NLFE isolates were more likely to be found in patients admitted from the community (97% vs 73% P = 0.03) rather than hospital acquired (3% vs 27% P = 0.009). There was no difference in rates of colonization (36% vs 46% P = 0.14) and pathogenicity (64% vs 54% P = 0.256), nor site of infection.

NLFE demonstrated a trend to statistical significance to be less resistant to later generation Cephalosporin. They were less likely to be resistant to Cefepime (1% vs 8% P = 0.003) and be flagged as an ESBL isolate.

**Conclusion.** Non Lactose Fermenting *E. coli* are more likely to be isolated from patients in the community, have no difference in predilection for nor site of infection, and are less likely to be resistant to later generation Cephalosporins.

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

2017. Colistin Susceptibility Testing Using the MicroScan® Colistin Well

**Background.** Antimicrobial resistance is a threat to public health. As carbapenem-resistant *Enterobacteriaceae*, multidrug-resistant *Pseudomonas aeruginosa*, and multirDrug-resistant *Acinetobacter baumannii* have increased in prevalence, there is increased in use of colistin as a therapeutic option. However, testing for colistin susceptibility is problematic for most clinical microbiology laboratories. Also, there is a paucity of surveillance data on the prevalence of colistin resistance in the United States. MicroScan® Gram-negative panels include a colistin well (4 μg/mL) to aid in the identification of bacteria, but it is not known whether this well can be used to assess the prevalence of colistin resistance.

**Methods.** All *Escherichia coli*, *Klebsiella pneumoniae*, *K. oxytoca*, Enterobacter cloacae, *A. aeroginosa*, or *A. baumannii* identified at the Emory University clinical microbiology laboratory between January 1, 2016 and December 31, 2016 were included in the study. Routine bacterial identification and antimicrobial susceptibility testing were performed using the MicroScan WalkAway 96 plus® and the Neg Breakpoint Combo Panel Type 41 or 44 (transition from 41 to 44 was made in March 2016). When these isolates were susceptible to three or fewer charted drugs, or upon provider request, a colistin ETEST® was performed.

**Results.** There were 288 out of 9296 isolates (3.1%) that had growth in the colistin MicroScan® well, suggesting colistin resistance. This included 79 E. coli (1.5%), 90 *Klebsiella spp.* (4.2%), 91 *Enterobacter spp.* (15.1%), 24 *P. aeruginosa* (1.9%), and 4 *A. baumannii* (3.7%). ETEST® was performed on 40 of the 288 isolates (13.9%). The MicroScan® colistin well result was confirmed (defined as an ETEST MIC >2) in 27 out of 40 cases (67.5%).

**Conclusion.** Resistance to colistin, at this single academic medical center, may be higher than was previously appreciated. This is a concerning finding. Further investigation is needed to determine whether the MicroScan® colistin well can be used as a reliable surrogate for detecting colistin resistance because in this study there was a low rate of categorical agreement between the MicroScan® colistin well and ETEST.

A future study is planned comparing these two testing methodologies with reference broth microdilution.

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

2018. Performance of TEM-PCR vs. Culture for Bacterial Identification in Pediatric Musculoskeletal Infections

James Wood Jr., MD, MSC; Cheryl Sesler, MS; Donald Stalons, PhD, D(ABMM), MPPh; Elena Grigorenko, PhD; J. Wood Jr., Diatherix: Investigator, Research support; Diatherix Laboratories, LLC: Employee, Salary; and Jotam Pasipanodya, MBChB, MPH, Haemophilus influenzae, Streptococcus pyogenes, and Streptococcus pneumoniae. TEM-PCR detected a pathogen in 20/25 subjects (80%), compared with 17/25 (68%) by culture. *S. aureus* was identified in 18 subjects, one of which was identified by TEM-PCR and not by culture. TEM-PCR also identified 2 subjects with *K. kingae* infection; neither was identified by culture. TEM-PCR detection of methicillin resistance and clindamycin resistance was 100% concordant with AST in the clinical laboratory. Genes encoding PVL were identified in 8/18 (44%) *S. aureus* samples. No bacterial co-detected were identified, and no other pathogens were identified by TEM-PCR or culture. Finally, there were no subjects with positive bacterial cultures and negative TEM-PCR results.

**Conclusion.** Rapid diagnostic assays, such as TEM-PCR, may be useful adjuncts to conventional, culture-based testing for children with MSI. Advantages include rapid identification of pathogen and early detection of antibiotic resistance genes. In a single multiplex assay, TEM-PCR provided reliable identification of MSI pathogens, with the potential for informing antibiotic selection early in the disease course.

**Methods.** Data were collected from children with MSI from June 2015 to December 2017. Blood, joint fluid, and bone aspirates were collected as part of the patient’s care. After data entry, both TEM-PCR and culture were performed. The following microorganisms were analyzed by TEM-PCR: *Staphylococcus aureus* and *S. epidermidis* (including methicillin resistance), *Pseudomonas aeruginosa*, *P. pyocyanea*, *Haemophilus influenzae*, *Staphylococcus lugdunensis*, *Escherichia coli*, *Klebsiella pneumoniae*, and *Streptococcus pneumoniae*.

**Results.** TEM-PCR detected a pathogen in 20/25 subjects (80%), compared with 17/25 (68%) by culture. *S. aureus* was identified in 18 subjects, one of which was identified by TEM-PCR and not by culture. TEM-PCR also identified 2 subjects with *K. kingae* infection; neither was identified by culture. TEM-PCR detection of methicillin resistance and clindamycin resistance was 100% concordant with AST in the clinical laboratory. Genes encoding PVL were identified in 8/18 (44%) *S. aureus* samples. No bacterial co-detected were identified, and no other pathogens were identified by TEM-PCR or culture. Finally, there were no subjects with positive bacterial cultures and negative TEM-PCR results.

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