

PART TWO – SESSION MATERIALS

Session Title: AHRQ Sepsis In-Situ – SP Adult

Please indicate the type of session by checking the appropriate box:

Case Scenario

Skills (Procedure) Station

Small Group Discussion

Computer-Based Learning

Simulation Enhanced Didactic

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Curriculum Title: AHRQ Sepsis Grant

Author 1: Lisa Barker, MD FACEP

Dept/Institution: Emergency Medicine/OSFMC; Jump

Author 2: Andrew Vincent, DO

Dept/Institution: Emergency Medicine/OSFMC

2.1 SESSION SNAPSHOT

**Intended Learner Group(s):**

Clinical care teams in regional EDs

**Program Goals:**

**Interprofessional/ multidisciplinary goals:**

1. Seamless integration of telehealth into the care of septic patients by inter-professional and multi-disciplinary teams throughout a multi-site healthcare ministry. Improvement in transitions of care and optimization of transfer decisions across our system.
2. Demonstration of teamwork and communication skills within an inter-professional team as per Teamstepps skills domains (team structure, communication, situational monitoring, mutual support, leadership)
3. Individual performance is important but contributory to total team performance.That team begins with the resuscitation team on site with the patient, and is extended to and incorporates the input of remote team members.
4. Demonstrate the value of telehealth engagement in the care of ED sepsis patients in a [simulated] busy ED environment
   * 1. Patient monitoring
     2. Compliance with bundle
     3. Minimize extra work

**Clinical Goals:**

1. Physician, nurse, and team accountability for optimal resuscitation as guided by the Surviving Sepsis Guidelines.
   * 1. Special emphasis on getting access
     2. Administering IVF
     3. Documenting IVF
     4. Focused clinical exam
     5. Repeat lactate
2. Improving patient care outcomes in sepsis through the product of total team commitment to shared goals and objectives which include meeting SSCG and use of telehealth.
3. Practice use of telehealth operations.
   1. It is not only anticipated but **expected** that TeleICU team members participate in the collegial management of the patient as a Team Member.
4. Promote positive team practices such as role delineation, verbal communication (shared mental models/situational awareness)
5. Identify barriers to telehealth engagement in the ED setting

**Pre-Learning to be completed before session (if any):**

1. Sepsis overview (Healthstream)
2. Sepsis definitions
3. BPA data
4. Three telehealth videos:
   * 1. Intro to telehealth
     2. Successful communication via Telehealth VIdeo
     3. Telehealth Demonstration Case

**Learning Objectives:**

Following participation in this session, learners will be able to:

1. Knowledge
   1. Define severe sepsis and septic shock according to the CMS guidelines effective 10/1/2015
   2. List the CMS quality measures for the care of patients with sepsis
   3. Describe the components of the Focused Clinical Exam
2. Skills – Behavioral
   1. Maintain situational awareness through verbalization of patient status to team members
   2. Demonstrate initial steps in management of shock per SSCG and department protocols
   3. Demonstrate collegial engagement of telehealth resources
3. Attitude
   1. Appreciate the benefits of telehealth engagement in critically ill patients
   2. Describe opportunities to utilize telehealth as a resource

**Scenario Objectives:**

1. Identify multiple possible sources of fever in the paraplegic patient.
2. Orders diagnostic tests in the sepsis panel:
   * 1. Blood cultures x 2
     2. Lactate
     3. Urine Culture
     4. CXR
3. Move telehealth cart into room after BPA fires
   * + 1. Introduces telehealth RN as part of the care team
4. Work collaboratively with telehealth to meet SSCG/CMS guidelines.
   * 1. Delivers minimum 30mL/kg IVF after patient develops septic shock (Act III)
     2. Identifies need for 6 hour lactate
     3. Identifies need for repeat focused clinical exam
     4. IV vasopressors started after patient does not respond to fluid bolus
5. Describe perceived barriers to telehealth utilization based on their role and clinical setting after each “Act” in the scenario
   * 1. Initial assessment
     2. Change in patient status

**Session Description:**

Inter-professional Standardized Patient scenario where learners participate in the ED evaluation and management of an initially stable septic patient (55yo) T12 paraplegic with fever. Patient will deteriorate during his ED course. Aggressive fluid resuscitation and pressor support will be required for patient to stabilize. Advanced airway management and/or advanced vascular access (CVC, IO) is not required.

