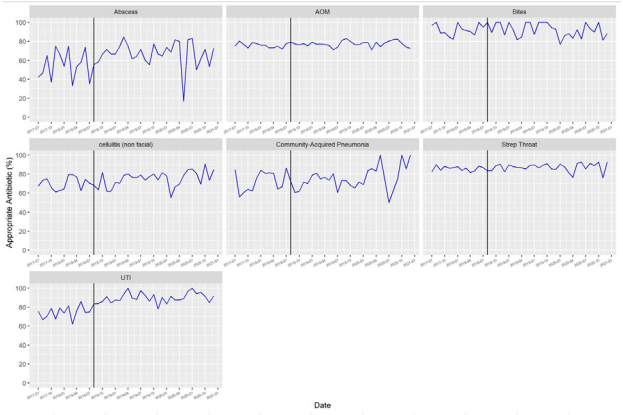
(75.7% to 81.6%; p< 0.001), UTI (34.9% to 42.9%; p=0.01) animal bites (37.1% to 45.6%; p=0.048), and cellulitis (28.0% to 42.3%; p< 0.001) (Figure 3).

Figure 1. Appropriate Agent

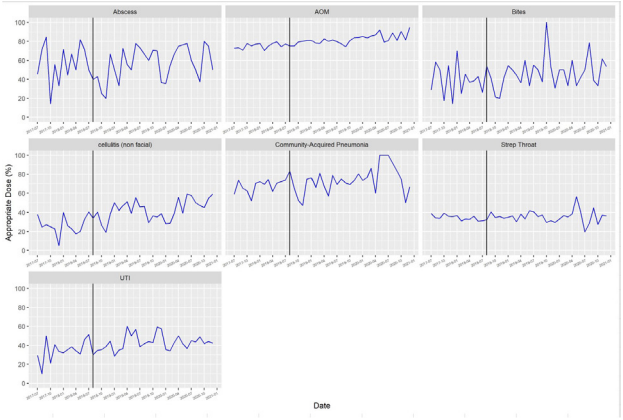


Run chart of percentage of encounters with antibiotic choice consistent with national guideline recommendations by discharge diagnosis. The vertical line indicates the start of outpatient antibiotic stewardship efforts in August 2018.

Figure 2. Appropriate Duration

Run chart of percentage of encounters with antibiotic duration consistent with national guideline recommendations. The vertical line indicates the start of outpatient antibiotic stewardship efforts in August 2018.

Figure 3. Appropriate Dose



Run chart of percentage of encounters with antibiotic dose consistent with national guideline recommendations. The vertical line indicates the start of outpatient antibiotic stewardship efforts in August 2018.

Conclusion. Our outpatient ASP improved prescribing patterns for agent, duration, and dose for many common pediatric infections in the PUC setting. Future work will focus on identifying opportunities to improve prescribing practices when antibiotics are indicated.

Disclosures. **Brian R. Lee, PhD, MPH** , **Merck** (Grant/Research Support)**Pfizer** (Grant/Research Support)

1138. Utility of Methicillin-resistant *Staphylococcus aureus* Nares Screening in Hospitalized Children With Acute Infectious Disease Syndromes

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Session: P-63. Pediatric Antimicrobial Stewardship (inpatient/outpatient pediatric focused)

Background. Empirical antibiotic regimens frequently include treatment for methicillin-resistant *Staphylococcus aureus* (MRSA). Studies in adults with pneumonia support the use of a negative MRSA nares screening (MNS) to help de-escalate antibiotic therapy. Comparable pediatric data in the literature is scarce. We aimed to evaluate the use of MNS for antibiotic de-escalation in hospitalized children (< 18 years) at a tertiary children's hospital.

Methods. A retrospective chart review was conducted of pediatric inpatients (January 01, 2015 to December 31, 2020) with a presumed infectious diagnosis who had a PCR-based MNS test and a clinical culture (i.e. site of infection or blood) performed as part of their diagnostic work up. Those who were screened >5 days since admission or > 48 hours since start of MRSA-active antimicrobials, and those who had antibiotic treatment withdrawn after 48 hours because of negative cultures were excluded.

Results. A total of 101 children were included with a median age (range) of 2 years (0-17) and about half (n=57, 56.4%) were male. Top three diagnosis groups were skin and soft tissue infections (n=33, 32.7%), toxin-mediated syndromes (n=21, 20.8%), and osteoarticular infections (n=13, 12.9%). Pneumonia accounted for only six (5.9%) patients. The prevalence of nasal MRSA colonization was 6.9% (n=7). The sensitivity of the MNS test to predict a MRSA infection was 42.9% with a specificity of 95.7%. The positive predictive value (PPV) and negative predictive values (NPV) were 42.9% and 95.7%, respectively. In about half (55/95, 57.9%) of patients initiated on anti-MRSA therapy, these agents were discontinued during the admission. A quarter (n=14, 25.5%) were de-escalated based on the negative MNS test alone, and another third (n=21, 38.2%) after negative MNS test and negative culture results became available.

