A Review of Maternal Sepsis Work at Thomas Jefferson University Hospital in Fiscal Year 2026

Jessica Abrams, MSN, RNC-OB, C-EFM, C-OBE, CBC
Lauren Johnson, DNP, MPH, RNC-OB, NE-BC, CBC
Chitra Nanavaty

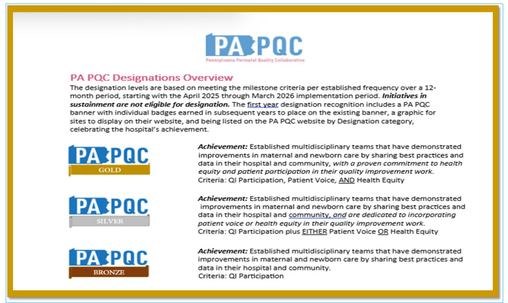
Jefferson Health
HOME OF SIDNEY KIMMEL MEDICAL COLLEGE

The Jefferson Nurse
Improving Lives, Together

MAGNET RECOGNIZED
AMERICAN NURSES CREDENTIALING CENTER

Background

- The Pennsylvania Perinatal Quality Collaborative (PAPQC) provides quality improvement support to healthcare teams to improve the standard of care for pregnant and postpartum people and babies [1]
- Obstetric Clinicians at Thomas Jefferson University Hospital in Philadelphia, PA partnered with the PAPQC to develop a Maternal Sepsis Quality Improvement Plan for Fiscal Year 2026
- The team set a goal of PAPQC Gold Level Designation for FY 2026



PA PQC
Pennsylvania Perinatal Quality Collaborative

PA PQC Designations Overview

The designation levels are based on meeting the milestone criteria per established frequency over a 12-month period, starting with the April 2025 through March 2026 implementation period. ***Initiatives in sustainment are not eligible for designation.*** The first year designation recognition includes a PA PQC banner with individual badges earned in subsequent years to place on the existing banner, a graphic for sites to display on their website, and being listed on the PA PQC website by Designation category, celebrating the hospital's achievement.

PA PQC GOLD — ***Achievement:*** Established multidisciplinary teams that have demonstrated improvements in maternal and newborn care by sharing best practices and data in their hospital and community, *with a proven commitment to health equity and patient participation in their quality improvement work.*
Criteria: QI Participation, Patient Voice, AND Health Equity

PA PQC SILVER — ***Achievement:*** Established multidisciplinary teams that have demonstrated improvements in maternal and newborn care by sharing best practices and data in their hospital and community, *and are dedicated to incorporating patient voice or health equity in their quality improvement work.*
Criteria: QI Participation plus EITHER Patient Voice OR Health Equity

PA PQC BRONZE — ***Achievement:*** Established multidisciplinary teams that have demonstrated improvements in maternal and newborn care by sharing best practices and data in their hospital and community.
Criteria: QI Participation

Methods

- Beginning July 2025, the TJUH Maternal Sepsis Team collected and analyzed sepsis data, developed and implemented education on Maternal Sepsis for staff, and initiated revision of the TJUH Maternal Sepsis Clinical Practice Guideline
- In September and October 2025, Certified Nurse Midwife Mari-Carmen Farmer facilitated a presentation entitled "Equity, Diversity, and Racism in Healthcare" for newly hired RNs and providers. The two-hour sessions incorporated didactic education as well as discussion on clinicians' professional responsibility to acknowledge systemic racism and adopt strategies to mitigate bias. Ahead of the sessions, an article addressing disparities in obstetric sepsis was emailed to participants.[2] The final half hour of each presentation was dedicated to a discussion of the article.
  Preparation/implementation steps for this project included:
  - **Developing the presentation**
  - **Creating a Pre and Post Maternal Sepsis Survey**
  - **Facilitating the presentation**
  - **Administering the Pre and Post Survey**
  - **Disseminating Results**
- On November 2025, Dr. Ariana Spiegel delivered a Perinatal Sepsis lecture featuring a case study. Dr. Spiegel incorporated patient voice into the lecture by sharing a recorded video of her interview with the patient featured in the case study.
- The TJUH team partnered with providers throughout the Enterprise to provide Evidence-Based clinical guidance for the screening, diagnosis, and treatment of maternal sepsis. The Maternal Sepsis Clinical Practice Guideline is currently under review for approval.

Results

Development of an Enterprise-Wide Maternal Sepsis Guideline, based largely on recommendations from the California Maternal Quality Care Collaborative (CMQCC) toolkit.[3] Highlights of the guideline include a two-step approach for screening pregnant patients over 20 weeks and postpartum patients up to 3 days post-delivery to reduce both false-positive and false-negative cases (standard SIRS criteria should be used for pregnant and postpartum patients outside of these dating parameters):

Step 1: Initial Sepsis Screen for All Patients with Suspected Infection (POSITIVE if two (2) or more criteria are met)
• Oral temperature < 36•C (96.8•F) or ≥ 38•C (100.4•F) • Maternal heart rate > 110 beats per minute (sustained for at least 15 minutes) * • Respiratory rate > 24 breaths per minute and sustained for 15 minutes (correct measurement of respiratory rate is visualized respirations for 1 minute) * • White blood cell count > 15,000/mm3 or >10% immature neutrophils (bands)
Step 2: Confirmation of Sepsis Test to Evaluate End Organ Injury
Laboratory values • Complete blood count (including % immature neutrophils (bands), platelets) • Coagulation status (PT/INR/PTT) • Comprehensive metabolic panel (specifically bilirubin, creatinine) • Venous lactic acid (lactate)
Bedside Assessment • Urine output (consider foley catheter, with urimeter if available) • Pulse oximetry • Mental status assessment

