Although antibiotics are often indicated to treat early-life infections, such exposure may lead to serious adverse outcomes. Few studies have characterized patterns of antibiotic use among neonatal intensive care units (NICUs). We performed a cross-sectional study of antibiotic use in 51 NICUs participating in the Pediatric Health Information System (PHIS), a database that includes clinical and resource utilization data for standalone children’s hospitals in the United States. Assessments were conducted on a single mid-week day of 2017. We examined the use of any antibiotic and broad-spectrum antibiotics using charge data in children admitted in each NICU on the study day. We compared antibiotic use among NICUs and geographical regions, and assessed its association with the NICU median case mix index (CMI) (as a surrogate for clinical complexity). There was a moderate but significant positive correlation between overall or broad-spectrum antibiotic use and median NICU CMI (Figure 2). There was a moderate but significant positive correlation between overall or broad-spectrum antibiotic use and median NICU CMI (Figure 2).

Antibiotic use prevalence varied substantially across NICUs (Figure 1). There was a moderate but significant positive correlation between overall or broad-spectrum antibiotic use and median NICU CMI (Figure 2).

**Conclusion.** There is substantial variability in antibiotic use among US NICUs, which seems partially explained by patient case-mix. Additional studies are needed to identify drivers of unwarranted variability in antibiotic use among NICUs.

**Disclosures.** Ritu Banerjee, MD, PhD, Accelerate Diagnostics: Grant/Research Support; BioFire: Research Grant; Biomeurex: Research Grant; Roche: Research Grant.

1138. Script for Pediatrics: Creating a Smartphone Application to Improve Antimicrobial Prescribing
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**Session:** 139. Antibiotic Stewardship (Pediatric): Implementation in Hospitals

**Background.** When considering antimicrobial stewardship (AMS) interventions, pediatrics is an important and often overlooked group. By 5 years of age, 97% of New Zealand (NZ) children have received antibiotics (median 8 antibiotic courses/child). Prescribing is complex due to age and weight-based adjustments, unpalatable oral preparations and inappropriate allergy labeling. Our tertiary Children's Hospital has >250 web-based nationally utilized guidelines, 15% including antimicrobials. A point prevalence audit showed only 63% guideline adherence for inpatient antimicrobial prescriptions. We designed an accessible app to bring antibiotic prescribing and antibiotic allergy decision-making to prescribers at point of care.

**Methods.** Using local hospital and community guidelines, the national formulary and consultation with subspecialty teams, 31 algorithms were developed. Each algorithm asks questions including diagnosis, age, antibiotic allergy history and known colonization with resistant organisms.

**Results.** The smartphone app (Script) uses the algorithms to advise on appropriate antibiotic, dose, route and duration of treatment. Advice regarding IV-oral switch parameters and oral antibiotic choice is provided. If allergy is suspected symptom-based decision-making enables the user to choose an alternative agent or encourage allergy de-labeling. Further AMS occurs in some algorithms when advice is given but not to prescribe antimicrobials.

**Conclusion.** Script for Pediatrics launched in NZ in March 2019 with >1000 users in the first 6 weeks. The most frequently accessed guidelines are otitis media, pneumonia and meningitis.

**Smartphone applications with local relevance and the ability to update in real-time may prove important tools, by providing easily accessible and intuitive advice to help support antimicrobial stewardship activities.** This intervention has been widely adopted by pediatric hospital prescribers. The impact on prescribing in concordance with guidelines, timely intravenous to oral antibiotic switch and allergy de-labeling will be assessed.

**Disclosures.** All authors: No reported disclosures.

1139. Multidisciplinary Initiative to Increase Guideline-Concordant Antibiotic Prescriptions at Discharge for Hospitalized Children with Uncomplicated Community-Acquired Pneumonia
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**Disclosures.** All authors: No reported disclosures.
Background. Community-acquired pneumonia (CAP) is the most common diagnosis in hospitalized children. The Pediatric Infectious Diseases Society and the Infectious Diseases Society of America published evidenced-based clinical practice guidelines for the management of CAP in children 3 months of age or older in 2011. These guidelines are not consistently followed. Our objective was to evaluate if quality improvement (QI) methods could improve guideline-concordant antibiotic prescribing, specifically addressing the use of oral third-generation cephalosporins, at hospital discharge for children with uncomplicated CAP.

