hours (95% CI 11.5–24.6) for 8 hour stewardship coverage. When stewardship coverage was extended to 16 hours, the mean decrease in time to ASTEWI-1 with APS was 21.4 hours (95% CI 14.3–28.5). Both time differences were found to be statistically significant (P < 0.001).

Conclusion. In a cohort of patients with Gram-negative bacteremia, when compared with CTC, ASTEWI-1 guided by APS significantly shortened the time to potential antimicrobial optimization. This improvement occurred even when antimicrobial stewardship support was limited to an 8 hour work day.

Figure 1: Protocol with simulated time difference for 8 hour stewardship service

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2135. Direct Disk Diffusion Susceptibility Testing for Gram-negative Bacteria from Blood Cultures: Diagnostic Accuracy and Impact on Antimicrobial Stewardship
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Session: 240. Stewardship: Impact of Diagnostics Saturday, October 7, 2017: 12:30 PM

Background. In order to detect multidrug resistant (MDR) bacteria, our laboratory routinely performs disk susceptibility (DS) testing from positive blood cultures. We conducted a prospective study to determine the accuracy, reporting time (RT), and antimicrobial stewardship impact of DS testing for Gram-negative bacilli (GNB) positive blood cultures.

Methods. From March – December 2016, first time positive blood cultures for GNB were included in the study. Broth from positive blood culture bottles was inoculated to standard media, as well as to Mueller-Hinton agar with cefoxitin (FOX), amoxicillin-clavulanic acid (AMC), cetaxin (CRO), cefazolin (CIP) and meropenem (MEM) disks. The CRO and CAZ were adjacent to the AMC disk, which enabled detection of zone-enhancement with extended-spectrum β-lactamase (ESBL) producing organisms. CLSI breakpoints were used to guide interpretations of the DS results. Antibiotic therapy changes, made based on verbal reporting of DS results, were recorded. In order to determine RT, the following time points were recorded: blood culture positivity, reading of DS, and reporting of standardized susceptibilities (SS).

Results. There were 105 unique, monomicrobial cultures consisting of: E. coli (N = 61), Klebsiella sp. (N = 15), Enterobacter sp. (N = 9), Proteus sp. (N = 5), Pseudomonas aeruginosa (N = 5), and 10 other miscellaneous GNB. RT was reduced from 38 to 22 hours, for SS and DS, respectively. For species with CLSI breakpoints (101 isolates), the majority of all antibiotics were done within 30%, respectively 17% of isolates were DS-intermediate and SS-susceptible (minor error). CIP disk testing identified all resistant isolates correctly (N = 21), as did MEM (N = 7). Resistance to CRO/CAZ was correctly identified in 26/27 isolates. DS results changed antibiotic management for 23 patients. Antibiotics were narrowed for 7 patients, and treatment was expanded for 16 patients. For these patients, DS results were available 24 hours before SS.

Conclusion. DS testing is an accurate and rapid method to detect MDR GNB blood culture pathogens and facilitates the optimization of antimicrobial therapy. A relatively high rate of minor errors was detected due to DS disks testing in the intermediate zone for isolates ultimately identified as susceptible by SS.

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2136. Effect of the Methicillin-Resistant Staphylococcus aureus Nasal Polymerase Chain Reaction on Vancomycin Days and Clinical Outcomes in Pneumonia
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Background. Previous studies have demonstrated that the methicillin-resistant Staphylococcus aureus (MRSA) nasal polymerase chain reaction (PCR) assay has a high negative predictive value for MRSA pneumonia, and that a negative result may be used to guide antibiotic de-escalation. Despite increasing use in clinical practice, limited data exist regarding the impact of nasal MRSA testing on the duration of MRSA-directed therapy and patient outcomes. This study evaluated the effect of the MRSA nasal PCR result on vancomycin days and clinical outcomes in patients treated for pneumonia with empiric vancomycin therapy.

Methods. A retrospective study of adult inpatients with an MRSA nasal PCR assay ordered between January 2015 and September 2015 was conducted. Patients with confirmed or presumed pneumonia and who were treated with empiric vancomycin therapy were included. Outcomes were compared for patients with a negative vs. a positive MRSA nasal PCR result. The primary outcome was the number of days of vancomycin therapy. Secondary outcomes included length of hospitalization, 30-day readmission, and mortality. This study evaluated the effect of the MRSA nasal PCR result on vancomycin days and clinical outcomes in patients treated for pneumonia with empiric vancomycin therapy.

