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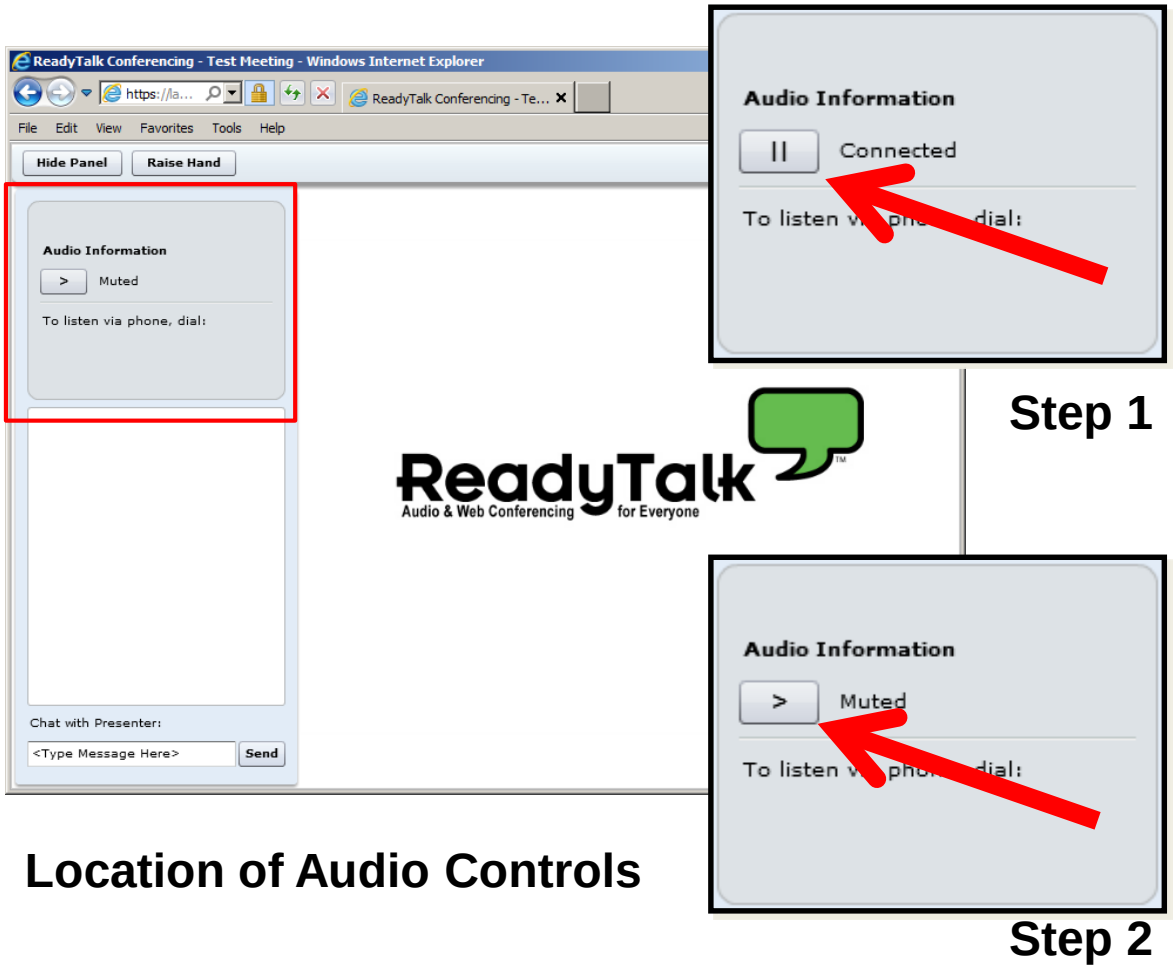

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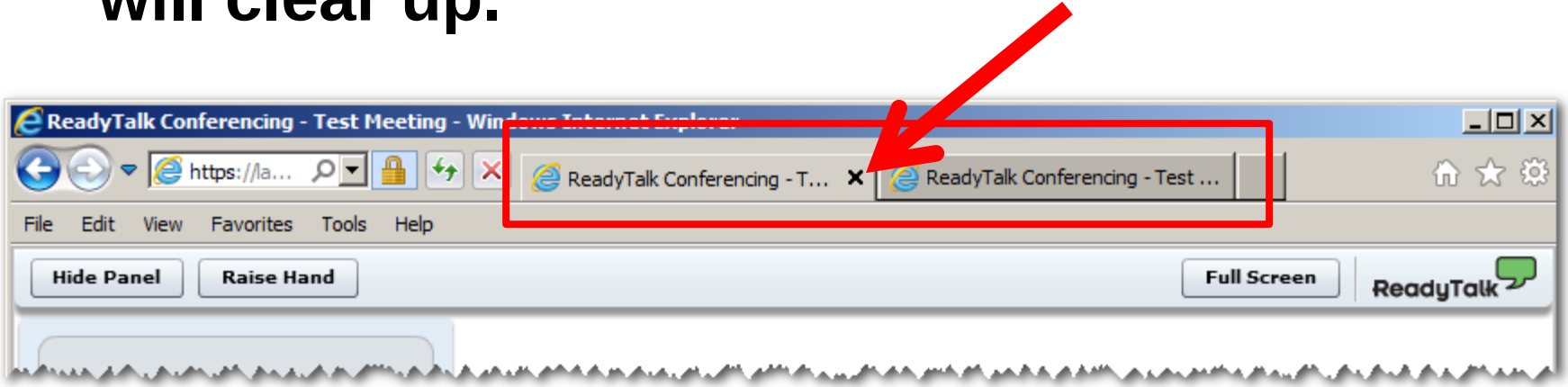

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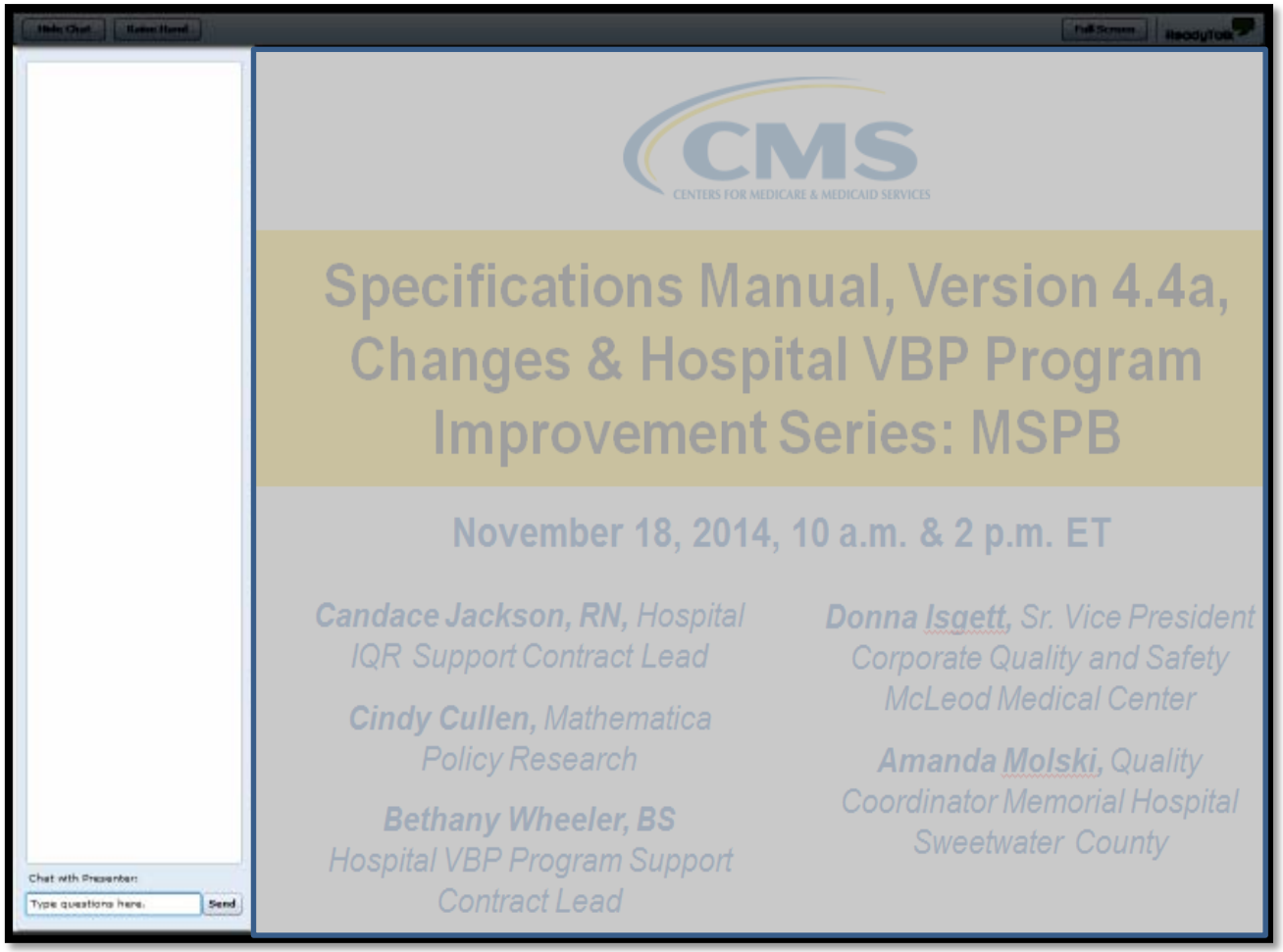

SEP-1 Early Management Bundle, Severe Sepsis/Septic Shock Part III: Measure Updates and Abstraction Guidance

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October 26, 2015

Purpose

The purpose of this presentation is to provide updates to the sepsis measure and additional abstraction guidance for several of the sepsis data elements.

SEP-1 Discussion Topics

- Updates released with v5.0b
- Review additional abstraction guidance for specific data elements including:
  - Severe Sepsis Present
  - Broad Spectrum or Other Antibiotic Administration
  - Septic Shock Present
  - Crystalloid Fluid Administration
  - Persistent Hypotension

Objectives

At the end of this presentation participants will be able to:

- Identify and understand the SEP-1 updates in the IQR manual v5.0b addendum.
- Describe how to abstract the Severe Sepsis Present, Septic Shock Present, Broad Spectrum or Other Antibiotic Administration, Broad Spectrum or Other Antibiotic Administration Selection, and Crystalloid Fluid Administration data elements.

SEP-1 Updates to v5.0b Addendum

- Review of revisions will focus on key changes.
- Will not discuss majority of changes to:
  - Suggested Data Sources
  - Inclusion Guidelines for Abstraction
  - Exclusion Guidelines for Abstraction

Broad Spectrum or Other Antibiotic Administration (slide 1 of 2)

Notes for Abstraction (Bullet Points 1 & 2 Edits):

- **NOTE: To choose Value "1", there must be at least one dose of an intravenous (IV) antibiotic given or started in the 24 hours preceding or 3 hours after the severe sepsis presentation time.**
- If the patient received any IV antibiotic within the 24 hours preceding or 3 hours following the presentation of severe sepsis, choose Value "1."

Broad Spectrum or Other Antibiotic Administration (slide 2 of 2)

Notes for Abstraction (Deleted Bullet Points):

- **Deleted** second bullet point referencing Appendix C, Table 5.0 and Table 5.1.
- **Removed** from third bullet point reference to Table 5.0 and Table 5.1
- **Deleted** fourth bullet point identifying which antibiotic to abstract if given both 24 hours prior to presentation and 3 hours following presentation.

Broad Spectrum or Other Antibiotic Administration Time

Notes for Abstraction (Bullet Point 1 Edits):

- If any antibiotic was administered intravenously (IV) within 24 hours prior to *Severe Sepsis Presentation Time*, abstract the earliest time that a dose of the IV antibiotic was given. This may be the same time as the time of presentation, within 24 hours prior to presentation, or a time greater than 24 hours before presentation.

Broad Spectrum or Other Antibiotic Administration Selection (slide 1 of 2)

Notes for Abstraction (Bullet Point 1 Edits):

- If there is one IV antibiotic started or given to the patient within 3 hours after presentation of severe sepsis that is on the monotherapy table in Appendix C, Table 5.0, choose Value "1" (Table 5.0 contains the names of all broad spectrum antibiotics approved as monotherapy).