Measure of End Organ Injury	**Criteria for End Organ Injury for Diagnosis of Maternal Sepsis (one criterion is sufficient for diagnosis)**
Respiratory function	• Acute respiratory failure as evidenced by acute need for invasive or non-invasive mechanical ventilation, OR • PaO2 / FiO2 < 300 • O2 saturation < 92%
Coagulation status	• Platelets < 100 x 109/L, OR • INR > 1.5, OR • PTT > 60 seconds
Liver function	• Bilirubin > 2mg/dL
Cardiovascular function	• Persistent hypotension after sufficient fluid administration** ◦ SBP < 85 mmHg, OR ◦ MAP < 65 mmHg, OR ◦ 40 mmHg decrease in SBP
Renal function	• Creatinine > 1.2 mg/dL, OR • Doubling of creatinine, OR • Urine output < 0.5 mL/Kg/hour (for 2 hours) or <60 ml in 2 hours
Mental status assessment	• Agitation, confusion, or unresponsiveness
Lactic acid	• 2 mmol/L in the absence of labor • >4 mmol/L in labor (do not collect in 2nd stage of labor or within and up to 1hr post-delivery)

The guideline also advises assessment, monitoring, and treatment of maternal sepsis once a diagnosis has been made:

Empiric Antimicrobials for Maternal Sepsis Secondary to Obstetric Infectious Conditions

Condition	**Preferred Antibiotic** (no reported penicillin allergy)	**Alternative Antibiotic** (mild-moderate risk penicillin allergy)	**Beta lactam Contraindicated**	**Duration**
Septic Shock or Severe Sepsis with Unknown Source	Refer to Jefferson Health – Empiric Antimicrobial Therapy for Adults with Severe Sepsis or Septic Shock			
Intraamniotic infection	Ceftriaxone 2g IV q24h PLUS Metronidazole 500mg IV q12h	Preferred: Ceftriaxone 2g IV q24h PLUS Metronidazole 500mg IV q12h Alternative for patients with reported cephalosporin allergy: Ertapenem 1g IV q24h	Vancomycin IV PLUS Gentamicin 6 mg/kg/24h PLUS Metronidazole 500mg IV q12h	DC after vaginal delivery. If CS, provide cefazolin and azithromycin per usual CS peri-op recommendations. Give one additional dose of the entire IAI regimen.
Endometritis				Continue until clinically improved and afebrile 24-48h.
Septic Abortion				Continue until clinically improved and afebrile 48h Follow with oral antibiotics to complete a 10-14 day course.

Antibiotics should ideally be administered **within one hour** of the diagnosis of maternal sepsis. Initial antibiotic coverage for the obstetric patient with sepsis should be **empiric** with use of a broad-spectrum antibiotic regimen, as many pelvic infections are polymicrobial and involve aerobes and anaerobes. Administer compatible antibiotics together. If not feasible, provide gram negative agent first. *Note that the doses recommended are based on normal renal function.*

In the 48-72 hours following initial antibiotic administration, it is recommended that the antibiotic regimen be narrowed as culture information becomes available and the patient stabilizes.

Results

The Maternal Sepsis Team's Health Equity work was a success. Among 20 participants in both sessions, 19 completed a post survey. Participants reported a significant improvement in confidence in their ability to practice cultural humility in their interactions with patients:

Additionally, at the end of the sessions, all respondents reported that they recognized that Black, Asian/Pacific Islander, and American Indian/Alaska Native obstetric patients experienced sepsis at 2.4, 1.5, and 1.8 times higher rates than their white counterparts.

Next Steps

- A significant number of women who develop sepsis are not being identified during the delivery hospitalization. For this reason, language-specific discharge education reinforcing Urgent Maternal Warning Signs associated with infection should be presented to the patient and support persons.
- Patients with sepsis during their delivery hospitalization should have contact with their healthcare provider **within 3-4 days** of discharge, as opposed to the typical scheduled visit at six weeks postpartum.
- Continue quarterly data collection and report out to all stakeholders, and to offer Health Equity Training to new hires
- Offer ongoing Health Equity Training to all staff
- Formalize process for quarterly Case Study presentations that incorporate Patient Voice in a meaningful way (primary patient accounts are more engaging than secondary accounts)

References

1. Pennsylvania Perinatal Quality Collaborative. Pennsylvania Perinatal Quality Collaborative - Home. (n.d.). https://www.papqc.org.

2. Arce, D., & Lee, A. (2024a). Disparities in obstetric sepsis and strategies to prevent them. *Seminars in Perinatology*, *48*(7), 151979. https://doi.org/10.1016/j.semperi.2024.151979.

3. Improving Diagnosis and Treatment of Maternal Sepsis: A CMQCC Quality Improvement Toolkit. California Maternal Quality Care Collaborative. (n.d.). https://www.cmqcc.org/toolkits-quality-improvement/sepsis.

@ResearchAtJeff