A MULTI-FACILITY HOSPITAL SYSTEM’S JOURNEY TO AN EARLY IDENTIFICATION TOOL FOR SEPSIS IN THE OBSTETRIC POPULATION

Jill C Hughes, MSN, RNC-OB

OBJECTIVES

1. At the end of the presentation, the participant will be able to state challenges to creating a sepsis early identification tool for the perinatal population.

2. At the end of the presentation, the participant will be able to describe a multi-facility hospital system’s lean leader approach to creating an OB specific early identification tool.

3. At the end of the presentation, the participant will have been given the opportunity to review and give input into the first draft of the OB sepsis early identification tool currently being trialed within the hospital system.

WHY?

• CMS Severe Sepsis/Septic Shock Core Measure

• CDC stated: Increase in maternal deaths from 7.2/100,000 in 1987 to 17.8/100,00 in 2009 * are due to an increase in infection and sepsis deaths*.
Percentages of pregnancy-related deaths in the United States in 2011 caused by:

- Cardiovascular diseases, 15.1%.
- Non-cardiovascular diseases, 14.1%.
- Infection or sepsis, 14.0%.
- Hemorrhage, 11.3%.
- Cardiomyopathy, 10.1%.
- Thrombotic pulmonary embolism, 9.8%.
- Hypertensive disorders of pregnancy, 8.4%.
- Amniotic fluid embolism, 5.6%.
- Cerebrovascular accidents, 5.4%.
- Anesthesia complications, 0.3%.

**CHALLENGES**

- Current sepsis screening tools do not allow for the physiologic changes related to pregnancy and early postpartum.
- Very little research exists related to early identification in the obstetric population, except to note that current methods are not effective.
- There is an identified need for education related to sepsis and the perinatal population for both nurses and physicians.

**APPROACH**

**Lean Methodology:**

- Part of the INTEGRIS culture
- A process to design/redesign workflow to eliminate waste and add value to the end result
Baseline research and data related to physiologic changes had previously been addressed with sepsis APRN.

- Identified Root Causes for identified challenges
  - RN’s don’t always think “sepsis” or look for sepsis
  - SIRS criteria in EMR connected to alarms/notifications are turned off
  - Physicians don’t always believe obstetric patients are at risk for sepsis.

Identified a physician champion

**SEVERE SEPSIS/SEPTIC SHOCK**

To be completed on patients placed on sepsis protocol

**ED Management** (the following must be performed prior to transfer upstairs)

1. Lactate completed and physician aware
   - Time:
2. Blood Cultures x2
   - Time:
3. Fluid bolus 30ml/kg infusing through large bore IV
   - Volume received: Ordered:
4. Appropriate primary antibiotic (broad spectrum)
   - Time:

**Ongoing Management** (may be completed in ICU or ED pending available bed)

1. Secondary antibiotic. (Communicate time frame for when antibiotics must be hung to meet measure)
   - None (Denotes monotherapy with no secondary antibiotic)
   - Cipro/Vanc/Other____________
   - Ongoing Antibiotics____________
   - Time:
2. Presep catheter (for Septic shock and in need of vasopressors)
   - Completed with confirmed placement / Ordered & Pending
   - Time:
3. Vasopressors (if hypotension persists) ___________________
   - To be completed within 6 hours of Septic Shock presentation.
   - Time:
4. Early Goal Directed Therapy Initiated
   - Time:

May be used in place of Physician focused exam.
**NEXT STEPS**

**Address challenges to step 3**

**Trial tool, make necessary changes and trial again**

**Obtain IRB approval to officially review outcomes related to goals of utilizing the tool:**

- Improve early identification and intervention related to obstetric sepsis identification.
- Improve nurse/physician communication related to sepsis identification.

**Roll out to ED for pregnancies >20 weeks and postpartum population.**

---

**REFERENCES**