Broad Spectrum or Other Antibiotic Administration Selection (slide 2 of 2)

Notes for Abstraction (Bullet Point 2 Edits):

- If one of the IV antibiotics listed on Table 5.0 was not started or given to the patient within 3 hours after presentation of severe sepsis, locate the name or names of antibiotics given within the three hour time window and identify the class they belong to by consulting Appendix C, Table 5.1, which contains a crosswalk of generic and trade names for antibiotics by class. Next refer to the Combination Antibiotic Therapy Table below to determine if an antibiotic from a class in Column A was given. Then review Column B for the classes of other antibiotics that must be administered in combination (2 antibiotics must be administered). There must be one from a class in column A and one from a class in column B administered to select Value "1." Review the chart to see that both drugs were started or given within 3 hours of severe sepsis presentation and if so, choose Value "1." If both drugs were not started or given, choose Value "2."

Crystalloid Fluid Administration

(slide 1 of 3)

Definition (Edits):

- Documentation of administration of crystalloid fluids prior to, at the time of, or after the presentation of septic shock.

Suggested Data Collection Question – Edits:

- Were crystalloid fluids administered prior to, at the time of, or after the presentation of septic shock?

Crystalloid Fluid Administration

(slide 2 of 3)

Allowable Value (Edits):

1 (Yes) Crystalloid fluids were administered prior to, at the time of, or after the presentation of septic shock, AND the volume ordered was 30 mL/kg.

2 (No) Crystalloid fluids were administered prior to, at the time of, or after the presentation of septic shock, AND the volume ordered was less than 30 mL/kg., or unable to determine volume ordered.

3 (No) Crystalloid fluids were not administered prior to, at the time of, or after the presentation of septic shock or unable to determine whether or not they were administered.

Crystalloid Fluid Administration

(slide 3 of 3)

Notes for Abstraction (New Bullet Point 2):

- Only abstract crystalloid fluids given for the presence of severe sepsis with hypotension, OR for the presence of severe sepsis with a lactate >= 4 mmol/L.

Persistent Hypotension

(slide 1 of 7)

Definition (Edits):

- Documentation of the presence of persistent hypotension in septic shock. The criteria for determining that hypotension was persistent are as follows:
  - In the one hour following administration of crystalloid fluids, two or more consecutive blood pressure readings of either:

Persistent Hypotension

(slide 2 of 7)

Allowable Value (Edits):

1 (Yes)	Crystalloid fluids were administered at a volume of 30 mL/kg and persistent hypotension was present within one hour of conclusion of fluid administration.
2 (No)	Persistent hypotension was not present within one hour of the conclusion of crystalloid fluid administration at a volume of 30 mL/kg.
3 (No) or UTD	The patient was not assessed for persistent hypotension within the one hour after the conclusion of crystalloid fluid administration at a volume of 30 mL/kg, or Unable to Determine.
4 (Not applicable)	Crystalloid fluids were not administered, or crystalloid fluids were administered but at a volume less than 30 mL/kg

Persistent Hypotension
(slide 3 of 7)

Notes for Abstraction (New Bullet Points 2 & 3):

- If the completion time of the 30 mL/kg crystalloid fluid infusion is documented in the medical record use that time as the start for the one hour within which to determine presence of persistent hypotension.
- If the completion time of the 30 mL/kg crystalloid fluid infusion is not documented in the medical record use the following criteria to determine the conclusion time.

Persistent Hypotension
(slide 4 of 7)

Notes for Abstraction (New Example Conclusion Time):

- If the physician order includes a time frame over which to infuse the crystalloid fluid, identify the time the fluids are started and add to that the duration identified in the order. This will represent the conclusion of crystalloid fluids.

  Example:

  A physician order for 1500 mL over 1 hour and the infusion is started at 10:00. Add 1 hour to the start time to determine infusion conclusion time of 11:00.

Persistent Hypotension

(slide 5 of 7)

Notes for Abstraction (New Example Conclusion Time):

- If the physician order includes a rate at which to infuse the crystalloid fluids, the end time can be calculated based on the volume, the rate and the start time.

  Example:

  A physician order for 1500 mL at 1000 mL/hour and the infusion is started at 10:00. The time over which 1500 mL is infused is the volume divided by the rate. 1500 mL divided by 1000 mL/hour is 1.5 hours. Add 1.5 hours to the start time to determine infusion conclusion time of 11:30.

Persistent Hypotension

(slide 6 of 7)

Notes for Abstraction (Bullet Point 9 Edits):

- The criteria for determining that persistent hypotension was present are as follows:

  In the one hour following conclusion of administration of crystalloid fluids, two or more consecutive blood pressure readings of either.

Persistent Hypotension
(slide 7 of 7)

Notes for Abstraction (New Bullet Point 10):

- If there is physician/APN/PA or nursing documentation indicating a low blood pressure reading is erroneous or questioning the validity of a low blood pressure reading, do not consider that reading for determining the presence of persistent hypotension.

Septic Shock Present

(slide 1 of 4)

Notes for Abstraction (Bullet Point 1 Criteria Edits):

b. Hypotension persists in the hour after the conclusion of the 30 mL/kg *Crystalloid Fluid Administration*, evidenced by

- systolic blood pressure (SBP) < 90, or
- mean arterial pressure < 65 or
- a decrease in systolic blood pressure by > 40 mmHg from the last previously recorded SBP considered normal for that specific patient

OR

Tissue hypoperfusion is present evidenced by

- Initial Lactate level is >= 4 mmol/L

Septic Shock Present

(slide 2 of 4)

Notes for Abstraction (New Examples):

Example 5:

Patient 5 met criteria for Severe Sepsis (answered Value “1” to Data Element *Severe Sepsis Present*). Blood pressure was 88/48. Crystalloid fluids were administered (30 mL/kg) and blood pressure increased to 100/54. Choose Value “2” for this patient.

Example 6:

Patient 6 met criteria for Severe Sepsis (answered Value “1” to Data Element *Severe Sepsis Present*). Blood pressure was 84/50. Crystalloid fluids were administered (30 mL/kg) and blood pressure was 88/52. Choose Value “1” for this patient.

Septic Shock Present

(slide 3 of 4)

Notes for Abstraction (Bullet Point 2 Edits):

- For evaluation of blood pressure parameters to establish whether or not hypotension persists after crystalloid fluid administration, begin abstracting at the time that crystalloid fluid administration concludes (refer to the *Persistent Hypotension* data element); abstract for the time period that follows for the next hour only. Choose Value “1” if hypotension (systolic blood pressure < 90, or mean arterial pressure < 65 or a decrease in systolic blood pressure by > 40 mmHg) was present in the hour after crystalloid fluid administration.

Septic Shock Present

(slide 4 of 4)

Notes for Abstraction (New Bullet Points 4 & 5):

- If Septic Shock presentation is more than six hours after Severe Sepsis presentation, choose Value “2.”
- If the only documentation indicating presence of Septic Shock is after the discharge time, choose Value “2.”

Septic Shock Presentation Date & Septic Shock Presentation Time

Notes for Abstraction (Bullet Point 1 Criteria Edits):

b. Hypotension persists in the hour after the conclusion of the 30 mL/kg *Crystalloid Fluid Administration*, evidenced by

- systolic blood pressure (SBP) < 90, or
- mean arterial pressure < 65 or
- a decrease in systolic blood pressure by > 40 mmHg from the last previously recorded SBP considered normal for that specific patient

OR

Tissue hypoperfusion is present evidenced by

- Initial Lactate level is >= 4 mmol/L

Severe Sepsis Present
(slide 1 of 7)

Notes for Abstraction (Bullet Point 1 Criteria "a" Edits):

a. Documentation of a suspected source of clinical infection. There may be reference to "possible infection from xx," "suspect infection from xx," or similar reference in progress notes, consult notes, or similar physician/APN/PA documentation. Nursing documentation referencing an infection, suspected infection, or current treatment of an infection is acceptable. Exclude documentation of viral or fungal infections.

Severe Sepsis Present

(slide 2 of 7)

Notes for Abstraction (Bullet Point 1 Criteria "c" Edits):

c. Organ dysfunction, evidenced by any one of the following:

   i. Systolic blood pressure (SBP) < 90, or mean arterial pressure < 65, or a systolic blood pressure decrease of more than 40 mmHg from the last previously recorded SBP considered normal for that specific patient

   ii. Acute respiratory failure as evidenced by a new need for invasive or non-invasive mechanical ventilation. Invasive mechanical ventilation requires an endotracheal or tracheostomy tube. Non-invasive mechanical ventilation (may be referred to as BiPAP) uses a mask.

Severe Sepsis Present

(slide 3 of 7)

Notes for Abstraction (Example 2 Edits):

Example 2:

The only relevant documentation, entered by an APN, was “febrile today, r/o infection.” All lab tests were within normal limits except for a bilirubin level of 2.6. Temperature was 38.2 C. Blood pressure was 140/72, urine output normal. Choose Value “2” for this patient – there is ~~no~~ a suspected ~~source of~~ infection (section a), only one abnormality from section b (temperature elevation), and an elevated bilirubin (section c).

Severe Sepsis Present

(slide 4 of 7)

Notes for Abstraction (New Statement Bullet Point 1):

Do not include evidence of organ dysfunction that is considered to be due to a chronic condition or medication (e.g., Creatinine >2 for a patient with end stage renal disease, INR > 1.5 for a patient on Warfarin).

Severe Sepsis Present
(slide 5 of 7)

Notes for Abstraction (New Bullet Point 6):

- If the only documentation indicating presence of Severe Sepsis is after the discharge time, choose Value “2.”

Severe Sepsis Present
(slide 6 of 7)

Inclusion Guidelines for Abstraction (Edits):

- For Infections (This is not an all inclusive list. If a condition not on this list is documented and not identified as an infection, consulting other resources to identify whether or not the condition is an infection is acceptable.)
  - Acute abdominal infection
  - Blood stream catheter infection
  - Bone/joint infection
  - Endocarditis
  - Implantable device infection
  - Meningitis
  - Pneumonia, empyema
  - Skin/soft tissue infection
  - Suspect infection, source unknown
  - Urinary tract infection
  - Wound infection

Severe Sepsis Present

(slide 7 of 7)

Exclusion Guidelines for Abstraction (Edits):

- For Severe Sepsis
  - Bacteremia
  - Possibly septic
  - Sepsis
  - Septic
  - Septicemia
- For Infections
  - Fungal infections
  - Viral infections

Severe Sepsis Presentation Date

(slide 1 of 2)

Notes for Abstraction (New Bullet Points 4 & 8):

- If a suspected infection, severe sepsis or septic shock is in an ED physician note without a specific date documented within the note, use the date the note was started or opened.

- If criteria for severe sepsis are met after physician/APN/PA documentation of septic shock, enter the date the physician/APN/PA documented septic shock.

Severe Sepsis Presentation Date

(slide 2 of 2)

Notes for Abstraction (Bullet Points 5 Edits):

- If severe sepsis is present on arrival to the Emergency Department or severe sepsis is identified in triage, the *Severe Sepsis Presentation Date* is the date the patient was triaged in the Emergency Department. If more than one triage date is documented (e.g., “Triage started” and “Triage completed”), use the later date reflecting triage is completed.

Severe Sepsis Presentation Time

(slide 1 of 2)

Notes for Abstraction (New Bullet Points 4 & 8):

- If a suspected infection, severe sepsis or septic shock is in an ED physician note without a specific time documented within the note, use the time the note was started or opened.

- If criteria for severe sepsis are met after physician/APN/PA documentation of septic shock, enter the time the physician/APN/PA documented septic shock.

Severe Sepsis Presentation Time

(slide 2 of 2)

Notes for Abstraction (Bullet Points 5 Edits):

- If severe sepsis is present on arrival to the Emergency Department or severe sepsis is identified in triage, the *Severe Sepsis Presentation Time* is the time the patient was triaged in the Emergency Department. If more than one triage time is documented (e.g., “Triage started” and “Triage completed”), use the later time reflecting triage is completed.

