

The Problem

Though antibiotics can save the lives of infants infected with early onset sepsis (EOS), a growing body of research shows antibiotics are being overprescribed for infants without sepsis who don't need such aggressive treatment. Furthermore, studies show inexplicable, dramatic disparities in antibiotic prescriptions for hospitalized newborns.

Overprescription of antibiotics contributes to the development of treatment-resistant bacteria, a serious threat to human health. Research also shows that antibiotic exposure is linked to harmful outcomes for some infants. For low birth weight infants without sepsis, there is even an increased risk of mortality.

Potential risks for newborns exposed to antibiotics



Higher incidence of allergies and asthma



Problems developing healthy gut bacteria



Increased likelihood of childhood obesity



Creation of treatment-resistant germs*

Program Benefits

The Centers for Disease Control and Prevention (CDC), the American Academy of Pediatrics (AAP) and the American College of Obstetricians and Gynecologists (ACOG) all urge hospitals to develop antibiotic stewardship programs. These programs have been proven to reduce unnecessary antibiotic exposure to infants and better track Antibiotic Utilization Rates (AURs).

Antibiotic stewardship programs

- ▶ Enhance treatment and prevention of sepsis in newborns
- ▶ Improve overall quality of patient care
- ▶ Prevent creation of drug-resistant bacteria
- ▶ Provide cost savings to hospitals**
- ▶ Reduce the negative effects associated with unnecessary antibiotic exposure



Our Approach

The **CASC-NEOS** initiative provides education and training, data collection and analysis, and quality improvement support for providers across Colorado to help them implement effective antibiotic stewardship programs. A steering committee of leaders from 5 different hospitals drives this work to ensure birth centers follow the most current recommendations from the AAP and CDC.



Support includes

- ▶ Recruitment of interested hospitals not currently using the Sepsis Risk Calculator and supporting its implementation
- ▶ Helping hospitals track and improve their AUR
- ▶ Assisting hospitals to identify and implement secondary interventions, including EOS guideline development and implementing Automatic Stop Orders (ASO)
- ▶ Gathering data to compare AURs and create consistency within Colorado hospitals
- ▶ Sharing information and best practices among participating providers

Benchmarks

By December 2020, hospitals and centers in the CASC initiative will



Adhere to AAP recommendations for evaluation and management of neonatal early onset sepsis



Demonstrate a 10% decrease in AUR – without missed or delayed treatment of true sepsis cases in patients 35 weeks or beyond

Measures

Metrics analyzed to track and improve outcomes



Antibiotic Utilization Rate (required)



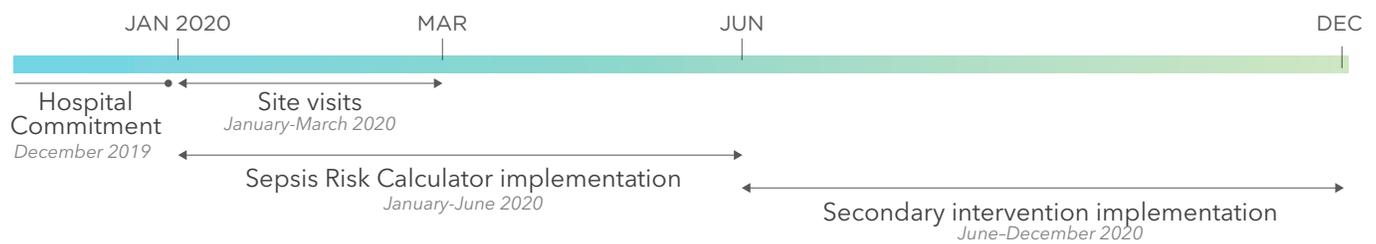
Proportion of babies exposed to any antibiotics (optional)



Case review of all cases of true sepsis in first 7 days of life (required)



Timeline



Data collection: Hospital teams will start by collecting a 6 month baseline (prior to commitment) and then send data monthly throughout duration of project and into sustainability phase.

What can your hospital do?

Simple, straightforward steps can make a big difference in your center’s AUR and create better outcomes for infants in your care.

Some recommendations from the AAP and CDC include



Carefully weigh risks and benefits of administering antibiotics in low-risk infants



In cases of true sepsis, prescribe antibiotics specific to the cultured bacteria



Use a method (such as the *Sepsis Risk Calculator*) to risk-stratify newborns



Create a guideline that promotes a consistent, evidence-based approach to evaluation and treatment of EOS



Stop antibiotics when infection is not confirmed by appropriate cultures

For more information or to get involved please visit:

www.cpcqc.org