Abstract
Background: The Duke Antimicrobial Stewardship Outreach Network (DASON) was established in 2013 to provide antimicrobial stewardship resources to community hospitals in the Southeast. Pediatric patients in community hospitals may benefit from antimicrobial stewardship program (ASP) activities.

Methods: Antibacterial use (AU) was reviewed using the DASON Antimicrobial Stewardship Assessment Portal, which includes filters for National Healthcare Safety Network (NHSN) unit types. We performed a retrospective review of AU in pediatric units from 1/1 – 12/31/2017. AU was summarized by days of therapy (DOT) and stratified by unit type and specific antibiotic agent. AU rates were reported as DOT/1000 patient days.

Results: A total of 41 pediatric units were included from the 28 hospital DASON cohort: 11 Neonatal Critical Care or Step Down Nurseries, 8 Pediatric Medical/Surgical wards, and 22 Well Baby Units. These units accounted for 1.6% of all AU in the cohort. These include 5585 DOT, 33%), gentamicin (6320 DOT, 29%), ceftriaxone (1750 DOT, 8%) and vancomycin (1462, 7%)

Conclusion: Pediatric patients accounted for a small proportion of AU in community hospitals. AU rates were managed on pediatric units at 28 DASON hospitals from January 1, 2017 – December 31, 2017. AU was summarized by days of therapy (DOT) and stratified by unit type and specific antibiotic agent.

Background

Inpatient pediatric antimicrobial stewardship efforts have focused mostly on freestanding children's hospitals or children's hospitals within larger hospitals. However, the majority of pediatric hospitalizations occur in non-children's hospitals

The Duke Antimicrobial Stewardship Outreach Network (DASON) provides stewardship resources to 28 community hospitals which may benefit from dedicated pediatric stewardship activities

Methods

- Antibacterial Use (AU) on NHSN-defined pediatric units at 28 DASON hospitals from January 1st – December 31st, 2017
- AU was summarized by days of therapy (DOT) and stratified by unit type and specific antibiotic agent
- AU rates were reported as DOT/1000 patient days

Results

- 21,731 DOT were administered on 41 pediatric units: 11 neonatal critical care or step down nurseries, 8 pediatric medical/surgical wards, and 22 well baby units (Figure 1). These units accounted for 1.6% of all DASON AU in 2017, ranging from 0.3 – 3.6% across the 28 hospitals
- The most commonly administered antibiotics, stratified by unit type, are reported in Figure 2. Ampicillin and gentamicin accounted for 82% of all DOT on neonatal units. There was a wider variation of antibiotics administered on the non-neonatal units, with ceftriaxone (30% of all DOT) predominating
- AU rates were highest on pediatric medical/surgical units (1081 DOT/1000 patient days) and lowest on the well-baby units (65 DOT/1000 patient days)

Conclusions

- Pediatric units contribute a small proportion of AU in the DASON network; the majority occurs on neonatal units. Although AU rates are lower on these units, there is significant antibiotic exposure at these hospitals with more than 17,000 neonatal DOT
- Neonatal antimicrobial stewardship efforts should include community hospitals; DASON is well-positioned to pilot such initiatives