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, MD1; Colleen B. Nash, MD, MPH2; Betty N. Vu, PharmD1, BCIDP1; AHAHVP1; Rush University Medical Center, Chicago, Illinois; Advocate Children's Hospital, 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 overuse 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 application 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 grams 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 per-centage antibiotic-free days per culture-negative 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, PharmD1; Maya Begacovic, PharmD, MPH, BCIDP2; Ronda Oram, MD3; Sarah Wieczorkiewicz, PharmD, FIDSA, BCPS, RCIDP4; Anthony Chiang, PharmD5; 1Advocate Lutheran General Hospital, Chicago, Illinois; Advocate Children's Hospital–Park Ridge, Park Ridge, Illinois; 2Wolters 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 AMS) on antimicrobial utilization and prescriber 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 2017 and March 2019 were included in the study, and results 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 = 238, 32%), discontinuation of anti-infective (n = 136, 19%), and dose optimization (n = 120, 17%). No significant difference was observed for overall, leftraxone, 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.
Session: 139. Antibiotic Stewardship (Pediciatric): Implementation in Hospitals
Friday, October 4, 2019: 12:15 PM

Background. Ventilator-associated tracheitis (VAT) is a common intensive-care unit entity considered in febrile patients with endotracheal intubation or with tracheostomy. Prospective-Audit-And-Feedback activities had identified an overall increased and high inter-provider-variability in the use of antibiotics for VAT. By developing a VAT-specific guideline, we intended primarily to decrease the amount of respiratory fluid cultures (RFCx) submitted, and secondly decrease the overall anti-biotic use (AU) in the PICU, while not increasing the incidence of ventilator-associated events (VAE).

Methods. A multidisciplinary team developed a guideline for patients with fever or change in baseline respiratory support with endotracheal intubation or with tracheostomy who had no radiographic evidence of pneumonia consisting of three parts: A) When to send an RFCx, B) Diagnosis of VAT, C) Antibiotic management of VAT. A) To obtain a RFCx, patient needed to have an abnormal white cell count (WBC) (< 5 K/uL or > 14.5 K/uL) AND purulent or increased amount of endotracheal secretions PLUS either abnormal body temperature (T <36°C or ≥38.3°C) or change in baseline respiratory support. B) A diagnosis of VAT is allowed if RFCx shows Gram stain with 2+ WBC and 2+ bacteria. C) Empirc antibiotic treatment with antipseudomonal activity (informed by previous RFCx if exist) to be covered, among other pathogens, coagulase-negative staphylococci (CoNS) which are positive bacteria in the neonatal intensive care unit (NICU) has included vancomycin, to cover, among other pathogens, coagulase-negative staphylococci (CoNS) which are positive bacteria in the neonatal intensive care unit (NICU) has included vancomycin, in combination with gentamicin, as the preferred agent for treatment of late-onset sepsis (LOS) due to Gram-negative bacteria such as Pseudomonas aeruginosa and Acinetobacter baumannii. By incorporating the above, we monitored for changes in the number of RFCx's ordered, ventilator days, and AU from January 2017 to December 2018. Manual audits were used to analyze adherence to the guideline. Data on education was completed at multiple PICU meetings from September 2017 through October 2018.

Results. Since the initiation of the guideline, we observed a downward trend of RFCx orders (Fig. A) with an average decrease of 19% after guideline implementation. The overall AU (Fig. B) in PICU decreased by an average of 24% while the incidence of VAT has remained stable.

Conclusion. Efforts to standardize diagnosis and treatment of VAT in patients with endotracheal intubation or tracheostomy resulted in a decreased number of RFCx, and reduced overall AU without increasing the risk of VAE.

Disclosures. All authors: No reported disclosures.

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

Background. Inappropriate antimicrobial use (AU) is recognized as a leading cause of antimicrobial resistance. However, quantifying AU in hospitals is challenging due to variability in information systems. Point prevalence surveys (PPS) provide a means to quantify AU in a cross-sectional manner within and between institutions. The aim of the study was to describe and compare the prescription patterns of AU across pediatric hospitals in Canada using PPS.

Methods. Two PPS (November 2018 and February 2019) were conducted at each of the 15 Canadian pediatric hospitals. For each PPS, AU data were collected for all inpatients ≤ 18 years (excluded mental health and birthing units) on the survey date. Data, including admitting diagnosis, age, comorbidities, Infectious Diseases consult, admitting service, documented pathogen(s), and antimicrobial(s) prescribed, was collected and entered into a RedCap database.

Results. In total, we surveyed 3826 patient-days. The mean proportion of children receiving at least one antimicrobial was 35.2% (range 25.1% to 42.9%). Of the 1951 antimicrobials prescribed, the most common were third-generation cephalosporins (3GC) (16%; 321), aminopenicillins (15%; 297), TMP-SMX (11%; 207), piperacillin–tazobactam (10%; 193) and first-generation cephalosporins (9%; 181). Overall, the frequency of carbapenems, quinolones and vancomycin use was 4% (79), 3% (65) and 8% (151), respectively. Of the antimicrobials used for targeted or empiric therapy (n = 1951), 242 (12.4%) were for pneumonia, 278 (14%) for intra-abdominal infections and 251 (13%) for other conditions.

Conclusion. Our study used a standardized approach to assess AU to obtain benchmarking data for Canadian pediatric hospitals. About one-third of children hospitalized in Canadian pediatric hospitals are prescribed at least one antimicrobial. Of patients on treatment for CAP, only 31% were prescribed aminopenicillins. More detailed analysis of the rationale for AU, and assessment of appropriateness is required to fully understand antimicrobial prescribing practices in pediatric hospitals and develop stewardship initiatives.

Disclosures. All authors: No reported disclosures.

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

Background. Empiric therapy for possible late-onset sepsis (LOS) due to Gram-positive bacteria in the neonatal intensive care unit (NICU) has included vancomycin to cover, among other pathogens, coagulase-negative staphylococci (CoNS) which are the most frequent cause of bloodstream infections (BSI). In 2015, Nationwide Children's Hospital (NCH) neonatal antimicrobial stewardship (nASP) team recommended nafcillin rather than vancomycin, in combination with gentamicin, as the preferred agent for empiric therapy of LOS in infants not colonized with methicillin-resistant Staphylococcus aureus, irrespective of presence of a central venous catheter. The NCH nASP team