considers other potential diagnoses, avoiding premature closure |

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*Sepsis Secondary to an Abdominal Wound Infection*

Learner: _____

| | Milestone | Did not achieve level 1 | Level 1 | Level 2 | Level 3 |
|---|---|---|---|---|---|
| 5 | **Pharmacotherapy (PC5)** | ☐ Did not achieve Level 1 | ☐ Asks patient for drug allergies | ☐ Selects an medication for therapeutic intervention, consider potential adverse effects | ☐ Selects the most appropriate medication and understands mechanism of action, effect, and potential side effects<br><br>Considers and recognizes drug-drug interactions |
| 6 | **Observation and reassessment (PC6)** | ☐ Did not achieve Level 1 | ☐ Reevaluates patient at least one time during case | ☐ Reevaluates patient after most therapeutic interventions | ☐ Consistently evaluates the effectiveness of therapies at appropriate intervals |
| 7 | **Disposition (PC7)** | ☐ Did not achieve Level 1 | ☐ Appropriately selects whether to admit or discharge the patient | ☐ Appropriately selects whether to admit or discharge<br><br>Involves the expertise of some of the appropriate specialists | ☐ Educates the patient appropriately about their disposition<br><br>Assigns patient to an appropriate level of care (ICU/Tele/Floor)<br><br>Involves expertise of all appropriate specialists |
| 9 | **General Approach to Procedures (PC9)** | ☐ Did not achieve Level 1 | ☐ Identifies pertinent anatomy and physiology for a procedure<br><br>Uses appropriate Universal Precautions | ☐ Obtains informed consent<br><br>Knows indications, contraindications, anatomic landmarks, equipment, anesthetic and procedural technique, and potential complications for common ED procedures | ☐ Determines a back-up strategy if initial attempts are unsuccessful<br><br>Correctly interprets results of diagnostic procedure |

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*Sepsis Secondary to an Abdominal Wound Infection*

Learner: _____

| | Milestone | Did not achieve level 1 | Level 1 | Level 2 | Level 3 |
|---|---|---|---|---|---|
| 20 | **Professional Values (PROF1)** | ☐ Did not achieve Level 1 | ☐ Demonstrates caring, honest behavior | ☐ Exhibits compassion, respect, sensitivity and responsiveness | ☐ Develops alternative care plans when patients' personal beliefs and decisions preclude standard care |
| 22 | **Patient centered communication (ICS1)** | ☐ Did not achieve level 1 | ☐ Establishes rapport and demonstrates empathy to patient (and family) Listens effectively | ☐ Elicits patient's reason for seeking health care | ☐ Manages patient expectations in a manner that minimizes potential for stress, conflict, and misunderstanding.<br><br>Effectively communicates with vulnerable populations, (at risk patients and families) |
| 23 | **Team management (ICS2)** | ☐ Did not achieve level 1 | ☐ Recognizes other members of the patient care team during case (nurse, techs) | ☐ Communicates pertinent information to other healthcare colleagues | ☐ Communicates a clear, succinct, and appropriate handoff with specialists and other colleagues<br><br>Communicates effectively with ancillary staff |

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