Engagement of telemedicine (eICU) is also desired and will be practiced at specific stop-points in the scenario.

2.2 SESSION EQUIPMENT

Please indicate all equipment required for this educational session. This includes any medical or educational supplies or equipment.

**Additional Setup (Non-Medical Equipment)**

|  |  |
| --- | --- |
| ITEM | Quantity |
| ALSi or SimMan monitor-laptop | 1 |
| SimScreen(s) | Choose an item. |
| CISCO Phone/Confederate Phone Click here to enter text. | |
| AV Needs (please describe): Continuous filming of scenario with portable video setup | |

***Note:*** *The above lists include equipment available from Jump.*

*If any other items are needed for this session, please list them below and note the source.*

*If you would like Jump to provide disposable supplies, please provide Peoplesoft number and allow two weeks for delivery.*

|  |  |  |  |
| --- | --- | --- | --- |
| **ITEM** | **SOURCE** | **PEOPLESOFT NUMBER** | **QUANTITY** |
| Central Line mockup | Jump | Click here to enter text. | 1 |
| eICU telemedicine cart | eICU/in-situ ED | Click here to enter text. | 1 |
| 22g IV bypass setup RAC, 1st access  18g IV hidden on LAC | Jump | Click here to enter text. | 1 |
| Empty IVF bags (NS) | Jump |  | 3 |
| 1L NS IVF bags – unspiked | In-situ ED (or Jump) |  | 2 Per Session |
| 1L NS IVF bag – can be already spiked (re-use) | Jump |  | 1 |
| Zosyn/Vanco | JUMP |  | 1 Per Session |
| Levophed | Jump |  | 1 Per Session |
| Studio Code Setup | Jump |  |  |

2.3 SESSION ENVIRONMENT

|  |  |
| --- | --- |
| **SIMULATION VENUES** | |
| Anatomical Skills Lab | Virtual ICU (for practice sessions only) |
| Innovation Lab | Virtual OR/Trauma Bay |
| Regional Transport Center | Virtual Patient Unit |
| Studio Apartment | Virtual Reality (Surgical Skills) Lab |
| Skills Lab | Workstation & Med Room |
| **DEBRIEFING VENUES** | |
| Briefing Theater | Debriefing Room |
| **CONFERENCE CENTER** | |
| Auditorium | Lecture Hall |
| Board Room | Pre-Function Space |
| Conference Room |  |

**In-Situ (list clinical space):** Regional ED

**Off-Site (please describe):** SJH (Pontiac) and SMMC **(**Galesburg)

**Room and Materials Setup**

Standardized patient on ED gurney in patient room in age-appropriate patient gown. Airway or other supplies expected in the ED patient care room should be confirmed prior and provided by the unit. This patient will have just been placed in the room following nurse triage in ED and will not be on the monitor, but will have mocked-up 22g IV access.

Also need second IV bypass set up attached to an 18g IV in case team orders second IV to be placed. IF they ask for CVC, it just gets taped on. Peripheral norepi is OK via a good flowing line.

2.4 SCENARIO SETUP

|  |
| --- |
| **Documents Included** |
| Scenario Setup Form – for vital signs on monitor |
| Patient Background (for manikin patients) |
| Standardized Participant(s) - Patient |
| Other: |
| 1. eICU Scripting guidelines 2. EMS report script |
| **N/A** – this session does not include case scenarios |

