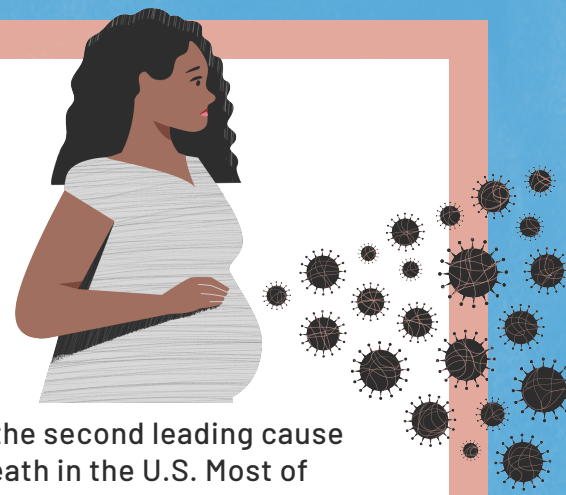


Maternal Sepsis Provider Fact Sheet



The United States has the highest rate of maternal mortality of any wealthy country—and those rates have risen over the past 20 years.

As defined by the World Health Organization, sepsis is “A life-threatening condition defined as organ dysfunction resulting from infection during pregnancy, childbirth, post-abortion, or postpartum period.”

Maternal Sepsis, which is sepsis that occurs during pregnancy or in the 42 days following delivery or other obstetric

event, is now the second leading cause of maternal death in the U.S. Most of these deaths are preventable through early identification and treatment of the underlying infection.

Through new analysis of administrative discharge data and birth record data from 2016–2018, the New York State Department of Health (NYS DOH) has identified factors that put some patients at increased risk of developing maternal sepsis. Interventions that could improve outcomes for pregnant and postpartum women have also been identified.

Demographic Risk Factors

- ▶ **Women of color** have significantly higher odds of developing maternal sepsis compared to white women:
 - **Hispanic women** have **2.1 times** the odds of developing maternal sepsis compared to White women
 - **Black women** have **1.8 times** the odds of developing maternal sepsis compared to White women
 - **Asian women** have **1.4 times** the odds of developing maternal sepsis compared to White women
- ▶ Women **less than 20 years old** at time of birth are twice as likely to develop maternal sepsis compared to women ages 20–35.
- ▶ Women with an education level **below a Bachelor's Degree** experience significantly higher odds of sepsis. This increase is most pronounced among women with less than high school education.

Obstetric Risk Factors and Maternal Morbidities

The vast majority of maternal sepsis cases occur within two weeks of delivery (or other obstetric event) and are associated with complications during childbirth.

- ▶ The most common risk factor is Cesarean delivery. Women who deliver via C-section are three times as likely to develop maternal sepsis and those who deliver vaginally.

Other Prevalent Maternal Morbidities/Obstetric Risk Factors identified using NYS DOH data include:

- **Induction of labor**
- **Nulliparity (never having given birth)**
- **Premature rupture of membranes**
- **Preterm delivery**
- **Postpartum hemorrhage**
- **Blood products transfusion**
- **Multiple gestation**

Patients with sepsis may complain of the following symptoms:

- Fever and chills and generally feeling unwell
- Dizziness and confusion
- Back or abdominal pain
- Foul-smelling vaginal discharge
- Feeling like their heart is racing
- Chesty cough
- Pain/burning on passing urine or not passing urine in a day

Comorbidities

The vast majority of comorbidities analyzed in the report were associated with significantly increased risk of maternal sepsis.

Prevalent comorbidities with an opportunity for intervention:

- Illegal drug use
- Tobacco use
- Obesity
- Deficiency anemia
- Asthma
- Depression
- Sickle cell disease
- History of sepsis (within 1yr of pregnancy)

The clinical signs of maternal sepsis:

Any of these abnormal criteria, sustained for >20 minutes:

- Systolic BP (mmHg) <90 or >160
- Diastolic BP (mmHg) >100
- Heart Rate <50 or >120
- Respiratory Rate <10 or >24
- O2 Sat on room air; % <95
- Oliguria, mL/hr x 2hrs <35
- Temperature <36 C or >38 C
- WBC <4,000 or >15,000

Maternal agitation, confusion, or unresponsiveness; patient with hypertension reporting a non-remitting headache or shortness of breath.

The complete maternal sepsis datasets are available here:

[Maternal Sepsis by County and Demographics, SPARCS: 2016-2018](#)
[Maternal Sepsis by Select Risk Factors, SPARCS: 2016-2018](#)

Possible areas of intervention

Increased vigilance when caring for those women identified as being at increased risk of developing sepsis (i.e. young women and women of color) and those who experience complications during delivery, including C-section and induced delivery. (A maternal early warning system is recommended by The American College of Obstetricians and Gynecologists District II: [Safe Motherhood Initiative Maternal Early Warning System.](#))

Appropriate discharge planning for those women identified as being at increased risk for maternal sepsis as the vast majority of maternal sepsis cases occur in the early postpartum period. This includes listening carefully to the concerns of new mothers who may articulate symptoms that indicate possible sepsis, providing close follow-up after discharge and ensuring that patients and their families are familiar with the signs of maternal sepsis.

Targeting emergency department providers with education on maternal sepsis for women who visit during pregnancy. More than half of all maternal sepsis cases were preceded by an ED or inpatient hospital visit and most (excluding obstetric events) were ED visits. (A maternal early warning system is recommended by The American College of Obstetricians and Gynecologists District II: [Safe Motherhood Initiative Maternal Early Warning System.](#))