

MI AIM Sepsis Bundle

Principle goal:

To reduce maternal morbidity and mortality from maternal sepsis

- Identify early
- Treat appropriately and promptly
- Recognize when to escalate care

Be Ready

Every Unit

- Have a standard sepsis policy at hospital
 - Have standards for early warning signs, diagnostic criteria and treatment of Sepsis (include order sets and algorithms)
 - Include an order set for screening, confirmation, and treatment in the EHR
 - Establish a rapid response team
 - Have a confirmation process in place
 - Assure rapid access to antibiotics
 - Adopt a system plan for escalation, obtaining appropriate consultation, and maternal transport
- Achieve unit education on pregnancy adjusted vital signs, maternal sepsis, protocols and institute unit multidisciplinary drills including debriefing

Recognize Early

Every Patient

- Have facility-wide standards for educating prenatal and postpartum women on signs and symptoms of sepsis
- Implement a standard protocol for frequency of complete measurement of vital signs
- Assess every patient for sepsis risk through screening
- Increase monitoring policy following positive initial screen
- Monitor for Septic Shock (BP <85 Systolic and/or MAP <65 sustained)

Respond Promptly per Protocol

- Follow facility wide standard protocols and escalation policies for management after positive sepsis screen
 - Increase surveillance of vital signs and check lactic acid levels
 - Administer fluids as defined in the tool kit
 - Start antibiotics, as appropriate
 - Send labs to confirm diagnosis
 - Make sure patient evaluated by a licensed advanced practice provider

- Respond appropriately after positive confirmation of sepsis
 - Give antibiotics within one hour - either source-directed or broad spectrum if etiology is unknown Give IV fluid for sepsis - 30 ml/kg within 3 hours
 - Escalate care to appropriate level (e.g., transfer to ICU or telemedicine consultation)
 - Give vasopressor to maintain MAP > 65 after adequate fluid resuscitation

Report To Enhance Systems Learning

- Review each case of maternal sepsis for
 - Accurate use of terminology and ICD-10 codes
 - Timing of written order to when antibiotics were given (goal is within 1 hour)
 - IV fluid for sepsis - 30 ml/kg of fluid (goal is within 3 hours)
 - Proper escalation of care
 - Systems issues both on unit and on services affecting unit
- Review Severe Maternal Morbidity ICD-10 codes in women with maternal sepsis (prior to and after implementation)

Give Respectful Care

- Provide staff training on implicit bias
- Communicate with empathy and listen to patient concerns
- Provide culturally appropriate education to patients and families on signs and symptoms of infection and when to seek immediate care
- Validate patient/family emotions and provide opportunities for shared decision making
- Obtain specific feedback from patients on the care experience
- Identify and address process and outcome variations related to systemic bias in clinical care
- Track infection rates and outcomes by race and ethnicity

Implementation Tips

- Add order sets and screening criteria to EHR
- Meet with hospital sepsis protocol stakeholders about important differences with maternal sepsis
- Engage pharmacy early about accessibility to prompt antibiotic treatment

With thanks to Elliot Main MD and Melissa Bauer DO

This MI AIM document is based on the California Maternal Quality Care Collaborative Sepsis Toolkit

MI AIM Sepsis Bundle Process Measure Questions

Screening – (NUM) # of patients screened for sepsis
(DENOM) # of patients audited

Review a list of maternal health OB patients and sample at least 20 cases to verify if a sepsis screening was completed.

This list will account for all patients admitted to the Labor and Delivery unit.

Guideline: Was a sepsis screening completed upon admission? If yes, count in the numerator and denominator. If no, count only in denominator.

****The same patient may be abstracted for antibiotics, fluids, and labs****

Antibiotic – (NUM) # of patients with appropriate antibiotics administered within one (1) hour of sepsis diagnosis (if more than one is ordered, all must be given within one hour)
(DENOM) # of patients audited

Review a list of maternal health OB patients who screened positive for sepsis and sample all cases (up to 20) for appropriate antibiotics within one hour of sepsis diagnosis.

This list will account for only patients that were positive for sepsis.

Guideline: Were appropriate antibiotics administered within one (1) hour of sepsis diagnosis? If yes, count in the numerator and denominator. If no, count only in denominator.

Fluids – (NUM) # of patients administered fluids at 30 ml/kg within three (3) hours of sepsis diagnosis
(DENOM) # of patients audited

Review a list of maternal health OB patients who screened positive for sepsis and sample all cases (up to 20) for appropriate fluids within three (3) hours of sepsis diagnosis.

This list will account for only patients that were positive for sepsis.

Guideline: Were fluids administered at 30 ml/kg within three (3) hours of sepsis diagnosis? If yes, count in the numerator and denominator. If no, count only in denominator.

Labs – (NUM) # of patients who had sepsis confirmation labs sent and resulted
(DENOM) # of patients audited

Review a list of maternal health OB patients who screened positive for sepsis and sample all cases (up to 20) for labs sent and resulted showing positive sepsis diagnosis.

This list will account for only patients that were positive for sepsis.

Guideline: Were sepsis confirmation labs sent and resulted? If yes, count in the numerator and denominator. If no, count only in denominator.

CDC Sepsis Codes –

ICD-10:

O85, O86.04, T80.211A, T81.4XXA, T81.44, T81.44XA, T81.44XD, T81.44XS

Severity: R65.20

A40.0, A40.1 , A40.3 , A40.8, A40.9, A41.01, A41.02, A41.1, A41.2, A41.3, A41.4, A41.50,
A41.51, A41.52, A41.53, A41.59, A41.81, A41.89, A41.9, A32.7

Source: <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/smm/severe-morbidity-ICD.htm>