



Disclosures. All authors: No reported disclosures.

2309. Promoting Healthcare Worker (HCW) Use of Personal Protective Equipment in Pediatric Ambulatory Settings

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Background. Existing Centers for Disease Control (CDC) and American Academy of Pediatrics (AAP) guidelines promote HCW personal protective equipment (PPE) use to prevent respiratory virus transmission in pediatric clinics; however, adherence to recommendations is inconsistent. We evaluated the effectiveness of two strategies designed to cue HCW use of PPE in a pediatric primary care clinic.

Methods. We implemented two HCW-focused interventions: (1) prompt for front desk respiratory symptom screen with placement of droplet signs on examination room door for symptomatic patients and (2) universal masking of healthcare workers during all patient encounters. Each intervention was implemented over a 2-week period and preceded by a washout period. We obtained caregiver report of HCW hand hygiene and mask use during patient encounters and measured differences in the proportion of behavior observed compared with washout periods.

Results. We obtained 217 caregiver reports of clinician handwashing and mask use before, during and after the patient encounter. There was no difference in nurse pre- or post-encounter hand hygiene behavior before and after each intervention (Baseline 65.9%; Droplet: 73.3%, $P = 0.34$; Universal masking: 77.5%, $P = 0.16$ and Baseline 53.3%; Droplet: 66.6%, $P = 0.14$; Universal masking: 55%, $P = 0.85$, respectively). There was also no difference in pre- or post-encounter MD hand hygiene behavior before and after each intervention: (Baseline 86.9%; Droplet: 77.8, $P = 0.17$; Universal masking: 87.5%, $P = 0.92$ and Baseline 75%; Droplet: 71.1%, $P = 0.62$; Universal masking: 80.0%; $P = 0.53$, respectively). However, there was a significant difference in observed mask use during encounters among both RNs and MDs before and after each intervention: (Baseline: 17.4%; Droplet: 44.4%, $P < 0.05$; Universal masking: 42.5%, $P < 0.05$ and Baseline: 20.6%; Droplet: 51.1%, $P < 0.05$; Universal masking: 62.5%, $P < 0.05$, respectively).

Conclusion. Respiratory symptom screening with visual prompts to use PPE and universal masking may not significantly impact hand hygiene behavior in a setting with high hand hygiene use but may increase mask use. Such interventions could provide a useful and low cost tool to help prevent the spread of respiratory viruses in primary care settings.

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2310. Reasons Pediatric Providers Obtain Endotracheal Aspirate Cultures and How Results Inform Patient Management

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Background. Endotracheal aspirate cultures (EACs) are commonly obtained in many PICUs. However, EACs cannot distinguish between bacterial colonization and infection, and may promote antibiotic overuse if collected in patients without clinical signs and symptoms of ventilator-associated infections (VAIs). We examined clinician's reasons to obtain EACs and whether the results informed clinical management.

Methods. We conducted a structured survey of nurse practitioners and physicians caring for ventilated children to inform a quality improvement initiative to optimize the use of EACs in the PICU at a tertiary care children's hospital. We assessed EACs

obtained from patients mechanically ventilated for at least 24 hours from November 2017 to February 2018. This was a 2-part survey: part 1 conducted within 1–2 days after obtaining an EAC, part 2 conducted after EACs results were reported.

Results. 25 surveys were completed. Nearly half (44%) of EACs were obtained for isolated clinical signs of fever, hypotension, laboratory abnormalities, or ventilator increases, while the remainder were obtained for a combination of reasons. Most EACs (60%) were collected as a "pan culture" with urine and blood cultures, and 92% of EACs had a previous EAC. At the time of ordering, providers thought the EAC would help with diagnosis of VAI (68%), antibiotic selection (80%), and believed it was very important for the patient's management (60%). After results were available, 40% of patients were given a diagnosis of VAI. Antibiotic therapy was discontinued in 12% and modified in 16% based on the EAC results. Antibiotics were changed based on a different test in 52%, or unchanged in 20%. Of the patients with a prior EAC, 72% of EACs resulted the same or fewer bacteria. On follow-up, 56% of the providers reported the EAC provided little to no value for the patient's management.

Conclusion. A large proportion of EACs were obtained due to isolated changes in a patient's clinical status and most EACs were obtained from patients who had prior EACs. Results were often similar to prior EAC results, infrequently led to changes in antibiotic selection and many providers did not find the results helpful. These findings suggest there is opportunity to standardize and reduce the use of EACs in the PICU.

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2311. Atypical Cat Scratch Disease Presentations

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Background. Cat scratch disease (CSD) is caused by *B. henselae*, a Gram-negative intracellular bacilli which is transmitted to humans via cat bite/scratch. Typical CSD presents as regional lymphadenopathy and fever. However, there are multiple atypical presentations of cat scratch disease that have been reported including prolonged fever, absence of lymphadenopathy and systemic complications such as hepatosplenic disease, osteomyelitis, Parinaud oculoglandular syndrome, neuroretinitis, encephalitis, and bacillary angiomatosis among other rare presentations. The aim of this study was to review the frequency, presentation, and treatment outcomes of atypical CSD presentations at Nationwide Children's Hospital (Columbus OH).

Methods. This was a retrospective study performed at Nationwide Children's Hospital, Columbus, OH. EMR of patients were reviewed between January 2010 and March 2017 using ICD9 or ICD 10 codes for CSD. Patients were identified on the basis of compatible clinical presentation and confirmatory serological test or PCR results for *B. henselae*. Clinical, radiological, and histopathological findings were collected

Results. A total of 204 patients were serologically diagnosed as having cat scratch disease between January 2010 and July 2017. Of the 204 cases, 166 (81%) had typical CSD and 38 (18.6%) had atypical CSD. Of the atypical manifestations, 20 (52%) patients had no lymphadenopathy, 12 (31%) had osteomyelitis, 12 (31%) patients had hepatic and/or splenic microabscesses, 4 (10.5%) had osteomyelitis and hepatic/splenic involvement, 3 (1.5%) had encephalitis, 2 (5.2%) had neuroretinitis, and there was one case each (2.6%) of Parinaud oculoglandular syndrome, uveitis, pulmonary cavity lesion, myocarditis, and endocarditis. Fever of unknown origin was present in 28 (75.6%) of the atypical CSD cases. The median duration of antibiotic treatment was 25 days (IQR 31) and median duration of illness in patients with atypical CSD was 51 days (IQR 56). The majority of patients were treated with dual antibiotic therapy that included rifampin.

Conclusion. In children with fever of unknown origin, serologic testing for CSD should be performed even in the absence of lymphadenopathy and a search for underlying systemic complications is recommended for prompt diagnosis and appropriate treatment.

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2312. Bordetella holmesii Bacteremia in Pediatric Patients: A Single-Center Experience

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Background. *Bordetella holmesii* is a respiratory pathogen, known to cause bacteremia predominantly among patients with functional or anatomical asplenia. Currently, there is no consensus on optimal treatment for *B. holmesii* infection nor are there established interpretative criteria. This study aims to describe treatment of pediatric patients diagnosed with *B. holmesii* bacteremia, and treatment outcomes, in order to help establish an optimal therapeutic strategy.

Methods. We conducted a retrospective chart review of pediatric patients with microbiologically confirmed *B. holmesii* bacteremia at Children's Healthcare of Atlanta, 2011–2018. We extracted demographic and clinical information of the identified patients from the medical record, and evaluated antimicrobial choice, hospital days, and treatment outcomes.