SEP-1
Additional Abstraction Guidance

- Severe Sepsis Present
- Broad Spectrum or Other Antibiotic Administration
- Broad Spectrum or Other Antibiotic Administration Selection
- Septic Shock Present
- Crystalloid Fluid Administration
- Persistent Hypotension

Severe Sepsis Present (slide 1 of 2)

Documentation of presence of severe sepsis

- If multiple episodes, abstract the first episode
- If multiple instances of documentation indicating presence of severe sepsis, abstract the earliest

Allowable Values:

Y (Yes)	Severe Sepsis was present.
N (No)	Severe Sepsis was not present, or Unable to Determine.

Severe Sepsis Present (slide 2 of 2)

Things to look for:

Earliest of either…

- Three criteria (all within 6 hours of each other)
  1. Documentation of suspected source of infection
  2. Two or more SIRS criteria
  3. One sign of organ dysfunction

OR

- Physician, APN or PA documentation of severe sepsis or suspected/possible severe sepsis.

Severe Sepsis Present – Suspected Infection (slide 1 of 3)

- Documented suspected source of infection
  - Must be a condition that is an infection or include the word infection
  - Can be confirmed, suspected, or possible
  - Most likely physician/APN/PA documentation
  - **NOT** looking for a diagnosis
  - Nursing documentation acceptable
    - "In ED earlier today diagnosed with UTI"
    - "Currently on oral antibiotics for pneumonia"

Severe Sepsis Present – Suspected Infection (slide 2 of 3)

- Inclusion Guidelines for Abstraction
  - List of infections most frequently associated with severe sepsis
  - Not an all inclusive list
  - For documented conditions not on list – acceptable to consult other resources to determine whether or not condition is an infection

Severe Sepsis Present – Suspected Infection (slide 3 of 3)

- Not acceptable
  - “Sepsis”, “bacteremia”, “septicemia”
  - Signs or symptoms, cultures, or presence of bacteria without documentation supporting it is an infection
  - Viral and fungal infections

Severe Sepsis Present – SIRS Criteria

- Two or more SIRS criteria:
  - Temperature > 38.3 C (100.9 F) or < 36 C (96.8 F)
  - Heart Rate (pulse) > 90
  - Respiratory Rate > 20
  - White Cell count > 12,000 or < 4,000 or > 10% bands
- Typically nursing documentation (vitals) and lab report results

Severe Sepsis Present – Organ Dysfunction (slide 1 of 2)

- **ANY ONE** of the following:
  - Lactate > 2 mmol/L
  - INR > 1.5 or aPTT > 60 seconds
  - Platelet count < 100,000
  - Bilirubin > 2 mg/dL
  - Creatinine > 2, or urine output < 0.5 mL/kg/hour for 2 hours
  - Acute respiratory failure evidenced by a new need for invasive or non-invasive mechanical ventilation
  - Systolic blood pressure (SBP) < 90 mmHg, or mean arterial pressure < 65 mmHg, or decrease in SBP more than 40 mmHg from last previously recorded SBP “normal” for that patient

Severe Sepsis Present – Organ Dysfunction (slide 2 of 2)

- Do not include evidence of organ dysfunction considered due to a chronic condition or medication.
- SBP:
  - Most cases of hypotension are identified based on SBP < 90 mmHg
  - To establish “normal” for > 40 mmHg decrease
    - Based on documentation of patients “normal” BP
    - Based on documentation there has been a drop of > 40 mmHg from what is “normal” for patient

Physician/APN/PA Documentation of Severe Sepsis

- If criteria not met, physician/APN/PA documentation of severe sepsis is acceptable.
- “Suspected” or “possible” severe sepsis acceptable.
- If criteria not met, and there is no physician/APN/PA documentation of severe sepsis, **BUT** there is physician/APN/PA documentation of septic shock, this is acceptable.

Severe Sepsis Presentation Date and Time (slide 1 of 3)

- Use Triage date and time **ONLY** if:
  - Patient arrives to the ED with severe sepsis
  - Severe sepsis identified as present or suspected during triage
  - All criteria are met prior to or during triage
  - If more than one triage time is documented (e.g., “triage started” and “triage completed”) use the later triage date and time

Severe Sepsis Presentation Date and Time (slide 2 of 3)

- Use the Date and Time the **patient met the last criterion** for severe sepsis, **OR** the Date and Time of **physician/APN/PA documentation**:
  - For cases where some criteria were met prior to or during triage, but last criteria were met after triage
  - For all cases presenting after triage time (still in the ED or inpatient)
- If the only documentation is septic shock
  - Use septic shock presentation date and time for severe sepsis presentation date and time

Severe Sepsis Presentation Date and Time (slide 3 of 3)

- Severe Sepsis Documented in ED Physician Notes:
  - If a specific time is associated with the notation use that date and time.
  - If there is **not** a specific time associated with the notation, use the time the ED note was started.

Timing of Clinical Criteria

- Start looking from time of arrival.
- Start looking for criteria that are “flagged” or easily identified in the medical record.
- Criteria do not need to be met in any specific order.
- All 3 criteria must be met within 6 hours of each other.

Severe Sepsis Case 1

ED arrival 0900. Triage time 0915. Triage notes state “patient currently on antibiotics for pneumonia”, vitals HR = 100, RR = 18, Temp = 38.4, BP = 88/40. Physician documents severe sepsis in ED note opened at 0920.

- Suspected Infection met 0915
  (triage note “…on antibiotics for pneumonia”)
- SIRS criteria met 0915
  (HR = 100, Temp = 38.4)
- Sign of organ dysfunction met 0915
  (SBP = 88)
- Physician documentation of severe sepsis 0920
- *Severe Sepsis Presentation Time* = 0915

Severe Sepsis Case 2

ED arrival 1300. Triage time 1305. Triage vitals HR = 95, RR = 22, Temp = 37, BP = 85/40. Physician documents rule out infectious source at 1400.

- SIRS criteria met 1305
  (HR = 95, RR = 22)
- Sign of organ dysfunction met 1305
  (SBP = 85)
- Suspected infection met 1400
  (physician documentation “rule out infectious source”)
- *Severe Sepsis Presentation Time* = 1400

Severe Sepsis Case 3

ED arrival 2130. Triage time 2135. Triage note “patient seen in ED in am for pneumonia sent home with antibiotics”, vitals HR = 102, RR = 22, Temp = 38.6, BP = 100/60. Lactate drawn in triage results = 2.3 reported after triage at 2215.

- Suspected infection met 2135
  (triage note “…seen in ED in am for pneumonia…”)
- SIRS criteria met 2135
  (HR = 102, RR = 22, Temp = 38.6)
- Sign of organ dysfunction met 2215
  (lactate = 2.3)
- *Severe Sepsis Presentation Time* = 2215

Severe Sepsis Case 4

ED arrival 1000. Triage time 1005. Triage vitals HR = 88, RR = 18, Temp = 38.6, BP = 100/60. Labs drawn 1020, results reported 1050 Lactate = 2.5. Repeat vitals 1200 HR = 95. Physician documents UTI at 1415.

- Sign of organ dysfunction met 1050
  (Lactate = 2.5)
- SIRS criteria met 1200
  (Temp = 38.6, HR = 95)
- Suspected infection met 1415
  (physician documentation “UTI”)
- *Severe Sepsis Presentation Time* = 1415

Severe Sepsis Case 5

ED arrival 0815. Triage time 0820. Triage vitals HR = 88, RR = 18, Temp = 38.4, BP = 100/60. Home medications include warfarin. Labs drawn 0830, results reported 0850 INR = 2.2, Lactate = 2.0, Creatinine = 2.5. Repeat vitals 1400 HR = 95. Physician documents possible pneumonia at 1500.

- Sign of organ dysfunction met 0830
  (Creatinine = 2.5)
- SIRS criteria met 1400
  (Temp = 38.4, HR = 95)
- Suspected infection met 1500
  (physician documentation “possible pneumonia”)
- For purposes of SEP-1, patient **does not** have Severe Sepsis as criteria not met within 6 hours of each other.

Broad Spectrum or Other Antibiotic Administration (slide 1 of 2)

An IV antibiotic was administered in the time window **24 hours prior to or 3 hours following** severe sepsis presentation

Allowable Values:

1 (Yes)	A broad spectrum or other antibiotic was administered intravenously in the time window 24 hours prior to or 3 hours following the presentation of severe sepsis.
2 (No)	No antibiotic was administered intravenously in the time window 24 hours prior to or 3 hours following the presentation of severe sepsis, or unable to determine.

Broad Spectrum or Other Antibiotic Administration (slide 2 of 2)

Things to look for:

- IV is only acceptable route
- Must be at least one dose of **ANY** IV antibiotic given or started within **24 hours prior to or 3 hours after** severe sepsis presentation
- Documentation must reflect actual administration of the IV antibiotic
- Must be started in time frame, does not need to be completely infused

Broad Spectrum or Other Antibiotic Administration Date and Time

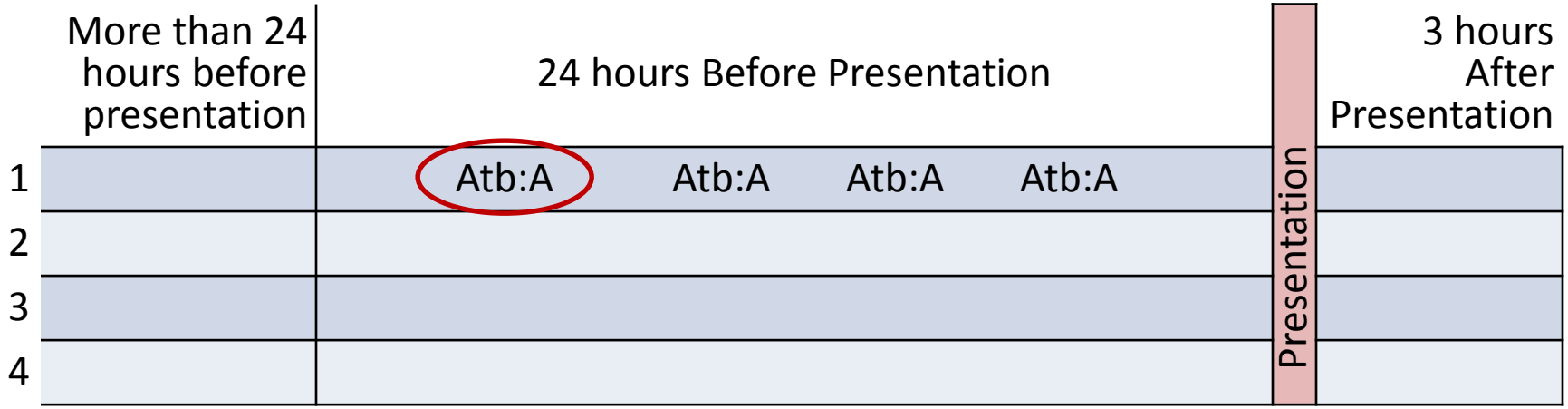
- The earliest date and time an IV antibiotic was administered within the time window **24 hours prior to or 3 hours** after Severe Sepsis Presentation.
- If IV antibiotic was given within 24 hours prior to Severe Sepsis Presentation:
  - Abstract the date and time of the earliest dose
  - Could be earlier than 24 hours prior to presentation
- If IV antibiotics were started **only** within 3 hours following Severe Sepsis Presentation, abstract the date and time of the earliest dose.

Antibiotic Timing Examples (slide 1 of 24)

	More than 24 hours before presentation	24 hours Before Presentation				Presentation	3 hours After Presentation
1		Atb:A	Atb:A	Atb:A	Atb:A		
2							
3							
4							

1. 4 doses of same antibiotic A given within 24 hours prior to presentation.

