Reducing Antibiotic Usage by a NICU-Specific Antibiotic Stewardship Program

Faouzi Maalouf, MD
Neonatology Fellow
faouzi.maalouf@vanderbilt.edu

Setting

• Level IV academic NICU, 96 beds
• 60% inborn
• 1350 Annual admissions:
  – 250 VLBW
  – 100 ELBW
  – 100 cardiac
  – 120 surgical
• Prescribing team includes 31 neonatologists, 11 fellows, 40 NNPs, and 90 residents; 270 RNs

Aims

• Decrease AUR from 32% to 26% (20% relative reduction) by December 2016
• Decrease percentage of infants who receive >48 hrs of antibiotics for rule-out sepsis from 50% to 30% (40% relative reduction) by July 2016
• Initiate a neonatal-specific antibiotic stewardship program

Measures

• Outcome measures:
  – AUR: days of therapy/100 patient days
• Process measures:
  – Portion of patients with extra doses of antibiotics
• Balancing measures:
  – Positive blood cultures

Interventions

• PDSA 1: created a multidisciplinary team and obtained baseline data
• PDSA 2: joined VON iNICQ and TIPQC antibiotic stewardship project
• PDSA 3: performed a VON Day Quality Audit, project was introduced to unit, and key drivers identified
• PDSA 4: practice change to limit prescribing antibiotics to 48 hours for presumed sepsis

Next Steps

• Formalize a neonatal-specific ASP
• Target antibiotic use of surgical prophylaxis
• Continue efforts to involve parents
Team Acknowledgment

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