Visual Smartboard Sepsis Criteria

Version: 2.0 04/21/2016

CMS Based Guidelines:

I. **Severe Sepsis (a, b, and c or d)**
   a. Documentation of a suspected source of infection:
      i. Positive Microbiology Culture.
      ii. ICD10 code corresponding to infection on Nursing Problem List.
      iii. ICD10 code corresponding to infection in the EDM Impression List.
   b. SIRS (Systemic Inflammation Response Syndrome) – 2 or more of the following:
      i. Temperature > 38.3° C (101° F) or < 36.0° C (96.8° F).
      ii. Heart Rate > 90 beats/min.
      iii. Respiratory Rate > 20 breaths/min.
      iv. White Blood Cell Count > 12,000/mm3 or < 4,000/mm3 or Bands > 10%.
   c. Organ Dysfunction – 1 or more of the following:
      i. Systolic Blood Pressure < 90 mmHg or MAP < 65 mmHg or a SBP decrease of more than 40 points (if documented).
      ii. Creatinine > 2.0 mg/dl or urine output less than 400ml/24hr (LOS > 24 hours).
      iii. Total Bilirubin > 2 mg/dl.
      iv. Platelet Count < 100,000 ul.
      v. INR > 1.5 or APTT > 60.
      vi. Lactate > 2 mmol/L.
   d. Provider documentation of one of the following on the Nursing Problem List or EDM Impression List.
      i. R65.2 - Severe Sepsis.
      ii. R65.20 – Severe Sepsis w/o Septic Shock.
      iii. R65.21 – Severe Sepsis with Septic Shock.
      iv. Free text search on Nursing Problem List for "sepsis".

II. **Septic Shock (Severe Sepsis from above plus one of the following)**
   a. Provider documentation of Septic Shock on the Nursing Problem List or EDM Impression List:
      i. R65.21 – Severe Sepsis with Septic Shock.
      ii. Free text search on Nursing Problem List for "septic".
   b. Lactate > 4 mmol/L.

Results:

1. If a patient meets none of the above criteria: **NEGATIVE.**
2. If a patient only meets the criteria for SIRS: **SIRS**.
3. If a patient meets the criteria for SIRS and has a documented source of infection: **POSS SEPSIS.**
4. If a patient meets the first 3 criteria (a, b, c) for severe sepsis or has provider documentation of "sepsis" or "severe sepsis" (d): **SEVERE SEPSIS.**
5. If a patient meets the criteria for severe sepsis and meets one of the criteria for septic shock: **SEPTIC SHOCK.**

Notes:

1. Currently as setup the VSB will pull in only those patients admitted to an inpatient room and bed but can be configured to consider any registered patient.
2. All vital sign and lab values are setup to consider the last value entered in the system; however, they can be configured to only consider values within a set time frame in hours (per CMS that may be 6 hours).
3. By default the sepsis results are based on CMS guidelines published on October 1st, 2015. Alternately, the board can be setup to use the SEPSIS-3 protocols (see below).

SEPSIS-3 Based Guidelines:

I. **Sepsis (a and b or c).**
   a. Suspected or Documented Infection:
      i. Positive Microbiology Culture.
      ii. ICD10 code corresponding to infection on Nursing Problem List.
      iii. ICD10 code corresponding to infection in the EDM Impression List.
   b. SOFA Score rise by 2 or more points (if documented in the system).
   c. 2 or 3 on qSOFA:
      i. Systolic Blood Pressure <= 100 mmHg.
      ii. Altered Mentation: Glasgow Coma <= 13.
      iii. Respiratory Rate >= 22 breaths/min.

II. **Septic Shock**
   a. MAP > 65 mmHg with Vasopressors.
   b. Lactate > 2mmol/L.

Results:

1. If a patients meets only the criteria for sepsis: **SEPSIS.**
2. If a patient meets the criteria for sepsis and all criteria for septic shock: **SEPTIC SHOCK.**