Antibiotic Timing Examples (slide 2 of 24)



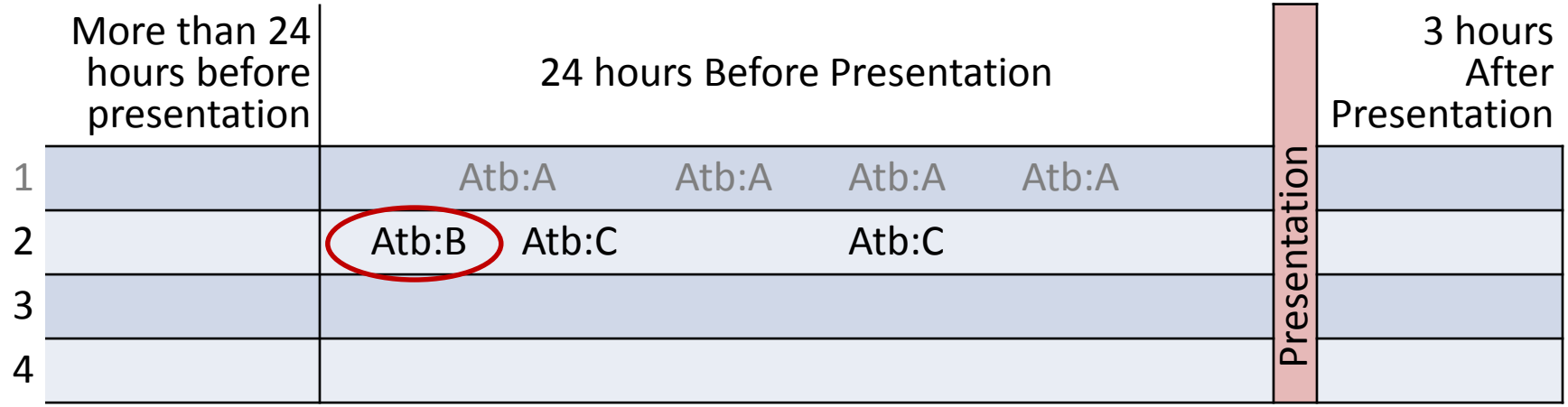
1. Abstract earliest dose of antibiotics given within 24 hours prior to presentation.

Antibiotic Timing Examples (slide 3 of 24)

	More than 24 hours before presentation	24 hours Before Presentation	Presentation	3 hours After Presentation
1		Atb:A Atb:A Atb:A Atb:A		
2		Atb:B Atb:C Atb:C		
3				
4				

1. Abstract earliest dose of antibiotics given within 24 hours prior to presentation.
2. 1 dose of antibiotic B, and 2 doses of antibiotic C given within 24 hours prior to presentation.

Antibiotic Timing Examples (slide 4 of 24)



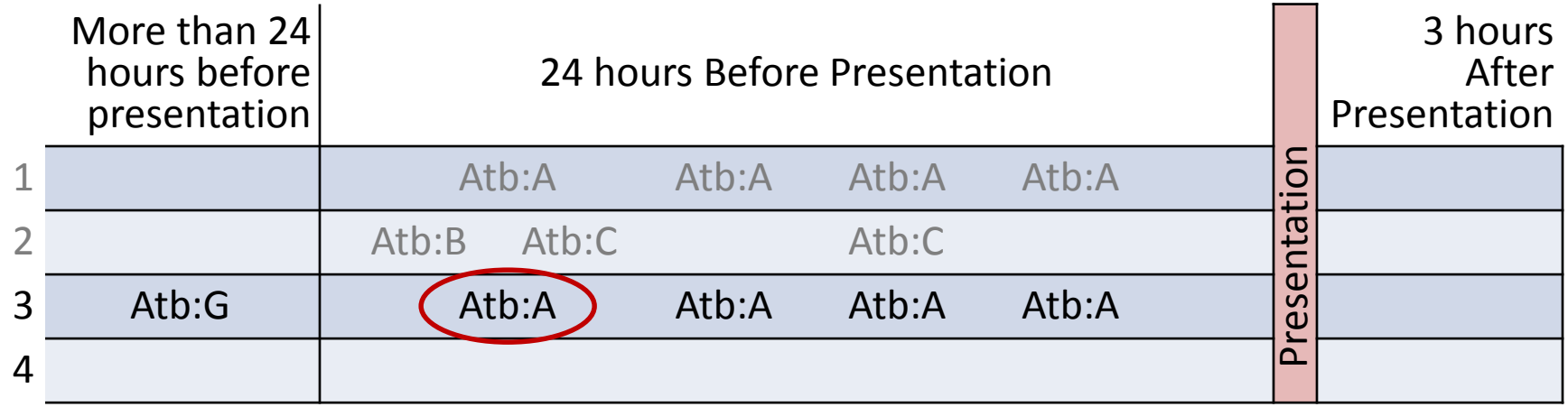
1. Abstract earliest dose of antibiotics given within 24 hours prior to presentation.
2. Abstract earliest dose of all antibiotics given within 24 hours prior to presentation, in this case antibiotic B.

Antibiotic Timing Examples (slide 5 of 24)

	More than 24 hours before presentation	24 hours Before Presentation				Presentation	3 hours After Presentation
1		Atb:A	Atb:A	Atb:A	Atb:A		
2		Atb:B	Atb:C		Atb:C		
3	Atb:G	Atb:A	Atb:A	Atb:A	Atb:A		
4							

1. Abstract earliest dose of antibiotics given within 24 hours prior to presentation.
2. Abstract earliest dose of all antibiotics given within 24 hours prior to presentation, in this case antibiotic B.
3. 4 doses of antibiotic A given within 24 hours prior to presentation, and 1 dose of a different antibiotic G given more than 24 hours prior to presentation.

Antibiotic Timing Examples (slide 6 of 24)



1. Abstract earliest dose of antibiotics given within 24 hours prior to presentation.
2. Abstract earliest dose of all antibiotics given within 24 hours prior to presentation, in this case antibiotic B.
3. Abstract earliest dose of antibiotic given within 24 hours of presentation, in this case antibiotic A.

Antibiotic Timing Examples (slide 7 of 24)

	More than 24 hours before presentation	24 hours Before Presentation				Presentation	3 hours After Presentation
1		Atb:A	Atb:A	Atb:A	Atb:A		
2		Atb:B	Atb:C		Atb:C		
3	Atb:G	Atb:A	Atb:A	Atb:A	Atb:A		
4	Atb:B		Atb:B		Atb:B		

1. Abstract earliest dose of antibiotics given within 24 hours prior to presentation.
2. Abstract earliest dose of all antibiotics given within 24 hours prior to presentation, in this case antibiotic B.
3. Abstract earliest dose of antibiotic given within 24 hours of presentation, in this case antibiotic A.
4. 2 doses of antibiotic B given within 24 hours prior to presentation, and 1 dose of the same antibiotic B given more than 24 hours prior to presentation.

Antibiotic Timing Examples (slide 8 of 24)

	More than 24 hours before presentation	24 hours Before Presentation				Presentation	3 hours After Presentation
1		Atb:A	Atb:A	Atb:A	Atb:A		
2		Atb:B	Atb:C		Atb:C		
3	Atb:G	Atb:A	Atb:A	Atb:A	Atb:A		
4	Atb:B		Atb:B		Atb:B		

1. Abstract earliest dose of antibiotics given within 24 hours prior to presentation.
2. Abstract earliest dose of all antibiotics given within 24 hours prior to presentation, in this case antibiotic B.
3. Abstract earliest dose of antibiotic given within 24 hours of presentation, in this case antibiotic A.
4. Abstract earliest dose of antibiotics given within 24 hours of presentation, in this case it is earlier than 24 hours prior to presentation. **NOTE: algorithm will exclude case.**

Antibiotic Timing Examples (slide 9 of 24)

	More than 24 hours before presentation	24 hours Before Presentation			Presentation	3 hours After Presentation
5	Atb:C	Atb:D	Atb:C	Atb:C		
6						
7						
8						

5. 1 dose of antibiotic D given within 24 hours prior to presentation, 2 doses of different antibiotic C given within 24 hours, and a dose of antibiotic C given more than 24 hours prior to presentation.

Antibiotic Timing Examples (slide 10 of 24)

	More than 24 hours before presentation	24 hours Before Presentation			Presentation	3 hours After Presentation
5	Atb:C	Atb:D	Atb:C	Atb:C		
6						
7						
8						

5. Abstract earliest dose of antibiotics given within 24 hours of presentation, in this case a dose of antibiotic C was given earlier than 24 hours prior to presentation. **NOTE: algorithm will exclude case**.

Antibiotic Timing Examples (slide 11 of 24)

	More than 24 hours before presentation	24 hours Before Presentation	Presentation	3 hours After Presentation
5	Atb:C	Atb:D Atb:C Atb:C		
6	Atb:E			
7				
8				

5. Abstract earliest dose of antibiotics given within 24 hours of presentation, in this case a dose of antibiotic C was given earlier than 24 hours prior to presentation. **NOTE: algorithm will exclude case.**
6. 1 dose of antibiotic E given more than 24 hours prior to presentation and no antibiotics given in time period 24 hours prior to through 3 hours following presentation.

Antibiotic Timing Examples (slide 12 of 24)

	More than 24 hours before presentation	24 hours Before Presentation			Presentation	3 hours After Presentation
5	Atb:C	Atb:D	Atb:C	Atb:C		
6	Atb:E					
7						
8						

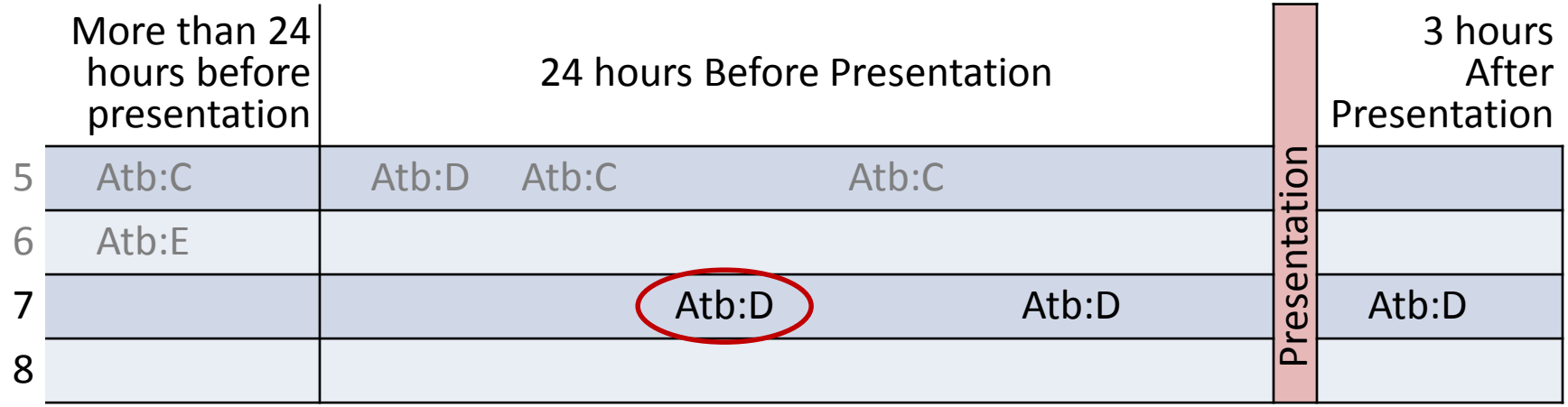
5. Abstract earliest dose of antibiotics given within 24 hours of presentation, in this case a dose of antibiotic C was given earlier than 24 hours prior to presentation. **NOTE: algorithm will exclude case.**
6. Select Allowable Value “2(No)” for *Broad Spectrum or Other Antibiotic Administration* data element. **NOTE: case will fail the measure.**

Antibiotic Timing Examples (slide 13 of 24)

	More than 24 hours before presentation	24 hours Before Presentation			Presentation	3 hours After Presentation
5	Atb:C	Atb:D	Atb:C	Atb:C		
6	Atb:E					
7			Atb:D	Atb:D		Atb:D
8						

5. Abstract earliest dose of antibiotics given within 24 hours of presentation, in this case a dose of antibiotic C was given earlier than 24 hours prior to presentation. **NOTE: algorithm will exclude case.**
6. Select Allowable Value "2(No)" for *Broad Spectrum or Other Antibiotic Administration* data element. **NOTE: case will fail the measure.**
7. 2 doses of antibiotic D given within 24 hours prior to presentation and 1 dose of same antibiotic D given within 3 hours after presentation.

