Sepsis Tracer

ED Tracer Scenario
87-year-old female comes up to registration desk, escorted by daughter (facilitator).

"Good morning/afternoon, we are doing a tracer today and you are the first stop."

- Present this as a real patient. Having a test patient account in the electronic health record (EHR) is ideal.
- Prepare sheets of paper with the relevant vital signs (VS) listed for each step in the process. These are what the RN will enter in the chart.

Registration

- Registration clerk asks what they would normally ask and sends the patient to waiting room.
- Have them ask for chief complaint (cc). The daughter says, "she has aches, chills and fever for the last few days and is now coughing up green phlegm."
    - As the facilitator – what are you looking for?
        - Look to see how much questioning is happening; is there a registration process by a non-clinician – if so, facilitator/daughter asks registration person how they know if the person is in trouble and needs to be seen right away?
    - Ask if a patient presents complaining of chest pain, what is your process at the registration desk? What about stroke? Do you have something similar for sepsis?
    - What is the wait time from registration to triage during various times of the day? Is expected wait time communicated to the patient?
    - Is there a handoff between registration and triage?

In Triage

- "We are doing a tracer today to identify gaps in our processes. Pretend this is a real patient." Let them know if there is a 'test' patient chart available for documentation in the EHR.
- RN triages patient
- Additional info:
    - CC: aches, chills and fever for the last few days and now coughing up green phlegm.
    - History of COPD, non-oxygen dependent, highest temp at home was 100.4°F, normally runs 97°F and has seemed confused today – couldn't remember if she had taken her meds this morning.
    - VS in triage: HR 95, RR 22, BP 88/60, T 99°F, SpO2 88% on RA
        - Was patient put on O2?
    - Facilitator will make up any additional information asked by triage RN
- Facilitator is looking for:
    - Did they screen for sepsis? This patient should screen as having severe sepsis.
    - Is there an alert or code sepsis process in place? Was it called? What was the response?
    - Any treatments or labs done in triage?
    - Did they weigh the patient? If not in triage, where?

- Ask triage nurse where the patient should go now. Back to waiting room? To a room in the back?
- Observe handoff to RN in the ED (state this is a tracer patient – proceed as normal)
- Did the RNs share the "same story" (CC, VS, etc.) and use the term severe sepsis?

In the Back (ED room)

- Assume 30-45 minutes have passed from time of registration
- RN should do full admission process; hook up EKG, check VS, conduct assessment
- Additional info for facilitator, if needed:
  - VS HR 102, RR 26, BP 86/60, T 99°F, SpO2 88% on RA or 96% on 2L
  - EKG – sinus tachycardia
  - Neuro – oriented to person and place. Perseverates when asked about time or why they are in the hospital. Answers "My daughter brought me," when asked.
  - Resp – diminished breath sounds LLL, coarse rhonchi, SOB with exertion
  - Cardiovascular – heart sounds normal, no peripheral edema, cap refill 3 seconds, fingers and toes are cool to touch and slightly pale, no mottling (if asked, normal BP is 130/80)
  - Skin – intact, pale, cool
  - GI – good bowel sounds, last BM yesterday, diminished appetite; drank some water and coffee this morning
  - Urine – voided a little when she woke up, amber color, has not voided since
- Facilitator is watching for:
  - Are they calling the MD? What are they communicating?
  - How long does it take for the MD to arrive?
  - Are there any orders (tests or labs) being placed, by RN per protocol?
  - Is there a sense of urgency in responding to patient's current condition?
  - How long until treatment is started?
  - Are they calling out time zero for severe sepsis?
- Treatment and testing are started:
  - Labs – CBC with differential, electrolytes/BUN/creatinine (BMP or Chem7), blood cultures x2, urine culture, lactate. What labs are run POC vs lab?
    - Could order PTT or other clotting tests, liver tests
  - Diagnostics – Did they order a chest x-ray (looking for source of infection)?
  - Treatment – antibiotics, fluids (30 mL/kg) (start two IVs – blood culture from each)
  - If morbidly obese (BMI > 30) – they can use ideal body weight for determining fluids (per CMS core measure)
- Facilitator asks/observes:
  - Any issues getting antibiotics timely? If two are ordered which is given first?
  - Is the 30 mL/kg bolus something that always happens? At what rate are fluids being administered? Is a pressure bag used?
    - Is the order provider dependent?
    - Do they give a liter at a time, reassess and determine the need to give more? Do they use non-invasive fluid volume assessments?
  - Evaluate the flow of information between providers. Is communication clear and effective?
  - Goal – understand their process and if there is variation between providers, time of day, day of week
- Reassessment of VS, response to treatment, is the patient improving or not?
- Ask – what would be the frequency of VS checks on this patient? Ideally every 15 minutes.
  - Two scenarios – one where BP resolves and one fails

    1-Resolves: HR 95, RR 20, BP 100/70, SpO2 96% on 2L
    - Test results: WBC 16,000, no left shift (bands < 10%), HGB 12, HCT 30, lactate 3.2, electrolytes normal, creatinine 1.2 (previous admission 0.8), chest x-ray LLL infiltrates, UA normal
    - Facilitator asks what the next steps are
      - Have they identified a source for infection?

- Watch VS closely – at what intervals are VS being done? Q15, q30, q1h or other?
- Assess for urine output (bladder scan, void, need for straight catheterization)
- Get repeat lactate
- Where would this patient be admitted to?

2-Fails: HR 105, RR 26, BP 88/60, SpO2 94% on 2L

- Test results: WBC 16,000, no left shift (bands <10%), HGB 12, HCT 30, lactate 3.2, electrolytes normal, creatinine 1.2 (previous admission 0.8), chest x-ray LLL infiltrates, UA normal
- Facilitator – what are your next steps?
    - How often are VS monitored, what else would be monitored? (urine output)
    - Are they starting more fluids or starting a vasopressor?
        - Which vasopressor (should be Levophed)?
        - How do they evaluate which is appropriate?
        - Is a central line inserted?
    - When did they get a repeat lactate?
    - How long would this type of patient be in the ED? What time did they meet criteria for septic shock (time zero) – observe or ask is this called out, is the language used?
        - If patient is going to be in the ED for six hours, how do they meet the 6-hour bundle elements?
            - Do you place invasive lines in the ED?
            - Do you do any minimally invasive testing for dynamic responsiveness?
    - Where would this patient be admitted?

3-Variation of the scenario: Patient's BP was never hypotensive even in triage, but lactate was 4.2

- HR 95, RR 24, BP 100/70, SpO2 96% on 2L
- Test results: WBC 16,000, no left shift (bands <10%), HGB 12, HCT 30, lactate 4.2, electrolytes normal, creatinine 1.2 (previous admission 0.8), chest x-ray LLL infiltrates, UA normal
- Facilitator asks, "What are the next steps?"
    - What is your approach to fluids? How are they administered?
    - Do you call out this patient as being in septic shock? How is the MD notified?
    - Have they identified source for infection? – severe sepsis due to PNA
    - Watching VS closely; assessing for urine output (bladder scan, void, need for straight catheterization); getting repeat lactate; would you obtain this repeat before transferring?
    - Where would this patient be admitted to?

- Observe/listen to handoff to floor, ICU or outside facility
    - Identify all bundle elements with timing
    - Response to treatment
    - Time zero
    - What still needs to be done to complete the bundle (if not completed in ED)