for off-hours results. Microbiologic and clinical data were collected prospectively. Due to inconsistencies in instrument performance identified after the first month, two post-implementation periods (Group A = October 2018–January 2019; Group B = February 2019–mid-April 2019) were analyzed to assess quality improvement efforts during clinical roll-out.

Results. In the 6.5-month combined period, 690 unique BC samples were run on AP and reviewed by AST (417 in A; 273 in B). Performance of the technology improved, with 78.9% (329/417) of isolates in Grp A identified vs. 85.3% in Grp B (233/273). Percentage of runs with progression to antibiotic susceptibility improved from 76.1% to 92.3%. Over both time periods, AST intervened on 277 samples (Figure 1). Recommendations (bug-drug mismatch, de-escalation, dose optimization, and infectious disease consult) were accepted at a rate of 97.4%. Time from BC positivity to optimal therapy was 15.3 hours (Figure 2).

Conclusion. Implementation of AP with AST review resulted in rapid identification and antibiotic susceptibility results with early optimization of antimicrobial therapy. Highest impact was seen in the management of patients with resistant Gram-negative infections. Oversight of the implementation by a partnership of clinical microbiology and the antimicrobial stewardship team was critical in identifying real-time implementation issues and opportunities for quality improvement. Though real-world performance was slightly inferior to published trial data, the instrument's exceedingly fast time to AS represents a significant advantage over other systems and enhances clinical care and patient safety particularly when paired with AST intervention.

Figure 1: AST Intervention Type

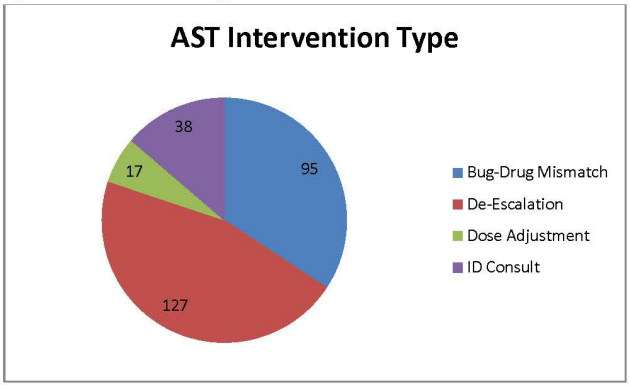
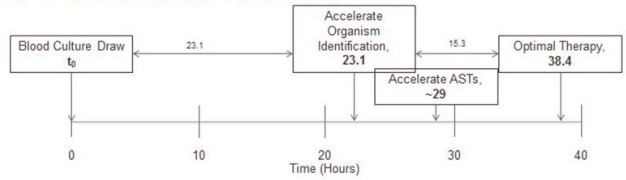


Figure 2: Post-Implementation Time to Optimal Therapy



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

1998. Impact of Rapid Blood Culture Identification with Real-Time Antimicrobial Stewardship (ASP) in Patients with *Staphylococcus aureus* (S. aureus) and *Enterococcus* spp. Bacteremia at a Large Academic Medical Center

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Session: 235. Antibiotic Stewardship: Diagnostics and Diagnostic Stewardship
Saturday, October 5, 2019: 12:15 PM

Background. The initiation of appropriate antimicrobial therapy is dependent on timely identification of the pathogen. FilmArray Blood Culture Identification Panel (BCID) is a rapid, multiplex polymerase chain reaction (PCR) panel that identifies 24 pathogens and 3 antibiotic resistance genes associated with bloodstream infections within 1 hour of growth. The purpose of this study was to compare the clinical impact of rapid BCID testing vs. standard blood culture processing, both coupled with real-time ASP, in patients with *S. aureus* and *Enterococcus* spp. bacteremia.

Methods. This was a single-center, retrospective chart review conducted as a pre-post intervention quasi-experimental study. The pre-intervention group included adult patients with *S.aureus* and *Enterococcus* spp. bacteremia identified by standard blood culture processing (PRE) and the post-intervention group included those identified by rapid BCID testing (POST). The primary endpoint was time in hours from positive Gram stain to initiation of optimal antimicrobial therapy [defined as vancomycin (VAN), linezolid (LZD), daptomycin (DAP), or ceftaroline for methicillin-resistant *S. aureus* (MRSA); nafcillin or cefazolin for methicillin-susceptible *S. aureus* (MSSA); DAP or LZD for VAN-resistant *Enterococcus* (VRE); VAN or ampicillin (if susceptible) for VAN-susceptible *Enterococcus* (VSE)]. Secondary endpoints included time to active therapy (defined as an antimicrobial to which the organism was susceptible), time to identification of pathogen, length of hospital stay (LOS) after positive culture, and 30-day mortality.