Results. 324 patients were included. In the overall cohort, the median duration of vancomycin therapy was 3 (interquartile range [IQR] 2–6) days in the negative MRSA nasal PCR group (n = 282) and 6 (IQR 4–9) days in the positive nasal PCR group (n = 42), P < 0.01. In the propensity score-matched cohort, the median number of vancomycin days was 3 (IQR 2–5) and 5 (IQR 4–8.5) in the negative (n = 137) and positive (n = 39) nasal PCR groups, respectively, P < 0.01. This difference persisted in an additional analysis of only patients with no positive respiratory cultures. No significant differences were observed in any secondary outcomes. The MRSA PCR assay demonstrated a positive predictive value of 45% and a negative predictive value of 98%.

Conclusion. A negative MRSA nasal PCR result correlated with fewer days of vancomycin therapy without negatively impacting other clinical outcomes. The use of the MRSA nasal PCR assay may reduce the duration of MRSA-active therapy in PCR-negative patients.

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2137. Influence of T2 Candida Testing for Rapid Diagnosis of Candida Infections on Antimicrobial Stewardship Efforts at a Large Academic Medical Center:
A Retrospective, Single-center Study
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Background. Antimicrobial stewardship has traditionally focused on the optimal use of antibacterial agents. Much less attention is focused on the optimal use of antifungal therapy (AFT). The high mortality and emergence of resistance in invasive fungal infections due to Candida presents a critical opportunity for AFT stewardship. The T2Candida (T2C) panel is a rapid diagnostic test using magnetic resonance to detect 5 antifungal pathogens during the study period utilizing days of therapy (DOT)/1000 pt days as a parameter.

Results. In 2015 and 2016, 100 patients and 138 patients with candidemia, respectively, were included in the analysis. In 2016, there were 354 T2C valid results; 36 (10.2%) were positive and 318 (89.8%) were negative. The DOT for all candidemic patients in 2015 was 2.02 days vs 1.15 days for candidemic patients in 2016, including all who were blood culture (BC)+ and/or T2C+ (P < 0.0001). For patients with candidemia in 2014, TTT in the T2C+ group vs those in whom only BC+ was 0.9 days and 1.69 days, respectively (P < 0.00001). Comparing results for 2015 and 2016, we observed echinocandin (Echin) usage of 15.1 and 17.8 DOT/1000 pt days, respectively.

Conclusion. We observed a significant decrease in the TTT for candidemic patients since introduction of the T2C. These results suggest that rapid identification of candidemia may be an important tool for AFT stewardship. We hypothesize that other factors, such as the updated IDSA Treatment Guidelines for Candidiasis and increased attention to the early intervention for sepsis campaign, may have influenced the use of Echin, and is supported by the observation that along with the decrease in TTT, we observed a slight increase in the DOT/1000 pt days between 2015 and 2016, suggesting more liberal use of empiric Echin.

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2138. Effect of Rapid Molecular Diagnostic Testing and Antimicrobial Stewardship on Antimicrobial Therapy of Respiratory Infections
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Background. Despite improving accuracy, rapid diagnostic testing (RDT) has minimal impact on antimicrobial stewardship (ASt) for respiratory infections. Testing, stewardship, and therapy all occur concurrently, thus making it difficult to determine the impact of RDT on therapy. This study evaluated whether rapid detection of respiratory infections impacted antimicrobial use and clinical outcomes.

Methods. A retrospective study of 776 consecutive patients admitted to a single center in the Phoenix VA Health Care System from January 1, 2014 to December 31, 2015 was conducted. Patients with community-acquired pneumonia (CAP) or healthcare associated pneumonia (HAP) and a positive rapid respiratory viral panel were included. Outcomes were evaluated for patients with a positive vs. negative respiratory viral panel and compared with historical controls.

Results. HAP (n = 503) and CAP (n = 273) patients were evaluated. The median length of hospitalization for patients with a positive respiratory viral panel was 11.5 days vs 9.5 days for patients with a negative respiratory viral panel (P = 0.03). In the CAP cohort, length of hospitalization was 9.2 days for patients with a positive viral panel vs 7.4 days for patients with a negative viral panel (P = 0.03). In the HAP cohort, length of hospitalization was 11.7 days for patients with a positive viral panel vs 9.7 days for patients with a negative viral panel (P = 0.04). Treatment was de-escalated in 21 patients in the CAP group and 9 patients in the HAP group (P = 0.02).

Conclusion. Rapid respiratory viral panel testing may impact antimicrobial therapy and length of hospitalization in patients with respiratory infections. Further studies are needed to determine if these results are generalizable to community settings.

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