OSF Little Company of Mary Medical Center: Implementation of Early Onset Sepsis (EOS) Calculator and Reduction of Neonatal Antibiotic Exposure

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Problem

- Antibiotic use in newborns is known to adversely affect the microbiome resulting in dysbiosis.
- Knowing that antibiotic use in newborns has negative consequences, we began gathering baseline data on antibiotic use in newborns .
- Our patient population is a mix ranging from those with primary care providers to those with little or no care; many of whom are living in underserved communities.
- We strive to continuously improve quality of care delivered to our neonatal population and improve outcomes.

Project Implementation

- Our team has proposed the integration of an Early Onset Sepsis tool into the EMR. This was a formal request and was submitted for review and possible implementation system-wide.
- While we anticipate integration of a formal EOS tool may take some time, we have moved forward with education of the clinical staff on antibiotic stewardship.
- Our goal was to demonstrate that the implementation of an EOS calculator will result in reduction of unnecessary exposure of newborns to antibiotics.
- We found that education was helpful in reducing clinical practice variation.
- We plan ongoing education for our medical and nursing staff

- Our Team:
- Cheryl A. Chemers MSN RN – Team Lead 
- Dr. O Itani MD; -FAAP 
- Mary P. Grimm- BSN, RN Maternal Child Nurse Manager 
- Lena Hamadeh Pharm D 

Not Pictured:

- Camille DiCostanzo NNP
- Regina Wan NNP
- Kim Reule FNP-C

Results

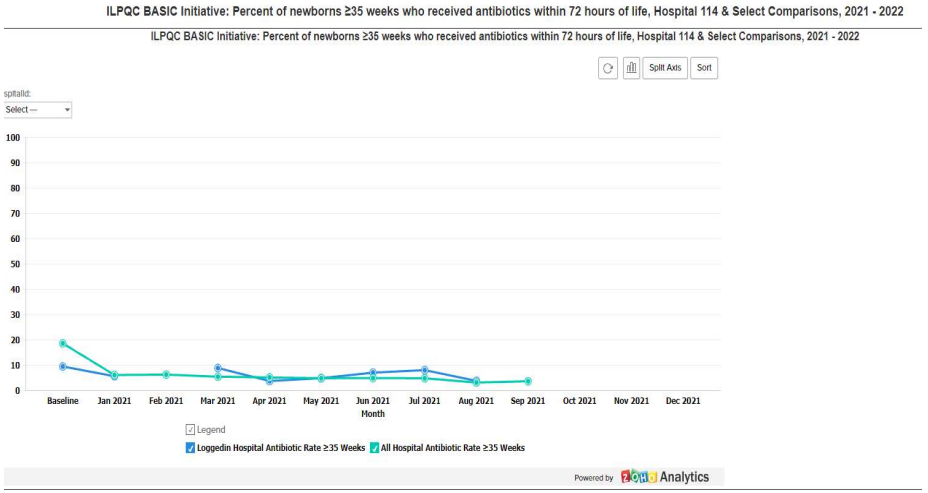
Our Goals (Data collected through July, 2021)

Decrease by 20% (or absolute rate of 4%) the number of newborns, born at greater than or equal to 35 weeks who receive antibiotics.

- Baseline = 9.8% Current= 7.08% (This is approximately a 30% decrease.)

Decrease by 20% the number of newborns with negative blood culture who receive antibiotics for longer than 36 hours.

- Baseline =25% Current= 16.67% (This is approximately a 33% decrease)



Conclusions

- Implementation of the EOS Calculator can reduce clinical practice variation amongst Neonatal Care Providers, and results in safe reduction of neonatal exposure to antibiotics.
- Education on antibiotic stewardship and the EOS calculator has been of paramount importance in reaching our goals.

Acknowledgements/Hospital Team

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