Antibiotic Timing Examples (slide 14 of 24)



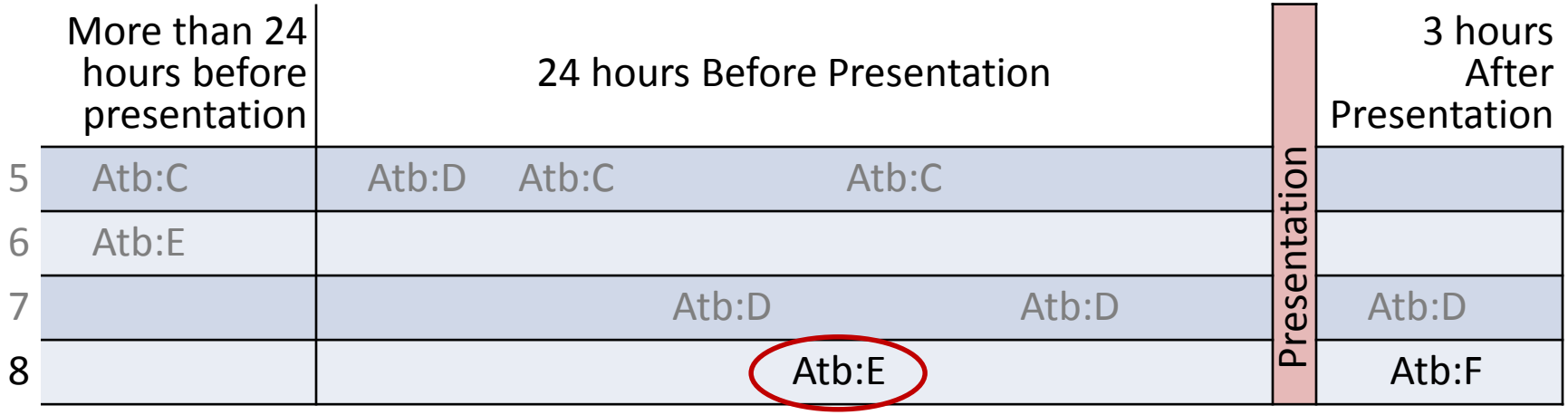
5. Abstract earliest dose of antibiotics given within 24 hours of presentation, in this case a dose of antibiotic C was given earlier than 24 hours prior to presentation. **NOTE: algorithm will exclude case.**
6. Select Allowable Value "2(No)" for *Broad Spectrum or Other Antibiotic Administration* data element. **NOTE: case will fail the measure.**
7. Abstract earliest dose of antibiotic given in the time frame.

Antibiotic Timing Examples (slide 15 of 24)

	More than 24 hours before presentation	24 hours Before Presentation			Presentation	3 hours After Presentation
5	Atb:C	Atb:D	Atb:C	Atb:C		
6	Atb:E					
7			Atb:D	Atb:D		Atb:D
8			Atb:E			Atb:F

5. Abstract earliest dose of antibiotics given within 24 hours of presentation, in this case a dose of antibiotic C was given earlier than 24 hours prior to presentation. **NOTE: algorithm will exclude case.**
6. Select Allowable Value "2(No)" for *Broad Spectrum or Other Antibiotic Administration* data element. **NOTE: case will fail the measure.**
7. Abstract earliest dose of antibiotic given in the time frame.
8. 1 dose of antibiotic E given within 24 hours prior to presentation, and 1 dose of a different antibiotic F given within 3 hours after presentation.

Antibiotic Timing Examples (slide 16 of 24)



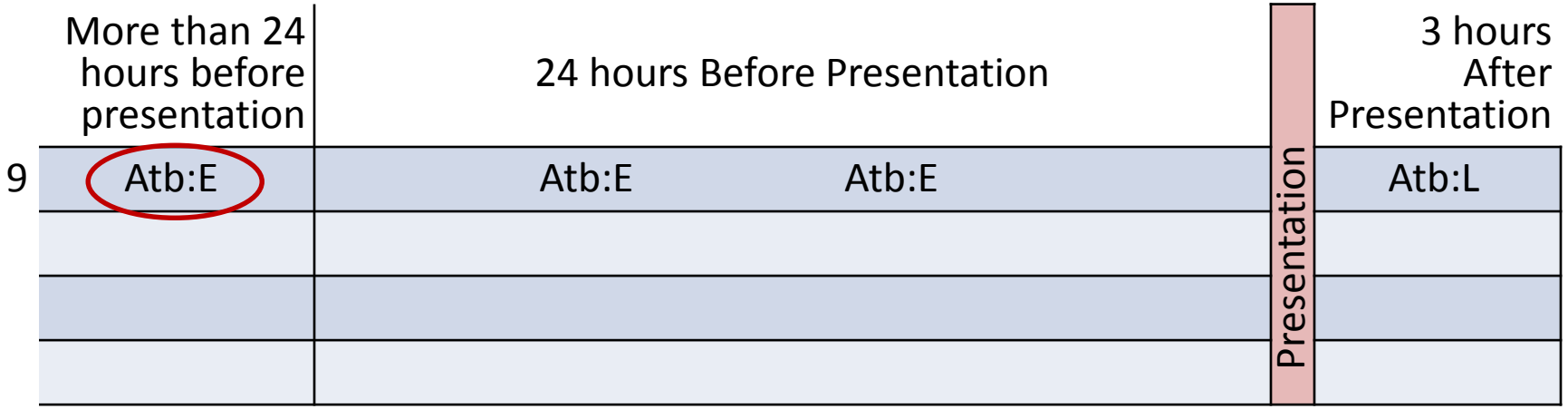
5. Abstract earliest dose of antibiotics given within 24 hours of presentation, in this case a dose of antibiotic C was given earlier than 24 hours prior to presentation. **NOTE: algorithm will exclude case.**
6. Select Allowable Value "2(No)" for *Broad Spectrum or Other Antibiotic Administration* data element. **NOTE: case will fail the measure.**
7. Abstract earliest dose of antibiotic given in the time frame.
8. Abstract earliest dose of antibiotic given in the time frame, in this case antibiotic E.

Antibiotic Timing Examples (slide 17 of 24)

	More than 24 hours before presentation	24 hours Before Presentation		Presentation	3 hours After Presentation
9	Atb:E	Atb:E	Atb:E		Atb:L

9. 2 doses of Antibiotic E were given within 24 hours prior to presentation and a dose was given more than 24 hours prior to presentation. 1 dose of antibiotic L was given within 3 hours following presentation.

Antibiotic Timing Examples (slide 18 of 24)



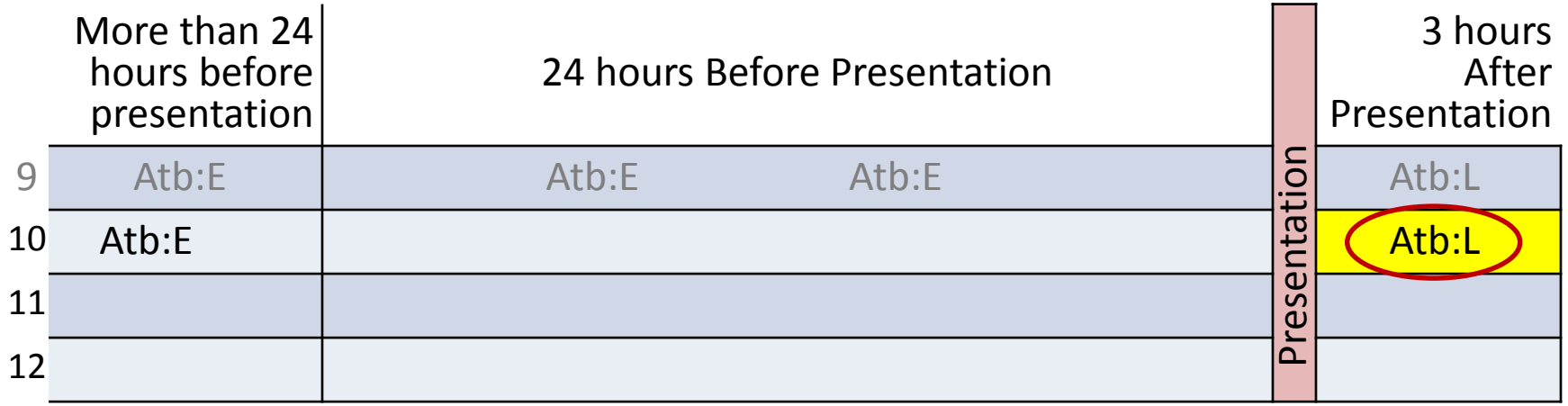
9. Abstract earliest dose of antibiotics given within 24 hours of presentation, in this case it is earlier than 24 hours prior to presentation. **NOTE: algorithm will exclude case.**

Antibiotic Timing Examples (slide 19 of 24)

	More than 24 hours before presentation	24 hours Before Presentation		Presentation	3 hours After Presentation
9	Atb:E	Atb:E	Atb:E		Atb:L
10	Atb:E				Atb:L
11					
12					

9. Abstract earliest dose of antibiotics given within 24 hours of presentation, in this case it is earlier than 24 hours prior to presentation. **NOTE: algorithm will exclude case**.
10. Antibiotic E was given more than 24 hours prior to presentation and antibiotic L was given within 3 hours following presentation.

Antibiotic Timing Examples (slide 20 of 24)



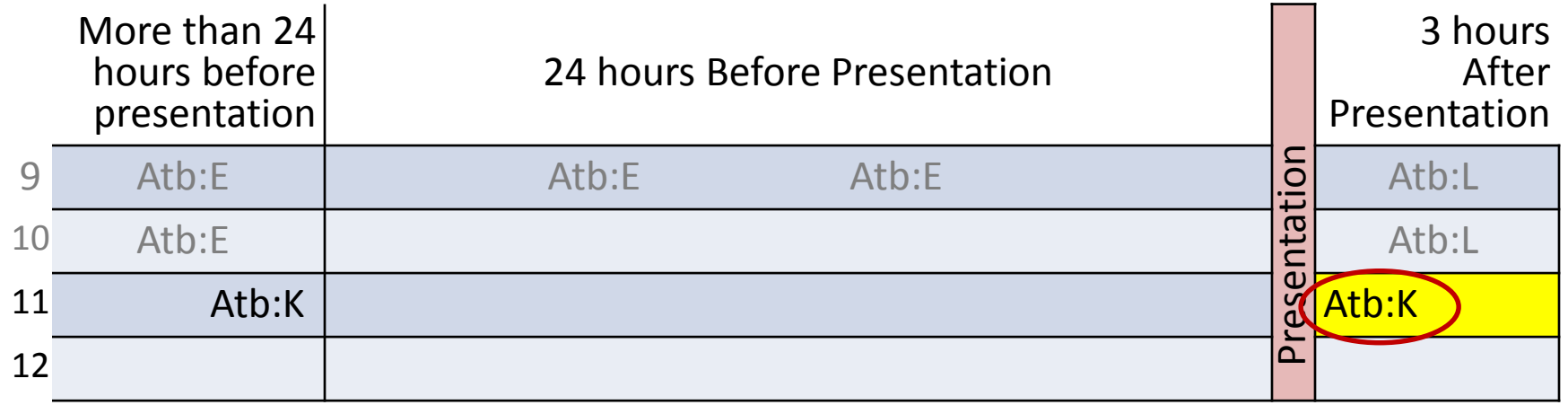
9. Abstract earliest dose of antibiotics given within 24 hours of presentation, in this case it is earlier than 24 hours prior to presentation. **NOTE: algorithm will exclude case.**
10. Abstract earliest dose given within 3 hours following presentation. **NOTE: antibiotics given are compared to options on Tables 5.0 & 5.1**

Antibiotic Timing Examples (slide 21 of 24)

	More than 24 hours before presentation	24 hours Before Presentation		Presentation	3 hours After Presentation
9	Atb:E	Atb:E	Atb:E		Atb:L
10	Atb:E				Atb:L
11	Atb:K				Atb:K
12					

9. Abstract earliest dose of antibiotics given within 24 hours of presentation, in this case it is earlier than 24 hours prior to presentation. **NOTE: algorithm will exclude case.**
10. Abstract earliest dose given within 3 hours following presentation. **NOTE: antibiotics given are compared to options on Tables 5.0 & 5.1**
11. Antibiotic K was given earlier than 24 hours prior to presentation and 1 dose of same antibiotic K was given within 3 hours following presentation.