Conclusion. Pediatric providers at this institution have started to use the MNS to help limit anti-MRSA therapy. We noted a high NPV which suggests that MNS may be useful for timely de-escalation of anti-MRSA therapy and thereby a useful antimicrobial stewardship tool for hospitalized children. Prospective studies to evaluate the utility of MNS for the various infectious syndromes are warranted.

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

1139. Reducing Collection of Tracheal Aspirate Bacterial Cultures: A Diagnostic Test Stewardship Intervention

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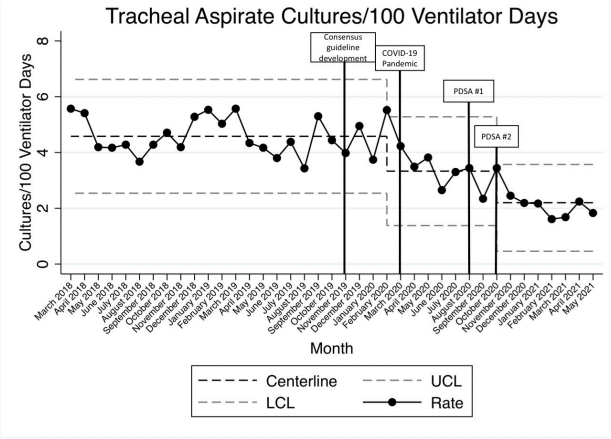
Session: P-63. Pediatric Antimicrobial Stewardship (inpatient/outpatient pediatric focused)

Background. Tracheal aspirate (TA) bacterial cultures are often collected in mechanically ventilated children to evaluate for ventilator-associated infections (VAI), including tracheitis and pneumonia. However, frequent bacterial colonization of tracheal tubes results in poor specificity of positive TA cultures for distinguishing bacterial infection from colonization, which contributes to antibiotic overuse for VAI. We performed a quality improvement project to reduce collection of TA cultures through implementation of a consensus guideline to standardize culture ordering, and measured its impact on antibiotic use in a tertiary PICU.

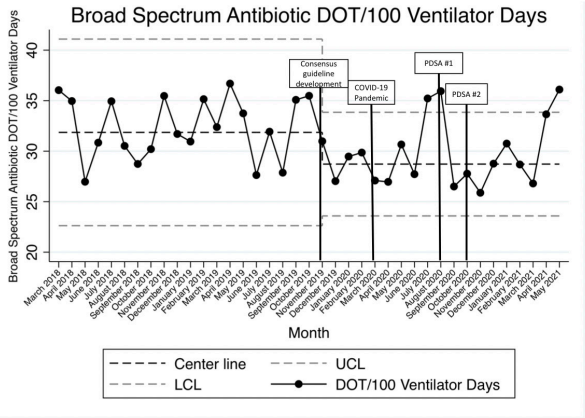
Methods. A multidisciplinary team including PICU, pulmonary, and ID clinicians developed the consensus guideline in November 2019-February 2020. The first Plan-Do-Study-Act (PDSA) cycle occurred in August 2020 and included provider education, providing a link to the guideline in the TA culture order, and signs and screensavers highlighting key guideline recommendations. The second PDSA cycle occurred in October-December 2020 and included weekly emails to on service PICU clinicians. Statistical process control charts were used to measure the number of TA cultures collected/100 ventilator days and broad-spectrum antibiotic DOT/100 ventilator days. The number of patients treated for VAI/100 ventilator days and guideline compliance were also measured.

Results. The baseline rate of TA culture collection was 4.58/100 ventilator days. A centerline shift to 3.33 cultures/100 ventilator days occurred in March 2020. Following PDSA 1 and 2 in October 2020, a second downward centerline shift to 2.22 cultures/100 ventilator days occurred (Figure 1). Broad-spectrum antibiotic days of therapy/100 ventilator days decreased in November 2019 coincident with the start of the project, but no further reductions occurred after PDSA 1 and 2 (Figure 2). The number of patients treated for VAI decreased from a baseline of 1.24/100 ventilator days to 0.66/100 ventilator days. Finally, the proportion of TA cultures ordered that

were non-compliant with the guideline recommendations was unchanged throughout the study period (Table 1).



Abbreviations: COVID-19, coronavirus disease 2019; PDSA, Plan-Do-Study-Act; LCL, lower control limit; UCL, upper control limit



Abbreviations: DOT, days of therapy; PDSA, Plan-Do-Study-Act; LCL, lower control limit; UCL, upper control limit

Table 1. Key Process Measures

	Baseline (2/2018-2/2020)	COVID-19 Pandemic (3/2020-8/2020)	Post-intervention (9/2020-5/2021)
TA cultures collected per month, mean	73	54	33
N (%) inappropriate cultures collected per month, mean	58 (79)[1]	43 (80)	28 (85)
Ventilator days per month, mean	1588	1541	1433
Culture/100 ventilator days, mean	4.58	3.33	2.22
Broad-spectrum antibiotic DOT, mean	503	471	410
Broad-spectrum antibiotic DOT/100 ventilator days, mean	31.69	30.60	28.60
Patients treated for VAI/100 ventilator days, mean	1.24[1]	0.80	0.66

[1]Data collected between 9/2019-2/2020 only

Abbreviations: TA, tracheal aspirate; DOT, days of therapy; VAI, ventilator associated infection; COVID-19, coronavirus disease 2019

Conclusion. A consensus guideline reduced collection of TA cultures, with a modest reduction in the rate of antibiotic treatment for VAI.