**Patient Information:**

**CC**: Fever **PMHx:** T12 Paraplegia, HTN **Weight**: 100kg (per SP) **Allergies:** NKDA

**Clinical Setting:** Regional ED

|  |  |  |  |
| --- | --- | --- | --- |
| **STATE NAME** | **VITAL SIGNS** | **EXAM/ADDL MANIKIN INFO** | **ACTIONS DESIRED** |
| **ACT ONE:**  Initial Presentation | *Temp: 101.4*  *HR:* 102  *BP: 130/70*  *RR: 18*  *SPO2: 98% on RA* | History per Background Info  Arrival time about 20 minutes ago  Moulage [wound, foley,22g IV R AC] | 1. Primary /Secondary Survey 2. Identifies SIRS criteria 3. Septic Workup Initiated 4. Place pt on Monitor |
| ***TRANSITIONS***: 1**.** If Tylenol given , lower temp to 99.5. 2. After labwork ordered (minimum CBC), BREAK for Debrief 1  **\*Simulation Specialist calls telehealth to begin ACT 2 : eICU calls to notify bedside RN that BPA has fired.** | | | |
| **ACT TWO:**  BPA fired | *HR: 120*  *BP: 92 / 60*  *RR: 20*  *SPO2: 98%* | Display labwork, CXR, ECG if ordered | Make contact with Telehealth   1. RN bring machine to bedside 2. Introductions. 3. Initial transfer of information 4. Telehealth recommendations re: any missing bundle elements 5. IVF bolus |
| ***TRANSITIONS:*** 1**.** If 1L IVF given , decrease HR to 110 over 1 minute. 2. After cart set-up, and orders verified [blood cx, urine cx, CXR, lactate, IVF], BREAK for Debrief #2  3. Go to ACT THREE when eICU calls to notify bedside RN that patient status appears to have changed | | | |
| **ACT THREE:**  Septic Shock  (2 hours elapsed) | *HR: 136*  *BP: 80/40*  *RR: 22*  *SPO2: 98%* | **2 or 3 empty IV bags hanging,** third one running.(depends on SP weight)  Eyes closed, drowsy  “I’m not feeling well – I feel weak” if stimulated  \*Lactate available upon arrival | Identify/verbalize septic shock to the team  Discuss change in status with telehealth team  Start norepinephrine  Discuss transport needs, discuss treatment plan with eICU. |
| ***TRANSITIONS:***   1. If Central Line ordered/started, apply mockup to chest of SP. 2. If pressors started and disposition arranged, go to Ready for Transfer over 1 minute 3. After call to transfer services, case ends, Debrief #3 | | | |
| Ready for Transfer | *HR: 104*  *BP: 110/60*  *RR: 18*  *SPO2: 98%* |  | Case ends with call to transfer services |

**Moulage:** 22G IV bypass bag on patient, sacral decubitus ulcer, indwelling foley catheter (taped to leg) with cloudy urine in bag, CVC mockup

**Multimedia:** CXR, ECG, labs [CBC, CMP, UA, Lactate] **Monitor Setup:** ED [manual BP, ECG, Pox]

EMS Run Script

Medic 23 is bringing in a 55 year old male from NH for complaint of fever.

Past medical history includes HTN and paraplegia.

They’ve got an IV in the right hand.

Field vital signs: 110 140/80 16 98% on RA

Accucheck was 104

**Flow of Case**

**Briefing (10 minutes):**

1. Psychological safety applies
   1. no individual performance data, this is about team function and the system we work in
   2. sessions will be recorded for aggregation / re-enactment of sepsis care for future learning materials
2. Physical safety also applies – you will be taking care of a Standardized Patient today – please don't hurt the SP actor! Your patient is a real person, so there are limitations to your interventions. You may examine the way you normally wound, excluding invasive exam or procedures. Initiate the process/verbalize, and we will provide results or create a simulated version (e.g. IV), lines get taped on, etc. vitals are from monitor not the patient, if unsure of a physical finding ask.
3. The goals for today:
   1. Review and apply the updated sepsis guidelines
   2. Explore the use of telehealth in the care of ED patients with sepsis
4. This will be different than a usual simulation in that there are 3 “acts”, will start and stop scenario to explore sepsis care and the integration of telehealth into your practice. Stopping does not indicate problems in care.
   1. Please suspend disbelief, we know the case is a bit artificial, the team would not usually be at bedside simulataneously, etc.
   2. The eICU can see in high definition, can see the monitor, can also get monitor data when running for real if they have room # The performance is by the team, not the individual – this is about improving processes, no information about individual performance will be released.