Methods. QI interventions, implemented at a single tertiary care children’s hospital in Washington, D.C., focused on key drivers targeting hospital medicine resident teams. Multiple plan-do-study-act (PDSA) cycles were performed. Initial interventions included educational sessions (in small group and lecture formats) aimed at pediatric resident physicians, as well as visual job aids (Figure 1) and guideline summaries posted in resident physician work areas. Interventions were implemented in series to allow for statistical analysis via run chart. Medical records of eligible patients were reviewed monthly after each intervention to determine the impact on appropriate discharge antibiotic prescribing.

Results. At baseline, the median percentage of children with a diagnosis of uncomplicated CAP discharged with guideline-concordant antibiotics was 50%. Median rates of guideline-concordant antibiotic prescribing improved to 87.5% after initial interventions (Figure 2).

Conclusion. A fellow-led multidisciplinary QI initiative was successful in decreasing rates of non-guideline-concordant antibiotic prescribing at discharge. These interventions can be tailored for use at other institutions and for other infectious processes with established treatment guidelines. To ensure sustained improvement in guideline-concordant prescribing, future planned interventions include additional educational sessions with residents, faculty, and pharmacists, EMR order set modification and physician benchmarking. These tactics are intended to address the anticipated challenge of resident/faculty turnover and automate antibiotic choice for uncomplicated CAP.

Disclosures. All authors: No reported disclosures.

1140. Evaluation of Neonatal Sepsis Guidelines in a Neonatal Intensive Care Unit Priya V. Patel, MD; Colleen B. Nash, MD, MPH; Betty N. Vu, PharmD; BCIDP, AHAHP; 1 Rush University Medical Center, Chicago, Illinois; 2 Rush University, Chicago, Illinois; 3 Rush University Medical Center, Chicago, Illinois; 4 Chicago State University, Chicago, Illinois

Session: 139. Antibiotic Stewardship (Pediatric): Implementation in Hospitals Friday, October 4, 2019: 12:15 PM

Background. Clinical practice surrounding neonatal sepsis varies significantly among physicians. In efforts to confront the challenge of inappropriate and overdose of antimicrobials in our Neonatal Intensive Care Unit (NICU), a multidisciplinary team developed a guideline for the evaluation and management of suspected and proven sepsis within the NICU in preterm infants. We evaluated the guideline implementation before and after the implementation of our guideline, developed in July 2018.

Methods. All infants <37 gestational weeks born in July and August of 2016, 2017, and 2018 were retrospectively reviewed and compared before and after implementation of the guideline. The primary outcome was the percentage of antibiotic-free days per admission. Secondary outcomes include percentage of direct treatment courses and percentage of antibiotic days for culture-negative sepsis. Chi-square and Mann–Whitney U tests were performed, as appropriate.

Results. A total of 75 and 37 patients were included for preliminary data analysis in the pre- and post-implementation periods, respectively. Chi-square and Mann–Whitney U tests were performed, as appropriate. The percentage of antibiotic-free days per admission per patient born in the pre-implementation period was lower (84.4% vs. 86.5%, P = 0.028). There is no statistical difference in the percentage of direct treatment between the two groups. The percentages of culture-negative antibiotic days were not statistically significant (69.2% vs. 80.5%, P = 0.296). The average birth weights were lower (1,719.7 vs. 1,420.7 grams, P = 0.02) and gestational ages were younger (31.4 weeks vs. 29 weeks, P = 0.001) in the post-implementation period.

Conclusion. Our preliminary data did not show a significant decline in the percentage of antibiotic days nor was there a significant change in appropriate antibiotic days after the implementation of our guideline; however, this may be confounded by the differences noted in our patient populations and is based on preliminary data. Implementation of this guideline is feasible and may reduce the inappropriate use of antimicrobials. Further data collection is ongoing to fully assess the impact of this guideline.

Disclosures. All authors: No reported disclosures.