Results. 132 patients were included. Mean time to optimal therapy decreased from 21.4 hours PRE to 10.7 hours POST ($P = 0.048$). Time to optimal therapy was shorter POST for MSSA [59.2 hours PRE vs. 25.8 hours POST ($P < 0.001$)] and VRE bacteremia [24.6 hours PRE vs. 5.6 hours POST ($P = 0.005$)]. Time to identification of pathogen decreased from 75.6 hours PRE to 2.7 hours POST ($P < 0.001$). Groups did not differ in time to active therapy, LOS, nor 30-day mortality.

Conclusion. Antimicrobial Stewardship coupled with rapid BCID testing significantly decreased time to pathogen identification as well as time to optimal therapy in patients with *S. aureus* and *Enterococcus* spp. bacteremia, most notably for MSSA and VRE.

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

1999. Does Pharmacist-Driven Methicillin-Resistant *Staphylococcus aureus* PCR Nasal Screening Decrease Time to De-Escalation of MRSA Coverage in Patients with Pneumonia?

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Session: 235. Antibiotic Stewardship: Diagnostics and Diagnostic Stewardship
Saturday, October 5, 2019: 12:15 PM

Background. Vancomycin and linezolid are antibiotics used in cases where methicillin-resistant *Staphylococcus aureus* (MRSA) is suspected, including in cases where MRSA is suspected to be the cause of pneumonia. MRSA nasal PCR has been shown to have a high negative predictive value when used to rule out MRSA pneumonia. The purpose of the current study was to determine whether a pharmacist-driven MRSA PCR nasal screening protocol would decrease the time to de-escalation or discontinuation of anti-MRSA therapy when utilized for pneumonia.

Methods. Patients were analyzed in two cohorts, those who received vancomycin or linezolid therapy from October 2012 to February 2013 (before pharmacist-driven MRSA nasal PCR protocol; $n = 88$) and those who received vancomycin from October 2016 to February 2017 (pharmacist-driven MRSA nasal PCR protocol; $n = 105$). During the study period, pharmacists were given the authority, via protocol to order an MRSA nasal PCR when vancomycin or linezolid was ordered for the indication of pneumonia. Subsequently, after a negative MRSA nasal PCR, pharmacists would contact the prescriber, and let the prescriber know that the MRSA PCR was negative, and then discontinue anti-MRSA therapy. The primary outcome was duration in hours of active anti-MRSA therapy. Secondary outcomes evaluated were the number of anti-MRSA antibiotic doses ordered, and the number of vancomycin troughs ordered.

Results. Patients in the pre-pharmacist driven cohort received vancomycin or linezolid for a median of 44.19 hours, whereas patients in the pharmacist-driven MRSA PCR protocol period received anti-MRSA therapy for a median of 19.1 hours ($P < 0.0001$). Additionally, prior to the initiation of the pharmacist-driven MRSA nasal PCR protocol, patients received 349 doses of anti-MRSA therapy, compared with 283 doses in the pharmacist MRSA nasal swab protocol group ($P < 0.0001$). There were also fewer vancomycin troughs ordered in the pharmacist MRSA nasal PCR protocol group (76 vs. 48, $P < 0.0009$).

Conclusion. A pharmacist-driven protocol for ordering MRSA nasal PCR led to a statistically significant decrease in the time to discontinuation of vancomycin or linezolid for suspected MRSA pneumonia when the MRSA nasal PCR was negative.

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

2000. Utilization of a 'Never Event' Framework to Classify Antimicrobial Appropriateness

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Session: 235. Antibiotic Stewardship: Diagnostics and Diagnostic Stewardship
Saturday, October 5, 2019: 12:15 PM

Background. Contemporary strategies can be leveraged to predict antimicrobial overuse, yet little information is gained on the appropriateness of antibiotics prescribed. Classifying appropriateness is complicated by the lack of a standard definition for appropriateness. Thus, we created and implemented a novel 'antibiotic never event' (NE) framework to systematically classify the most inappropriate usages of vancomycin and correlated these NE to abnormal consumption trends (i.e., antibiotic outbreaks).

Methods. Vancomycin use was categorized by an algorithm using data query from the electronic medical records. Extracted data included vancomycin use, relevant patient demographics, and microbiological data. Electronic classifications placed each vancomycin therapy into type 1 (use for non-susceptible organism after susceptibility finalization) or type 2 (use exceeding 48h after susceptibility report when a safe de-escalation is possible) NE. Patients were categorized as cases or controls (no NE) at Northwestern Memorial Hospital (NM) and Henry Ford Hospital (HF)