Each clinical “Act” will occur at patient bedside in the clinical space. Debriefings will occur either outside room or on other side of simscreens at foot of bed so that camera filming the scenario can still pick up the debriefing discussion without identifying participants.

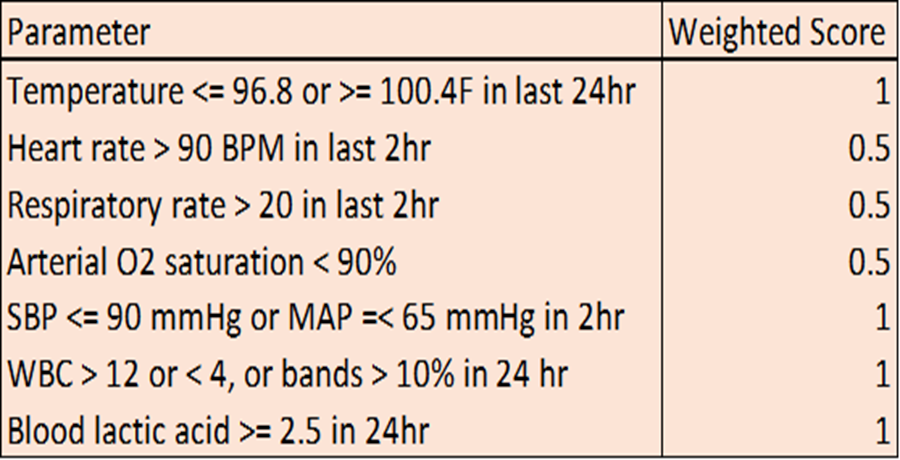
**Case starts with facilitator reading the EMS run sheet**

|  |  |  |  |
| --- | --- | --- | --- |
| STAGE | TIME  (min) | ED TEAM | TELEHEALTH |
| ACT ONE | 10 | At bedside: Full team  MD – perform H&P  RN/tech – pt on monitor, draw labs, IV start | Monitor Cart Off |
| DEBRIEF #1 | 10-15 | Questions to explore:   * + - 1. What does the team think is going on with this patient?       2. For pt’s at risk for deterioration, telehealth can help team observe the patient. Observation needs the cart. What is the reality of your workflow at this point?       3. Who would set up the cart?       4. Demonstrate raise, lower the cart, and how you might position it       5. Please set up the cart, and turn it back off       6. Pictures for the telehealth nurse to help the team set up if they are struggling with what to do   **45 minutes transpire** | Brief introduction when cart turned on for practice.  Identify room # for scenario.  No clinical discussions yet.  After cart turned off, call bedside nurse to alert her that sepsis BPA fired on patient in Room X…  [this triggers transition to ACT 2] |
| ACT TWO | 10 | 1. Telehealth calls bedside RN alerting him/her to BPA firing. 2. Team pulls cart into room, turns it on 3. Clinical introductions 4. Reviews bundle with telehealth, additional orders/interventions | 1. Clinical introductions 2. Ask about bundle elements (eICU will not know what has been ordered) 3. “What sources of infection have you considered?” 4. Recommend 30cc/kg amount which is approximately 3 Liters for our 100kg SP. |
| DEBRIEF #2 | 10 | 1. What are the barriers to telehealth? 2. How does telehealth monitor? (algorithms alert them to vitals, bPA, other?) 3. What is telehealth able to do? what can they see? what can't they see? 4. When would their engagement help you in your regular workflow? [high volume? Multiple sepsis patients?]   **2 hours transpire** | *eICU to be cued by sim tech to call bedside RN and notify team that patient seems less alert – this ends debrief #2, goes to Act 3* |
| ACT THREE | 10 | 1. Telehealth notifies bedside RN (or MD) of patient status change – 2 hours has elapsed 2. Team returns to room 3. Ensures 30mL/kg IVF given 4. Starts pressor support 5. Arranges transfer/admission to ICU 6. Focused clinical Exam | 1. Verify bundle elements as needed 2. Verify classification of patient as septic shock 3. If patient admitted kept in regional ICU, emphasize eICU presence 4. Repeat lactate? |
| FINAL DEBRIEF | 15 | *Includes all clinical team members plus telehealth. Issues to explore:*   1. Telehealth interactions: telephone vs video monitoring 2. Point-of-contact? (MD vs RN) 3. Communication strategies – in front of patient and/or families? 4. Conflicting views – how to address (CUS?, 2-challenge) 5. The Sepsis Hospital 6. Balancing barriers vs benefits | |

