

Providing education on some key maternal sepsis concepts will assist in routine screening for sepsis and providing treatment as necessary. A suggested outline is listed below, as well as some multi-media resources. Patient care stories are a powerful and effective tool used for buy-in, especially when they highlight the critically important role frontline care providers play in early recognition and treatment. One recommended strategy in the education plan is to engage learners at the start of any training by playing videos or recounting stories of women impacted by sepsis.*

Outline

1. Patient story
2. Sepsis incidence and mortality
 - a. Brief overview of sepsis in adults, frequency, morbidity
 - b. Worldwide frequency of maternal sepsis in the US
3. Key sepsis concepts
 - a. Time is an issue: Early recognition is critical
 - b. Overview of pathophysiology of sepsis (recommend Khan academy video)
 - c. Vital sign abnormalities, (i.e. elevated temperature not need be present)
 - d. Lab work
 - i. Lactic acid
 - ii. CBC and differential
 - iii. Other labs
 - e. Source control
 - f. Early antibiotics
 - g. Fluid resuscitation
 - h. Fluid responsiveness
4. Maternal sepsis
 - a. Pregnant women may look normal until they are very ill
 - b. Routine adult sepsis screening protocols need to be altered to adjust for the physiologic changes of pregnancy
 - c. Common sources of infection in the obstetric population
 - d. Chorioamnionitis
5. Additional considerations
 - a. Preeclampsia and fluid resuscitation
 - b. Elevated lactic acid levels during labor
 - c. Group A Strep- can have rapid onset

Selected Course Resources:

1. Bauer ME, Lorenz RP, Bauer ST, et al. Maternal deaths due to sepsis in the state of Michigan, 1999-2006. 2015 *Obstetrics & Gynecology*, 126(4):747-725. doi:10.1097/AOG.0000000000001028
 - This article and associated appendix outlines the cases of women who died from sepsis during 1999-2006. Table 2 lists some of the vital sign or clinical indicator derangements present when the women came to the hospital with sepsis. This information helps to illustrate the importance of paying attention to respiratory rate and oxygen saturation, and shows that not all women present with a fever. The appendix provides details that can help in illustrating a patient story. The final paragraph in this article can be used to highlight key concepts related to the need for early identification and treatment.
2. Bauer ME, Balistreri M, MacEachern M. Normal range for maternal lactic acid during pregnancy and labor: A systematic review and meta-analysis of observational studies. 2018 *Am J of Perinat*, Advance online publication. doi:10.1055/s-0038-1675243
 - This article provides additional detail about lactic acid findings for patients pre- and post- delivery and during labor.
3. Carol J. Decker. Retrieved from <https://www.caroljdecker.com>
 - Carol Decker developed sepsis while pregnant with her second child and developed severe complications as a result of the infection. The site has video of her discussing her experience and her journey as she has recovered from sepsis and its complications.
4. Khan Academy. (2015). Septic shock pathophysiology. Retrieved from <https://www.khanacademy.org/science/health-and-medicine/circulatory-system-diseases/shock/v/septic-shock-pathophysiology-and-symptoms>
 - Khan Academy presents an engaging overview of the pathophysiology of sepsis. A suggestion is to pair the viewing of this video with a question and answer session with participants. Asking questions such as, “What would you expect to see in your patient with sepsis?” and “What might be a late sign?” allows for recall and retention of the concepts.
5. Olvera L, & Dutra L. Early recognition and management of maternal sepsis. 2016 *Nurs for Women’s Health*, 20(2):184-196. doi:10.1016/j.nwh.2016.02.003.
 - This article outlines a program for maternal sepsis early recognition and treatment. There is a video link embedded in this article: <http://bcove.me/k8cl9d8j>. The first 12 minutes of the video provide a vivid description of a clinical scenario where a patient died from sepsis. Maternity nurses may strongly resonate with this material.
6. World Sepsis Day. Retrieved from <https://www.worldsepsisday.org/>
 - This site contains patient stories, free materials for patient and staff education, and ideas about ways to celebrate World Sepsis Day.

*This education outline can be adapted for all maternity practitioners and providers, including but not limited to, scrub techs, delivery techs, CNAs, etc., and department educational competencies.