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

1140. Impact of a Rapid Molecular Bloodstream Diagnostic Test on Optimal Antibiotic Use in Infants

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Session: P-63. Pediatric Antimicrobial Stewardship (inpatient/outpatient pediatric focused)

Background. Rapid molecular bloodstream diagnostics have been shown to decrease time-to-optimal antibiotic therapy in adult and pediatric patients. The purpose of the study was to compare the time-to-optimal antimicrobial therapy both pre-and post- implementation of rapid diagnostic testing in infants.

Methods. This was a single-center quasi-experimental study conducted from December 2018 to December 2020 at Children's Hospital New Orleans. A rapid, multiplex polymerase chain reaction bloodstream diagnostic was implemented in January 2019. Antimicrobial Stewardship performed a daily review of all antimicrobials during both periods and made recommendations when necessary. The primary outcome was the difference in time-to-optimal therapy. Secondary outcomes included time-to-effective therapy, 30-day all-cause mortality rate, 30-day recurrent bacteremia rate, and time-to-microbiologic clearance. Patients were excluded if they had an unrelated concomitant infection, withdrawal of care before the result, bacteria not identified by the panel, or were over 6 months of age.

Results. Thirty-five and forty-three patients met inclusion criteria pre-and post-implementation. The median post-natal age was 2 months and median PRISM score was 12 in both groups. Median time-to-optimal therapy was 53.1 hours in the pre-intervention and 24.4 hours in the post-intervention group (-28.7 hours, P = 0.03). Median time-to-effective therapy was 0 and 1.4 hours, respectively (+1.4 hours, P = 0.02). There was no significant difference in 30-day all-cause mortality (3 vs. 4 patients, P = 0.62), 30-day recurrent bacteremia (0 vs. 2 patients, P = 0.2), or microbiologic clearance (37.3 vs. 26.2 hours, P = 0.09).

Conclusion. Implementation of a rapid, multiplex bloodstream diagnostic lead to a significant decrease in time-to-optimal antibiotic therapy in infants when compared to standard microbiological techniques.

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

1141. Effect of the SARS-CoV-2 Pandemic on *Staphylococcus aureus* Colonization in Healthy Children

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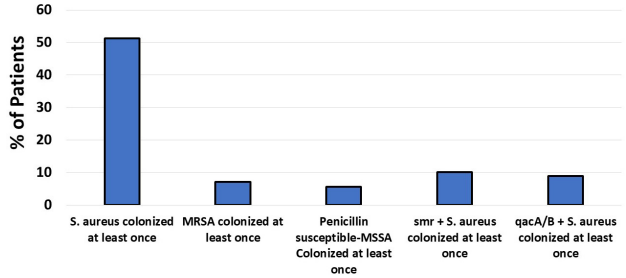
Session: P-64. Pediatric Bacterial Studies (natural history and therapeutic)

Background. *Staphylococcus aureus* is a common colonizer of the skin and mucus membranes. Several investigators have reported reductions in a number of childhood infections temporally associated with social distancing/masking mandates intended to curb the SARS-CoV-2 pandemic. No data are available regarding the impact of these measures on bacterial colonization. We report preliminary results from an ongoing longitudinal *S. aureus* colonization study initiated just prior to the pandemic.

Methods. Healthy children < 18 years were recruited from 2 Houston-area primary care clinics from Nov 2019- Feb 2020. Subjects had anterior nares and axillary cultures obtained and completed questionnaires. Additional questionnaires and cultures were performed every three months for 1 year. Identified *S. aureus* were subjected to antimicrobial susceptibility testing as well as PCR for genes associated with tolerance to antiseptics (*qacA/B*, *smr*). Beginning in March 2020, social distancing and masking mandates were initiated. Temporary restrictions on non-essential research activities were enacted and follow-up encounters were not resumed until June 2020; subjects completed follow-up by Feb 2021. Comparison of colonization rates pre- and post-SARS-CoV-2 pandemic were performed.

Results. 168 children were enrolled and 75.6% completed at least 2 follow-up encounters. 51.2% were colonized at least once by *S. aureus* and 8.1% had MRSA colonization (Figure 1). Those with MRSA colonization were older than those without (9.6 vs. 5.8 years, p=0.04). The frequency of *S. aureus* colonization was stable during the study period; however, rates of MRSA colonization declined beginning in summer 2020 (Figure 2 and 3, p=0.04). There was no difference in self-reported masking/social distancing practices or any traditional MRSA risk factors among those with and without MRSA colonization in the 6-12 month follow-up period.

Figure 1. *S. aureus* Colonization Over the Course of 12 Months



The proportion of children colonized at least once during the course of the study period.