2.5 LEARNERS’ SESSION HANDOUTS

1. Stimuli (via monitor):
   1. CXR
   2. ECG
   3. Labwork results
      1. CBC
      2. CMP
      3. Lactate
      4. UA

BPA Algorithm



A score > 2 (not =) will trigger the BPA to fire.

2.6 SESSION RECORD

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **AHRQ Septic Shock – SP Adult** | **C**  **O**  **M**  **P**  **L**  **E**  **T**  **E** | **P**  **R**  **O**  **M**  **P**  **T**  **E**  **D** | **N**  **O**  **T**  **D**  **O**  **N**  **E** | Date:  Team Members: |
| **ACT ONE** |  |  |  | Verifies IV access |
|  |  |  | Starts IVF |
|  |  |  | Skin exam: Identifies sacral decubitus ulcer |
|  |  |  | CBC is ordered or sent per protocol |
| **ACT TWO** |  |  |  | Sepsis work-up: adds Lactate if not done |
|  |  |  | Cultures: blood, urine |
|  |  |  | CXR |
|  |  |  | Continues IVF |
| **ACT THREE** |  |  |  | Identifies patient as having sepsis/severe sepsis/septic shock to team |
|  |  |  | Empiric antibiotics: |
|  |  |  | Pressor support (for persistent hypotension)  Med/dose given: |
|  |  |  | *Content of Consult* |
|  |  |  |  |
|  |  |  | *Quality of Consult* |
|  |  |  |  |
|  |  |  |  |
| **Team Interactions** |  |  |  | Call-outs |
|  |  |  | Check-backs |
|  |  |  | S |

2.7 SESSION SPECIFIC REFERENCES/SOURCES

1. **Case Notes:**
   1. Faciliator Guide:

Faculty: 1 sim tech, 2 faculty facilitators

Clinical Setting: ED

Facilitator roles:

* + 1. Confirm readiness of other faculty, equipment, and appropriate room set up expected if real patient occupied
    2. Briefing before scenario starts per case flow notes:
    3. Scenario starts with notification that a new patient has been “roomed” – arrived about 20 minutes ago.
    4. At start of each ‘ACT’ – provide time elapsed info
    5. let the eICU nurse communicate as usual, don't pre-empt at and of debrief/start of next act
    6. Following scenario and serial debriefings, distribute session evaluation to participants
  1. Stimuli Available:
     1. CBC - elevated WBC
     2. CMP - mild renal insufficiency
     3. Lactate - elevated (over 4.0)
     4. ECG – sinus tachycardia (generated through Laerdal program)
     5. UA (normal and abnormal available)
     6. CXR (normal)

1. **Debriefing Plan**
   1. Method of debriefing:

* Stop and Go debriefing
  1. Debriefing materials:
* Assessment checklist
* Sepsis Guidelines/CMS Handout (poster? Card?)
* Telehealth FAQ list
  1. Questions to facilitate the debriefing:
     1. What infections is this patient at higher risk for given his paraplegia?
     2. Pending test handoffs to receiving facilities?
  2. Learning Objectives Met?

1. Take-Aways regarding Sepsis Bundle
2. Take-Aways regarding Telehealth
3. Knowledge assessment?
   1. Post-Session Learner Evaluation
      1. Knowledge assessment?
      2. Telehealth readiness survey
4. **Telehealth FAQs**
   1. Dropbox file to be inserted/attached here once complete
5. **Resources and References**

Note: 01765948