Objectives

- Identify the key stakeholders involved in antimicrobial stewardship and outline their respective roles in the implementation of the concept within the individual organization, clinical unit, community and globally.

- Summarize the 2010 Centers for Disease Control and Prevention recommendations for prevention of GBS perinatal disease and discuss the counter recommendations made by the American Academy of Pediatrics Committee on the Fetus and Newborn and the response of clinicians in practice.

- Describe the unique aspects and specific characteristics of the patient population, diseases and diagnostic processes that influence efforts to implement antimicrobial stewardship in the NICU setting.

Content Outline

1. Role of Behavior Change in Antimicrobial Stewardship
   1.1 Overview and identification of key stakeholders
   1.2 Clinician roles
   1.3 Interventions aimed at behavior change
   1.4 Approaching stewardship globally
   1.5 Stewardship aspects in agriculture and farming

2. Impact of Antibiotic Stewardship on Early-Onset Neonatal Sepsis Guidelines
   2.1 Definition of early-onset sepsis (EOS)
   2.2 Risks of antibiotic use
   2.3 Review of all releases of the Centers for Disease Control and Prevention (CDC) guidelines for GBS perinatal prophylaxis
   2.4 Recommendations, discussions and commentaries related to the 2010 CDC guidelines
      2.4.1 2011 AAP
      2.4.2 2012 Committee on the Fetus and Newborn (COFN)
      2.4.3 Community response to 2012 COFN guidelines
      2.4.4 2013 Brady & Polin clarification of AAP policy on EOS
   2.5 Updates from COFN and impact on clinical practice

3. Antimicrobial Stewardship as it Applies to the NICU setting
   3.1 Adverse outcomes related to antibiotic use
   3.2 Challenges posed by diagnostic overlap and culture negative sepsis
   3.3 Issues presented by the variability in duration of treatment
   3.4 Impact of maternal chorioamnionitis on neonatal antibiotic use
   3.5 Approaches to drug dosing and therapeutic monitoring
   3.6 Essential participants and their roles on the antimicrobial stewardship team in the NICU
   3.7 Management strategies for stewardship in the NICU
      3.7.1 Measuring and adjusting antibiotic use
      3.7.2 Maximizing culture yields and use of ancillary lab tests
      3.7.3 Selection of empiric therapy
      3.7.4 Ongoing re-evaluation of antibiotic use
   3.8 Coordination, organization and research needs remaining

Reading Material Resources

Continued on next page
Antimicrobial Stewardship: Neonatal Focus

Reading Material Resources

Module WB1734: Antimicrobial Stewardship: Neonatal Focus is based on the resources listed below. A copy of the resources are included with the module.

The Role of Behavior Change in Antimicrobial Stewardship, Charani, et al., Infectious Disease Clinics of North America, 28, 2014, pp. 169-175.
