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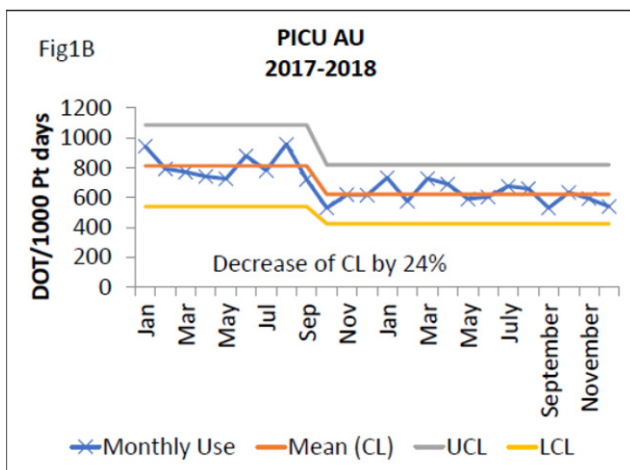
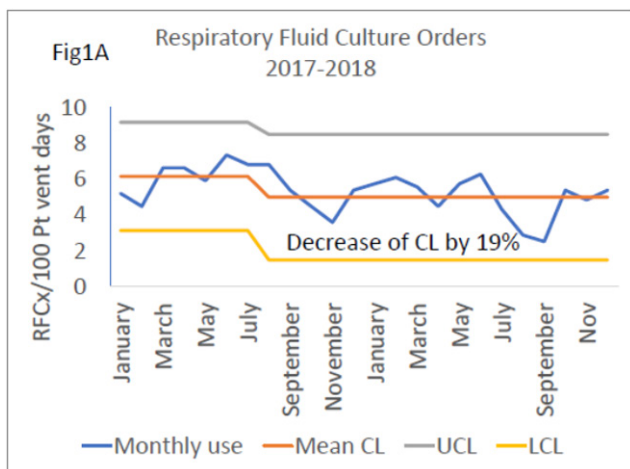
Session: 139. Antibiotic Stewardship (Pediatric): Implementation in Hospitals
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Background. Ventilator-associated tracheitis (VAT) is a common intensive-care unit entity considered in febrile patients with endotracheal intubation or with tracheostomy. 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 antibiotic 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 ($T < 36^{\circ}\text{C}$ or $\geq 38.3^{\circ}\text{C}$) or change in baseline respiratory support. B) A diagnosis of VAT is allowed if RFCx shows Gram stain with ≥ 3 WBC AND ≥ 3 bacteria. C) Empiric antibiotic treatment with antipseudomonal activity (informed by previous RFCx if exist) to be started after RFCx have been obtained. Reassessment and possible modification at 48H based on final RFCx results. Duration of AU to be limited to 5 days. Guideline education was completed at multiple PICU meetings from September 2017 through June 2018. Manual audits were used to analyze adherence to the guideline. Data on RFCx order utilization, ventilator days, and AU from January 2017 to December 2018 were analyzed.

Results. Since the initiation of the guideline, we observed a downward trend of RFCx orders (Fig1.A) with an average decrease of 19% after guideline implementation. The overall AU (Fig1.B) in PICU decreased by an average of 24% while the incidence of VAE 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.

1143. Measuring Up! Benchmarking Antimicrobial Use in Canadian Children's Hospitals

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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 ($n = 1541$), 373 (24.2%) were for pneumonia, 278 (18%) for intra-abdominal infections and 251 (16.3%) for fever without a source. For the treatment of community-acquired pneumonia (CAP) ($n = 178$), aminopenicillins and 3GC use was 31% and 37%, respectively.

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.

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1144. Evaluation of Nafcillin vs. Vancomycin as Empiric Therapy for Late-Onset Sepsis in the Neonatal Intensive Care Unit

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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