1141. Implementation of a Pediatric Handshake Antimicrobial Stewardship Program to Improve Antimicrobial Utilization Amanda P. Hughes, PharmD; 1 Maya Beganovic, PharmD, MPH, BCIDP; 2 Ronda Oram, MD; 3 Sarah Wieczorkiewicz, PharmD, FIDSA, BCPS, BCIDP; 4 Anthony Chiang, PharmD; 1 Advocate Lutheran General Hospital, Chicago, Illinois; 2 Advocate Children’s Hospital-Park Ridge, Park Ridge, Illinois; 3 Wolters Kluwer, Chicago, Illinois

Session: 139. Antibiotic Stewardship (Pediatric): Implementation in Hospitals Friday, October 4, 2019: 12:15 PM

Background. Antimicrobial stewardship (AMS) programs emerged in response to rising rates of resistance and adverse effects associated with inappropriate antimicrobial utilization. Optimal metrics and strategies (e.g., preauthorization, prospective audit and feedback) for AMS remain to be elucidated. This study evaluated the impact of a multidisciplinary, rounding-based AMS strategy (i.e., Handshake Stewardship) on antimicrobial utilization and prescribing practices at a pediatric hospital.

Methods. This was a single-center, retrospective quality improvement study at a community, teaching children’s hospital. All pediatric and neonatal inpatients with active antimicrobial orders between July 2018 and March 2019 were included in the study, and endpoints were compared with data from July 2017–March 2018. Antimicrobial courses were prospectively audited by a multidisciplinary AMS team, and feedback was provided to the primary teams during Handshake Stewardship rounds. The primary endpoint was a number of interventions made and the corresponding acceptance rates. The secondary endpoint was days of therapy (DOT) per 1000 patient-days. Descriptive statistics were performed on all continuous and categorical data as appropriate.

Results. Of 2238 antimicrobial courses reviewed, 710 (32%) required intervention, and 86% of the interventions made were accepted. The top 3 indications evaluated were respiratory (n = 522, 23%), sepsis/bacteremia (n = 351, 16%), and surgical prophylaxis (n = 266, 12%). Of the respiratory courses reviewed, there were 228 opportunities for antimicrobial optimization. The most common interventions were: bug-drug optimization (n = 208, 29%), discontinuation of anti-infective (n = 136, 19%), and dose optimization (n = 120, 17%). No significant difference was observed for overall, ceftriaxone, meropenem, and vancomycin DOT pre- and post-implementation of Handshake Stewardship. However, a statistically significant reduction in DOTs was observed for piperacillin–tazobactam (15.2 vs. 7.4, P = 0.004) and a nonsignificant reduction in meropenem (9.5 vs 6.2).

Conclusion. Rounding-based, Handshake AMS was associated with overall high intervention acceptance rates and a reduction in commonly utilized broad-spectrum antimicrobials.

Disclosures. All authors: No reported disclosures.

1142. Evaluation and Impact of a Tracheitis Diagnosis and Management Guideline in a Pediatric Intensive Care Unit Denise Iacono, PharmD; 1 Ammara Tanweer, PharmD; 2 Todd Sweberg, MD, MBA; 1 Stefan Hagmann, MD, MSc, FIDSA, FAAP; 3 Vincent Chua, BS; 4 Joan DeCelle-Germana, MD; 5 Kalioiopi Tsirilakis, MD; 1 Cohen

Session: 139. Antibiotic Stewardship (Pediatric): Implementation in Hospitals Friday, October 4, 2019: 12:15 PM

Background. Tracheitis is a serious infection present in the pediatric population. A recent systematic review found a variety of diagnosis methods, such as flexible bronchoscopy, for the diagnosis of tracheitis. Clinical practice for this diagnosis is not consistent, and a lack of a diagnosis/Figure 1. Examples of visual reminders used in the second intervention Figure 2. Flow chart of discharges with guideline concordant antibiotic prescriptions Variable Pre-Implementation (N = 75) Post-Implementation (N = 277) P-Value Birth Weight, g ± SD 1714.7 ± 827.2 1620.7 ± 664.9 0.02 Gestational Age, weeks ± SD 31.4 ± 3.4 29 ± 2.6 0.001 Table 1: Comparison of Infants Admitted to the Rush Neonatal Intensive Care Unit in the Pre-implementation and Post-implementation Periods Variable Pre-Implementation Post-implementation Table 2: Comparison of Antibiotic Utilization in the Pre-implementation and Post-implementation Periods