Antibiotic Timing Examples (slide 22 of 24)



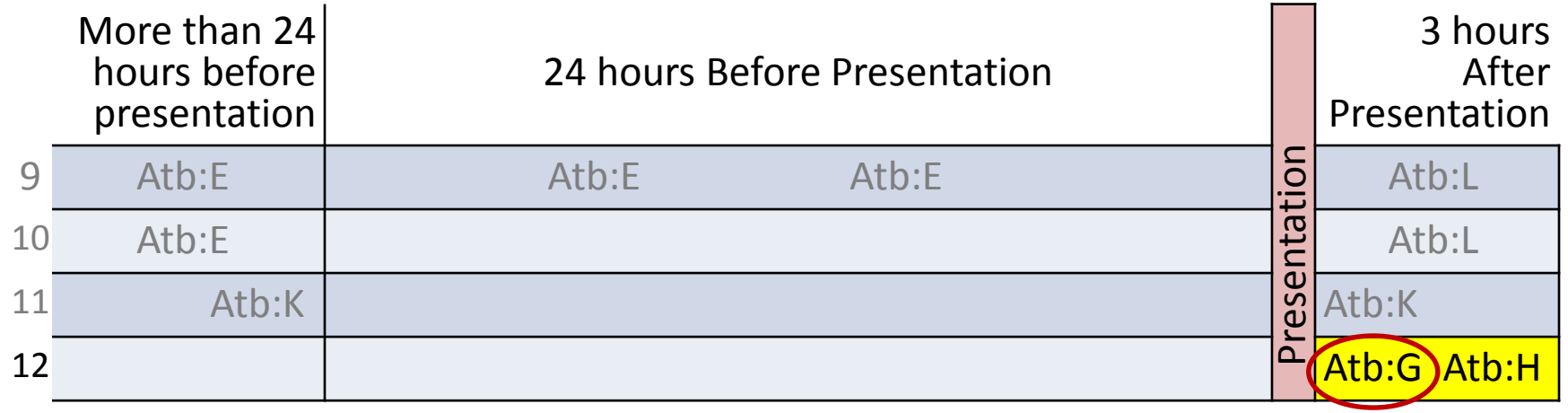
9. Abstract earliest dose of antibiotics given within 24 hours of presentation, in this case it is earlier than 24 hours prior to presentation. **NOTE: algorithm will exclude case.**
10. Abstract earliest dose given within 3 hours following presentation. **NOTE: antibiotics given are compared to options on Tables 5.0 & 5.1**
11. Abstract earliest dose given within 3 hours following presentation. **NOTE: antibiotics given are compared to options on Tables 5.0 & 5.1**

Antibiotic Timing Examples (slide 23 of 24)

	More than 24 hours before presentation	24 hours Before Presentation	Presentation	3 hours After Presentation
9	Atb:E	Atb:E Atb:E		Atb:L
10	Atb:E			Atb:L
11	Atb:K			Atb:K
12				Atb:G Atb:H

9. Abstract earliest dose of antibiotics given within 24 hours of presentation, in this case it is earlier than 24 hours prior to presentation. **NOTE: algorithm will exclude case.**
10. Abstract earliest dose given within 3 hours following presentation. **NOTE: antibiotics given are compared to options on Tables 5.0 & 5.1**
11. Abstract earliest dose given within 3 hours following presentation. **NOTE: antibiotics given are compared to options on Tables 5.0 & 5.1**
12. 1 dose of antibiotic G and 1 dose of antibiotic H given within 3 hours following presentation.

Antibiotic Timing Examples (slide 24 of 24)



9. Abstract earliest dose of antibiotics given within 24 hours of presentation, in this case it is earlier than 24 hours prior to presentation. **NOTE: algorithm will exclude case.**
10. Abstract earliest dose given within 3 hours following presentation. **NOTE: antibiotics given are compared to options on Tables 5.0 & 5.1**
11. Abstract earliest dose given within 3 hours following presentation. **NOTE: antibiotics given are compared to options on Tables 5.0 & 5.1**
12. Abstract earliest antibiotic given within 3 hours following presentation. **NOTE: antibiotics given are compared to options on Tables 5.0 & 5.1**

Broad Spectrum or Other Antibiotic Administration Selection (slide 1 of 4)

Selection of IV antibiotics administered within 3 hours following severe sepsis presentation

Allowable Values:

1 (Yes)	The IV antibiotic that was given within 3 hours following the presentation of severe sepsis is consistent with antibiotic selection guidelines.
2 (No)	The IV antibiotic that was given within 3 hours following the presentation of severe sepsis is not consistent with antibiotic selection guidelines.

Broad Spectrum or Other Antibiotic Administration Selection (slide 2 of 4)

What to look for:

- Scope is **broad spectrum antibiotics** for **initial treatment**
- Limited to cases where the only antibiotics were given or started within 3 hours following presentation
- Monotherapy:
  - One IV antibiotic given or started listed in Appendix C, Table 5.0 (Antibiotic Monotherapy, Sepsis) within 3 hours after severe sepsis presentation
  - Multiple antibiotics can be given, at least **one must be from Table 5.0**

Broad Spectrum or Other Antibiotic Administration Selection (slide 3 of 4)

What to look for:

- Combination therapy:
  - If at least one antibiotic from Table 5.0 was not given, refer to Table 5.1 (Antibiotic Generic/Trade name Crosswalk, Sepsis).
  - For antibiotics the patient was given on Table 5.1, note the shaded rows above each to identify the antibiotic classes.
  - Refer to the Combination Antibiotic Therapy Table located in the *Broad Spectrum of Other Antibiotic Administration Selection* data element.

Broad Spectrum or Other Antibiotic Administration Selection (slide 4 of 4)

What to look for:

- Combination therapy - continued:
  - If the classes are in either Column A or Column B, look to the other column for a corresponding antibiotic class that must be given in combination
  - There must be at least **one antibiotic given from Column A and at least one from Column B**
  - Additional antibiotics can be given

Antibiotic Abstraction – Combination Therapy (slide 1 of 4)

- Patient was given Gentamicin
- Table 5.1 indicates this is an Aminoglycoside

Table 5.1 Antibiotic Generic/Trade Name Crosswalk, Sepsis

Antibiotic Selection Options (includes trade & generic name)	Generic Name Crosswalk
Aminoglycosides	
Amikacin	Amikacin
Garamycin	Gentamicin
Gentamicin	Gentamicin
Kanamycin	Kanamycin
Kantrex	Kanamycin
Nebcin	Tobramycin
Tobramycin	Tobramycin
Aztreonam	
Azactam	Aztreonam
Aztreonam	Aztreonam
Cephalosporins (1st and 2nd Generation)	

Antibiotic Abstraction – Combination Therapy (slide 3 of 4)

- Patient was also given Vancomycin
- Table 5.1 indicates this is a Glycopeptide

Clindamycin IV	
Cleocin	Clindamycin
Clindamycin	Clindamycin
Daptomycin	
Cubicin	Daptomycin
Daptomycin	Daptomycin
Glycopeptides	
Targocid	Teicoplanin
Teicoplanin	Teicoplanin
Telavancin	Telavancin
Vancocin	Vancomycin
Vancomycin	Vancomycin
Vibativ	Telavancin

Antibiotic Abstraction – Combination Therapy (slide 4 of 4)

- Combination Antibiotic Therapy Table
  - Must be an antibiotic from a class in Column A and Column B
  - Gentamicin an Aminoglycoside is in Column A
  - Vancomycin a Glycopeptide is in Column B

Combination Antibiotic Therapy Table

Column A		Column B
Aminoglycosides OR Aztreonam OR Ciprofloxacin	+	Cephalosporins (1st and 2nd Generation) OR Clindamycin IV OR Daptomycin OR Glycopeptides OR Linezolid OR Macrolides OR Penicillins

Septic Shock Present (slide 1 of 2)

Documentation of presence of the first episode of Septic Shock

Allowable Values:

1 (Yes) There is documentation of Septic Shock

2 (No) There is no documentation of Septic Shock, or unable to determine

Septic Shock Present (slide 2 of 2)

Things to look for: Earliest of either

- Clinical Criteria for Septic Shock
  a. Documentation of Severe Sepsis present

     AND

  b. Tissue hypoperfusion
     - Persistent hypotension

       OR

     - Lactate >= 4 mmol/L

  OR

- Physician, APN or PA documentation of Septic Shock or suspected/possible Septic Shock

Septic Shock Present: Severe Sepsis

- Septic Shock cannot be present without Severe Sepsis.
  - Can be confirmed, suspected, or possible
  - Can be based on Severe Sepsis criteria or physician/APN/PA documentation
- If Severe Sepsis not present, choose Value “2 (No).”

Note: *Severe Sepsis Present*, if criteria not met, and there is no physician/APN/PA documentation of Severe Sepsis, **BUT** there is physician/APN/PA documentation of Septic Shock, this is acceptable for Severe Sepsis.

Septic Shock Present: Hypoperfusion (slide 1 of 4)

Tissue Hypoperfusion demonstrated by **Persistent Hypotension**:

- Requires determination of whether or not:
  - patient received 30 mL/kg of crystalloid fluids
  - patient was hypotensive after 30 mL/kg of crystalloid fluids were given.
- Requires review of criteria for:
  - *Crystalloid Fluid Administration* data elements
  - *Persistent Hypotension* data element

Septic Shock Present: Hypoperfusion (slide 2 of 4)

Tissue Hypoperfusion demonstrated by **Persistent Hypotension**:

- One hour after crystalloid fluids completed (requires **30 mL/kg** to determine Septic Shock presence)
  - Systolic blood pressure (SBP) < 90 mmHg, OR
  - Mean arterial pressure (MAP) < 65 mmHg, OR
  - Decrease in SBP by > 40 mmHg from last recorded SBP considered “normal” for patient
- Documentation typically found in nursing documentation (vitals)

Septic Shock Present: Hypoperfusion (slide 3 of 4)

Determining 30 mL/kg crystalloid fluids concluded:

- Documented time infusion ends

OR

- Can base upon start time and duration in order
  - Example:

    Order for 3000 mL (100 kg patient) over one hour. Infusion started at 0800. Time concluded = 0900.

Septic Shock Present: Hypoperfusion (slide 4 of 4)

Tissue Hypoperfusion demonstrated by **Initial Lactate Level >= 4 mmol/L**:

- Initial Lactate Level results
- Crystalloid fluids may not have been given yet, but should be given for treatment of Septic Shock
- Documentation typically found in laboratory report results

Septic Shock Present: Physician/APN/PA Documentation

- If criteria for Septic Shock are not met, but there is physician/APN/PA documentation of Septic Shock, choose Value “1 (Yes)”
- Select “1 (Yes)” for the following:
  - Possible or suspected Septic Shock
  - Rule out Septic Shock
  - Differential diagnosis Septic Shock

Septic Shock Present: Crystalloid Fluids Not Given

If crystalloid fluids were **NOT** administered after the presentation date and time of Severe Sepsis, select Allowable Value “2 (No).”

Septic Shock Presentation Date and Time

- Use Triage date and time **ONLY if**:
  - Patient arrives to the ED with Septic Shock
  - Septic Shock is identified as present or suspected during triage

- Use the Date and Time the **last sign of Septic Shock was noted or last laboratory value was reported**, **OR** the Date and Time of **physician/APN/PA documentation**:
  - For all cases presenting after triage time, including if still in the ED or admitted as inpatients

Crystalloid Fluid Administration

(slide 1 of 3)

Documentation that crystalloid fluids were administered prior to, at the time of, or after presentation of Septic Shock

Allowable Values:

1 (Yes)	Crystalloid fluids were administered prior to, at the time of, or after the presentation of septic shock, AND the volume ordered was 30 mL/kg.
2 (No)	Crystalloid fluids were administered prior to, at the time of, or after the presentation of septic shock, AND the volume ordered was less than 30 mL/kg., or unable to determine volume ordered.
3 (No)	Crystalloid fluids were not administered prior to, at the time of, or after the presentation of septic shock, or unable to determine whether or not they were administered.

Crystalloid Fluid Administration

(slide 2 of 3)

Things to look for:

- Only acceptable crystalloid fluids:
  - 0.9% saline solution (Normal Saline)
  - Lactated Ringers
  - **Note:** Colloids can be given in addition to crystalloids **BUT are NOT** an acceptable substitute for purposes of the measure
- To determine volume that should be ordered:
  - Weight in pounds divided by 2.2 to find weight in kgs
  - Weight in kgs multiplied by 30 is total volume required
- Documentation must be clear crystalloid fluids were actually administered – two parts:
  - Crystalloid fluids must be given, AND
  - Ordered volume must be equivalent to 30 mL/kg

Crystalloid Fluid Administration

(slide 3 of 3)

More things to look for:

- For purposes of the measure use actual weight or estimated weight documented closest to order
- Order must include time frame over which to give crystalloid fluids or a rate of administration
- Administration time frame or rate, **MUST** be greater than **1000 mL over 8 hours (125 mL/hour)**
- **Can** be ordered and given over a series of infusions
- Crystalloid fluids for flushing IV lines **cannot** be used
- Total volume (30 mL/kg) does not need to be completely infused

Crystalloid Fluid Administration Date and Time

The date and time the 30 mL/kg crystalloid fluid infusion was started

Things to look for:

- Crystalloid fluids are given in large volumes (> 1000 mL)
- **DO NOT** abstract date and time:
  - Crystalloid fluids were ordered
  - IV access was started
  - Crystalloid fluids given to dilute other medications or to flush other medications or IV lines

Persistent Hypotension (slide 1 of 2)

Documentation of the presence of persistent hypotension in the hour following completion of 30 mL/kg of crystalloid fluids

Allowable Values:

1 (Yes)	Crystalloid fluids were administered at a volume of 30 mL/kg and persistent hypotension was present within one hour of the conclusion of fluid administration
2 (No)	Persistent hypotension was not present within one hour of the conclusion of fluid administration at a volume of 30 mL/kg
3 (No) or UTD	The patient was not assessed for persistent hypotension within the one hour after the conclusion of fluid administration at a volume of 30 mL/kg, or Unable to Determine
4 (Not applicable)	Crystalloid fluids were not administered, or crystalloid fluids were administered but at a volume less than 30 mL/kg

Persistent Hypotension (slide 2 of 2)

Things to look for:

- Start at conclusion of 30 mL/kg of crystalloid fluids
- Indentified by two or more consecutive blood pressure readings of:
  - SBP < 90, OR
  - MAP < 65, OR
  - Decrease in SBP for > 40 mmHg from last recorded SBP considered “normal” for patient
- If no SBP or MAP recorded in the one hour following crystalloid fluid conclusion, select Allowable Value “3 (No) or UTD”

Persistent Hypotension: Crystalloid Fluid Conclusion (slide 1 of 2)

Example 1, infusion **duration** ordered:

- Order for 2500 mL normal saline over 2 hours
- Infusion started at 0900
- Add infusion duration time (2 hours) to start time (0900) for infusion end time = 1100

Example 2, infusion **rate** ordered:

- Order for 3000 mL normal saline at 1000 mL/hr
- Infusion started at 1000
- To find how long it will take to infuse, divide volume (3000 mL) by rate (1000 mL/hr) = 3 hours
- Add infusion duration time (3 hours) to start time (1000) for infusion end time = 1300

Persistent Hypotension: Crystalloid Fluid Conclusion (slide 2 of 2)

Example 3, infusion **duration** ordered, volume ordered greater than target volume (30 mL/kg):

- Order for 2500 mL normal saline over 2 hours
- Target volume (30 mL/kg) = 2250 mL (165 lb patient)
- Infusion started at 0900
- 2500 mL ÷ 120 mins = 20.83 mL/min
- 2250 mL ÷ 20.83 mL/min = 108 mins (1 hour 48 mins)
- Add infusion duration time (1 hour 48 mins) to start time (0900) for infusion end time = 1048

Septic Shock Case 1

Severe Sepsis presentation at 0900. Initial Lactate level report at 0830 = 4.2. Patient weight = 165 lbs. Order for 2500 mL normal saline (NS) over 2 hours. IV flow sheet NS started at 0915. BP before NS = 130/80. BP at 1115 = 136/82.

- *Septic Shock Present* = “1 (Yes)” time = 0900
  (Severe Sepsis with Lactate = 4.2)
- *Crystalloid Fluid Administration* = “1 (Yes)”
  (target volume = 2250 mL, 2500 mL ordered and started)
- *Crystalloid Fluid Administration Time* = 0915
- *Persistent Hypotension* = “2 (No)”
  (infusion of 30 mL/kg complete approximately1103, no hypotension within hour after)

Septic Shock Case 2

Severe Sepsis presentation at 1620. BP at 1620 = 85/30. Patient weight = 220 lbs. Order for 3000 mL NS over 1.5 hours. IV flow sheet NS started at 1630. BP at 1805 = 88/32, 1807 = 87/33.

- *Septic Shock Present* = “1 (Yes)” time = 1807
  (Severe Sepsis with persistent hypotension)
- *Crystalloid Fluid Administration* = “1 (Yes)”
  (target volume = 3000 mL, 3000 mL ordered and started)
- *Crystalloid Fluid Administration Time* = 1630
- *Persistent Hypotension* = “1 (Yes)”
  (infusion of 30 mL/kg completed approximately 1800, hypotension still present within hour after)

Septic Shock Case 3

Severe Sepsis presentation at 1015. BP at 1430 = 88/40. Patient weight = 146 lbs. Order for 2000 mL NS over 2 hours. IV flow sheet NS started at 1630. BP at 1845 = 86/38, at 1850 = 88/37.

- *Septic Shock Present* = “2 (No)” time (1845) is > 6 hours after *Severe Sepsis Presentation Time* (1015)
- For purposes of SEP-1 this patient does not have Septic Shock
- Case goes to end of algorithm, no further data entry required

Septic Shock Case 4

Severe Sepsis presentation at 1300. At 1230 IV started with 1000 mL bag NS at 50 mL/hr. BP at 1420 = 80/35. Patient weight = 212 lbs. Order to increase NS IV rate to 1000 mL/hr, followed by 2000 mL NS over 2 hours. Rate increased at 1430. 2000 mL NS started at 1530. BP at 1735 = 88/38, 1740 = 87/36.

- *Septic Shock Present* = “1 (Yes)” time (1740)
  (Severe Sepsis with persistent hypotension)
- *Crystalloid Fluid Administration* = “1 (Yes)”
  (target volume = 2890 mL, 2900 mL ordered and started)
- *Crystalloid Fluid Administration Time* = 1430
  (when rate increased to 1000 mL/hr)
- *Persistent Hypotension* = “1 (Yes)”
  (infusion of 30 mL/kg complete approximately 1730, hypotension still present within hour after)

Septic Shock Case 5

Severe Sepsis presentation at 0700. BP at 0815 = 82/36. Patient weight = 165 lbs. Order for 1500 mL NS over 2 hours. IV flow sheet NS started at 0830. BP at 1035 = 87/35, at 1045 = 88/30.

- *Septic Shock Present* = “2 (No)”
  - Ordered volume (1500 mL) less than target volume (2250 mL)
  - Hypotension still present after fluids infused but 30 mL/kg not given so not considered *Persistent Hypotension*
- No further data entry required, case goes to end of algorithm

Resources

- SEP-1 Fact Sheet on *QualityNet*

  https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier3&cid=1228772869636

- Hospital Inpatient Questions & Answers Tool on *QualityNet*

  https://cms-ip.custhelp.com/

- Version 5.0b Addendum and Release Notes on *QualityNet*

  https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier2&cid=1141662756099

SEP-1 Changes in Manual version 5.0b

(slide 1 of 3)

Data Element	Brief Summary of Changes
Broad Spectrum or Other Antibiotic Administration	• Clarified the administration time frame wording to indicate IV antibiotics must be given in the 24 hours prior to OR 3 hours following presentation of severe sepsis • Removed references to Tables 5.0 and 5.1 as they are not applicable for this data element
Broad Spectrum or Other Antibiotic Administration Time	• Clarified the time required for the IV antibiotic administration
Broad Spectrum or Other Antibiotic Administration Selection	• Clarified guidance on administration of the combination therapy

SEP-1 Changes in Manual version 5.0b

(slide 2 of 3)

Data Element	Brief Summary of Changes
Crystalloid Fluid Administration	• Clarified wording to indicate that fluids could be given prior to presentation of septic shock
Persistent Hypotension	• Corrected the reference of 30 mL/kg as a rate to be a volume • Clarified guidance around what documentation is used to determine the presence of persistent hypotension • Added guidance to indicate not to use readings that were documented as erroneous

SEP-1 Changes in Manual version 5.0b

(slide 3 of 3)

Data Element	Brief Summary of Changes
Septic Shock Present, Septic Shock Presentation Date, Septic Shock Presentation Time	• Clarified the abstraction guidance regarding the initial lactate level and the volume of crystalloid fluids administered • Clarified that nursing documentation can be used
Severe Sepsis Present, Severe Sepsis Presentation Date, Severe Sepsis Presentation Time	• Added nurses notes/documentation to suggested data sources and clarified the criteria for Severe Sepsis

Thank You

- Your questions and feedback
  - Resulted in important revisions
  - Updates posted on *QualityNet* in version 5.0b
  - Continuing to look at data elements and measure design based on your questions and feedback

Continuing Education Approval

- This program has been approved for 1.0 continuing education (CE) unit for the following professional boards:
  - Florida Board of Clinical Social Work, Marriage and Family Therapy and Mental Health Counseling
  - Florida Board of Nursing Home Administrators
  - Florida Council of Dietetics
  - Florida Board of Pharmacy
  - Board of Registered Nursing (Provider #16578)
    - It is your responsibility to submit this form to your accrediting body for credit.

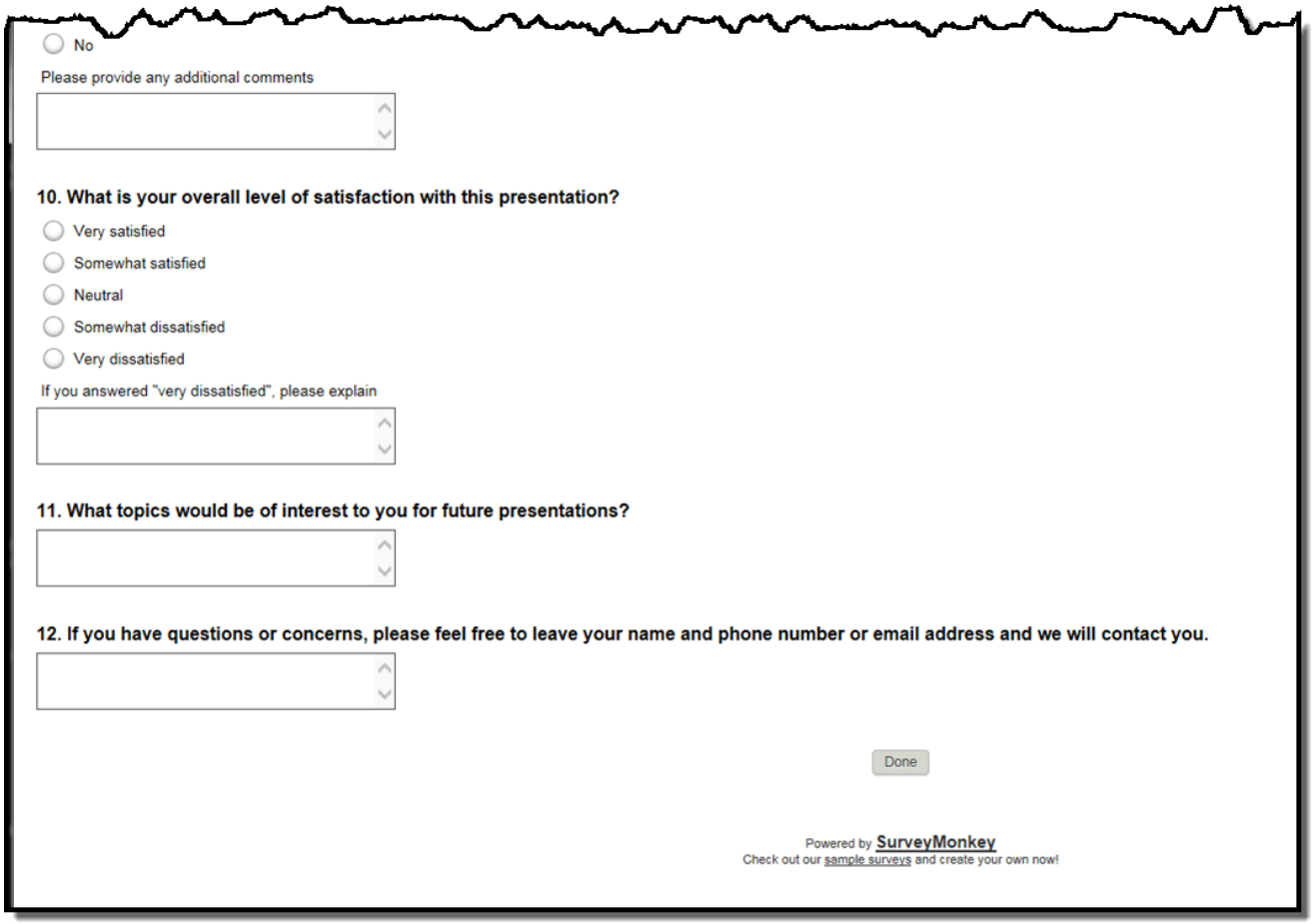
CE Credit Process

- Complete the ReadyTalk® survey that will pop up after the webinar, or wait for the survey that will be sent to all registrants within the next 48 hours.
- After completion of the survey, click “done” at the bottom of the screen.
- Another page will open that asks you to register in HSAG’s Learning Management Center.
  - This is a separate registration from ReadyTalk
  - Please use your PERSONAL email so you can receive your certificate
  - Healthcare facilities have firewalls up that block our certificates

CE Certificate Problems?

- If you do not immediately receive a response to the email that you signed up with in the Learning Management Center, you have a firewall up that is blocking the link that is sent out
- Please go back to the **New User** link and register your personal email account
  - Personal emails do not have firewalls

CE Credit Process: Survey



No

Please provide any additional comments

10. What is your overall level of satisfaction with this presentation?

- Very satisfied
- Somewhat satisfied
- Neutral
- Somewhat dissatisfied
- Very dissatisfied

If you answered "very dissatisfied", please explain

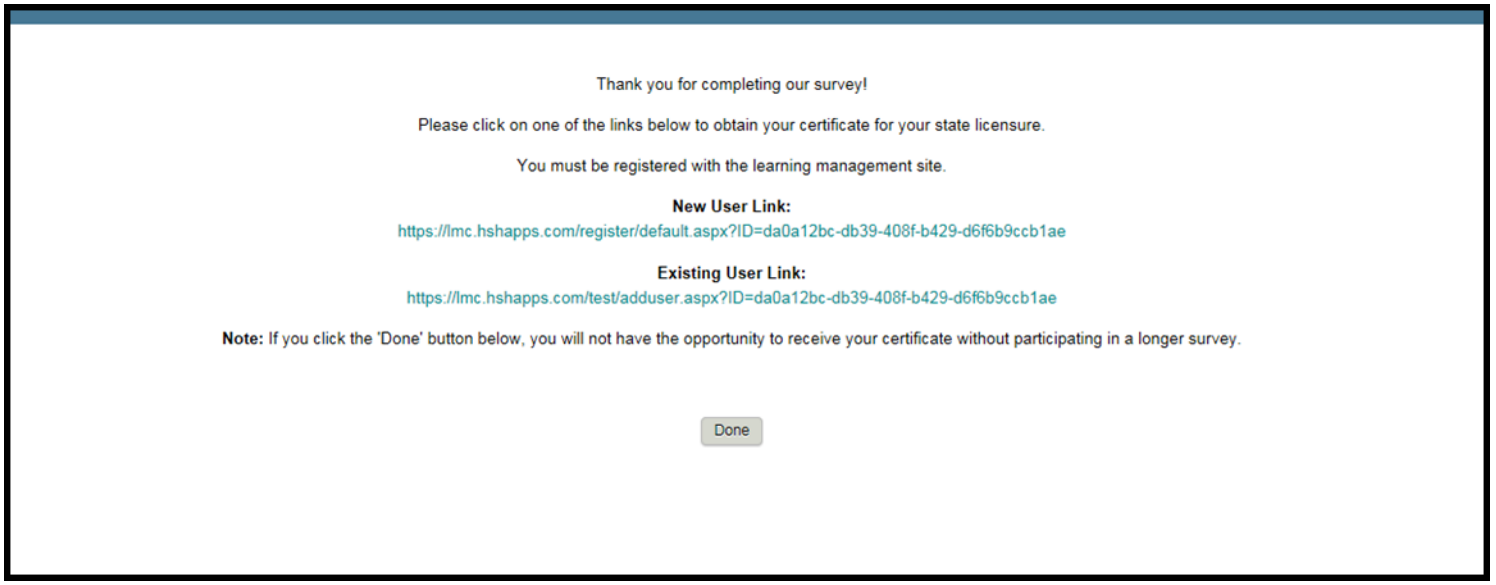
11. What topics would be of interest to you for future presentations?

12. If you have questions or concerns, please feel free to leave your name and phone number or email address and we will contact you.

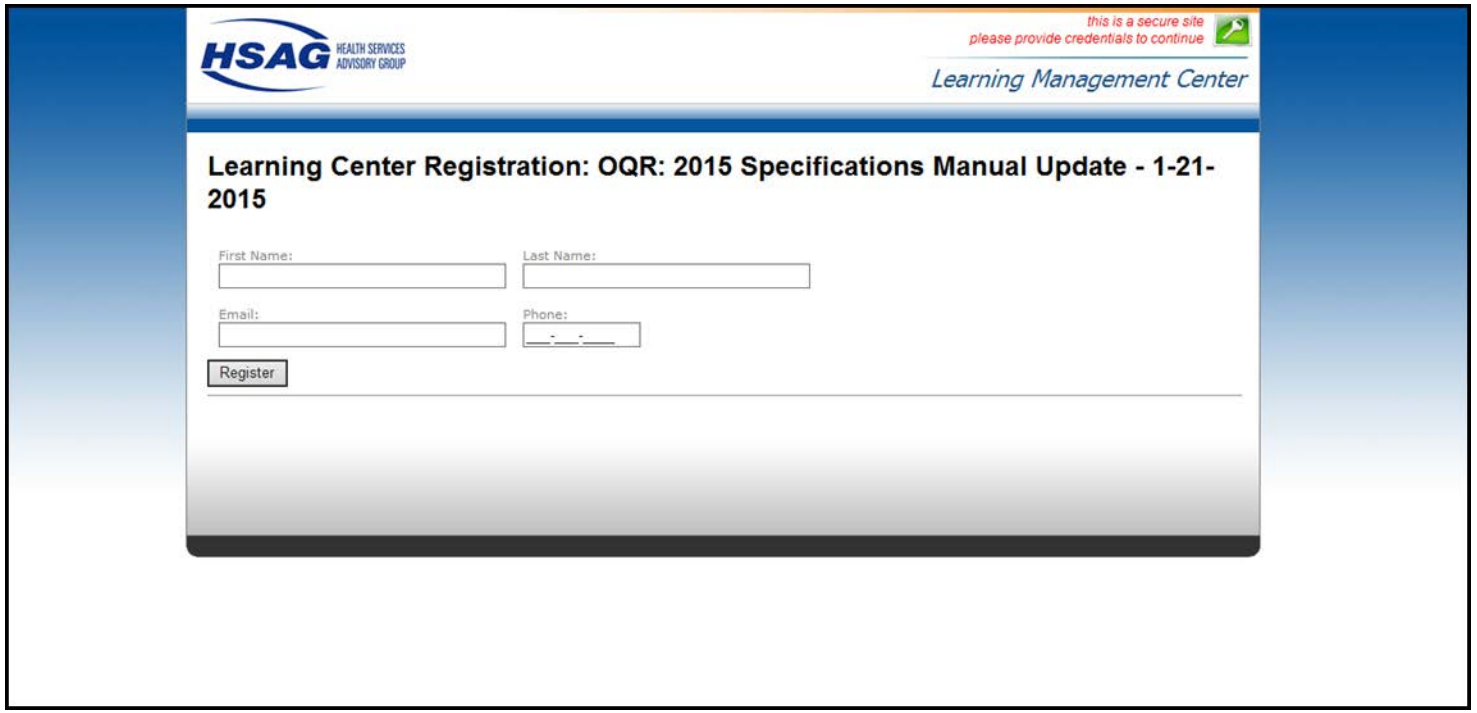
Done

Powered by SurveyMonkey
Check out our sample surveys and create your own now!

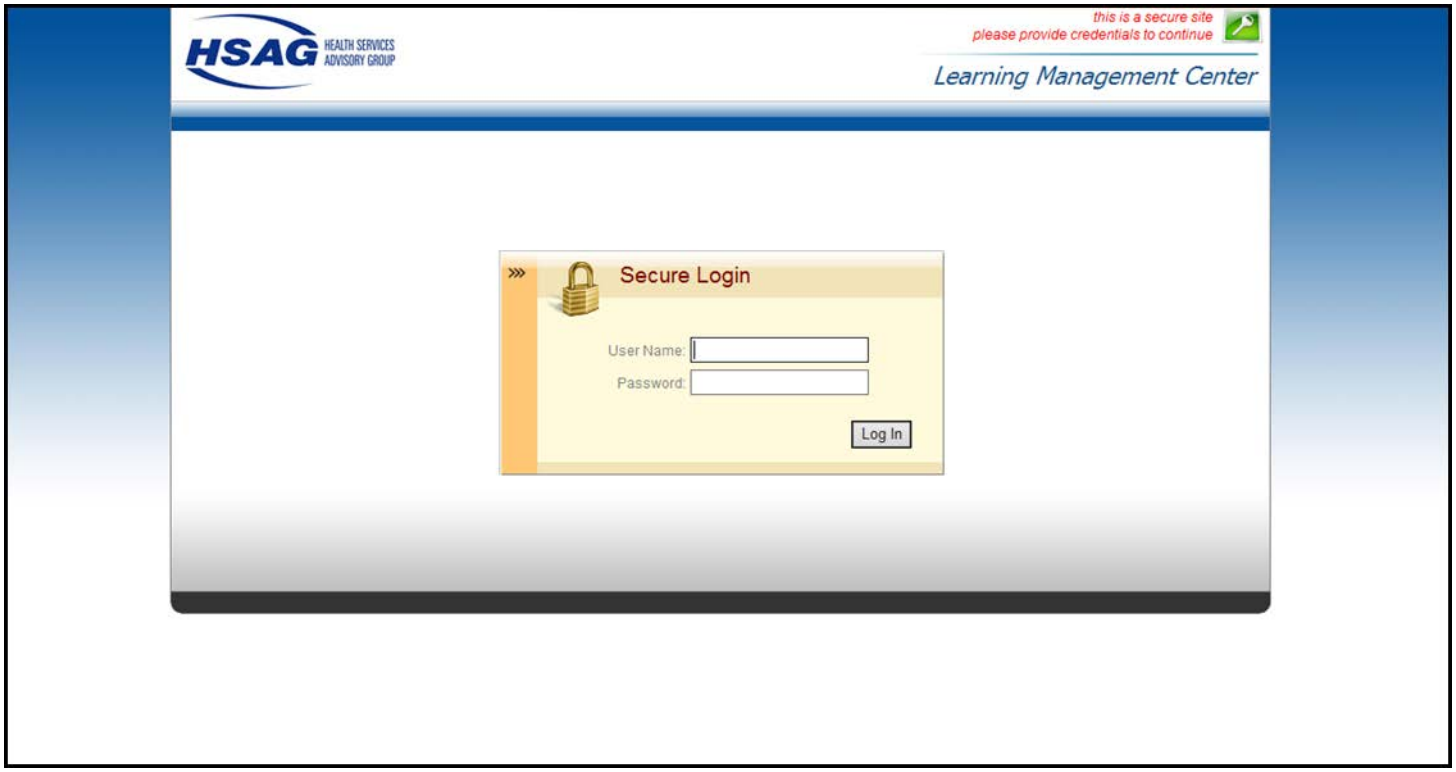
CE Credit Process



CE Credit Process: New User



CE Credit Process: Existing User



QUESTIONS?