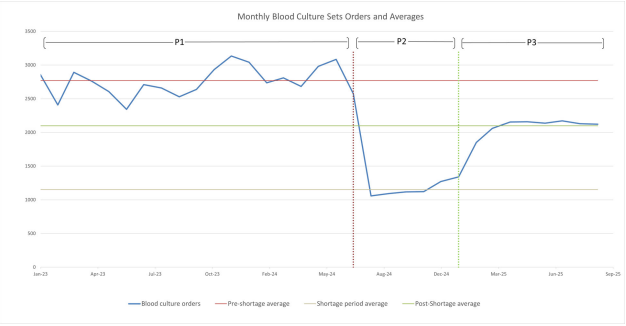
20% during the intervention. Accurate adherence to the order panel in this subset was 76%. **Conclusion:** In this study, we successfully implemented scalable BDG diagnostic stewardship, achieving a sustained 17% reduction in weekly BDG orders and nearly reaching the 20% target after 32 weeks. Further optimization of OPAs, along with provider feedback and education, may yield additional improvements.

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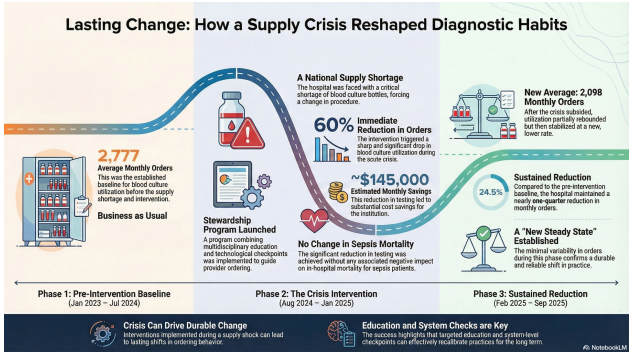
Presentation Type:
Poster Presentation
Subject Category: Diagnostic Stewardship
Long-Term Sustained Reduction in Blood Culture Utilization Following Crisis-Driven Stewardship‡

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Background: Faced with a national blood culture (BC) bottle shortage, our institution implemented a diagnostic stewardship intervention relying on multidisciplinary teams' education to enhance provider awareness, along with technological checkpoints. This initial effort resulted in a 60% reduction in BC orders and an estimated monthly savings of approximately $145,000, with no change in in-hospital sepsis mortality. The initial report covered the post-intervention period up to January 2025. As bottle availability normalized, acute-phase restrictions ended, while key stewardship components were deliberately maintained. The electronic medical record (EMR) best practice advisory (BPA) remained active, paired with continued clinician education and ongoing monitoring of blood culture utilization to reinforce appropriate practice. We subsequently evaluated the durability of this stewardship approach, focusing on long-term utilization drift and the net sustained reduction in blood culture use after the acute supply crisis resolved. **Methods:** We conducted a retrospective review of BC utilization at a 438-bed tertiary care academic center. The study compared the Pre-Intervention Baseline (P1: January 2023-July 2024) against the two post-intervention phases: the acute shortage (P2: August 2024–January 2025) and the sustainability phase (P3: February 2025–September 2025). The stewardship intervention in P3 included an EMR-based BPA, along with ongoing education and monitoring. The primary outcome was the mean monthly BC orders. Statistical stability in P3 was assessed using 95% confidence intervals (CI). **Results:** Blood culture utilization averaged 2,777 sets per month during the pre-intervention period (P1). Following the acute shortage (P2), utilization partially rebounded and then stabilized at a lower plateau during the eight-month sustainability phase (P3) at 2,098 monthly orders. This represents a sustained 24.45% reduction compared with the pre-intervention baseline. The stability of P3 is supported by a narrow 95% confidence interval (1,909.92 to 2,186.08) and a low margin of error of ±88.08 orders, confirming that the reduction reflects a reliable new steady state. **Conclusion:** Our long-term evaluation shows that a diagnostic stewardship intervention implemented during an acute supply shock resulted in a durable shift in



‡The abstract titles in this supplement have been corrected since original publication. A notice detailing the changes has been published at https://doi.org/10.1017/ash.2026.10802.



practice. Even after the shortage was resolved, monthly blood culture utilization remained nearly one-quarter below baseline and stabilized with minimal variability, indicating the establishment of a reliable new steady state. These findings highlight that targeted education and system-level checkpoints can drive lasting reductions in unnecessary testing and recalibrate ordering behavior well beyond the immediate crisis.

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Poster Presentation
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Comparison of Automated Antimicrobial Susceptibility Testing Instruments' Results to Broth Microdilution Results ‡

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Background Use of automated antimicrobial susceptibility testing (AST) instruments are common in clinical microbiology laboratories, in part due to the quick turnaround time and automated result reading. Given the wide variability in validation and each individual instrument's algorithms and parameters, AST data between clinical laboratories is not guaranteed to be comparable. Accurate AST is critical to ensure appropriate antimicrobial prescribing practices. In Tennessee little is known about the comparability of AST testing amongst clinical labs. This study aims to quantify differences in clinical automated testing instrument (ATI) performance when compared to broth microdilution (BMD). Methods Clinical laboratory AST data from Phoenix (PHX) and Microscan (MS) instruments were obtained for carbapenem-resistant Enterobacterales (CRE) and carbapenem-resistant Acinetobacter baumannii (CRAB) via the Multi-site Gram-Negative Surveillance Initiative. Data were received from the residents of seven select counties in Tennessee from 2019–2024. Identified isolates were sent to the Tennessee State Public Health Laboratory's Antimicrobial Resistance Lab Network (ARLN) program for additional testing, including BMD AST, which was used as the reference standard. Agreement between ATIs and BMD breakpoint interpretations were measured using a weighted Cohen's Kappa calculated in SAS 9.4. Results There were 401 isolates included in this study. Eleven antibiotics were evaluated for agreement between MS and BMD, and ten were evaluated for agreement between PHX and BMD, shown in Table 1. Six antibiotics and four antibiotics showed lower agreement to BMD for PHX and MS respectively. Both MS and PHX showed near perfect agreement (κ<0.81) for four antibiotics. Additionally, MS and PHX both showed moderate agreement (κ<0.41) for five antibiotics, two of which were imipenem and meropenem. Agreement between ATI and BMD was poor for ertapenem across both MS and PHX, with the data showing clinical ATI are over-reporting resistance compared to BMD. Agreement between MS and BMD was also poor for cefotaxime (0.39). Conclusion While this study only evaluated a subset of isolates tested at the clinical laboratory, it still demonstrates that clinical AST instruments results are not necessarily comparable, with half of the

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antibiotics evaluated showing moderate to poor agreement when compared to BMD. The poor agreement reported for ertapenem is particularly concerning, as these represent overreported carbapenem resistance, which impacts treatment options, transmission-based precaution implementation, and unnecessary confirmatory testing through ARLN. This study demonstrates the need for laboratories utilizing commercial AST instruments to perform frequent quality control checks to ensure instruments are functioning within an acceptable performance standard range.

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Table 1: Agreement between clinical ATI instruments breakpoint interpretations and broth microdilution by antibiotic

Antibiotic	N = 401	Microscan Cohen's Kappa (95% CI)	Phoenix Cohen's Kappa (95% CI)
Amikacin	MS = 98 PHX = 141	0.78 (0.60 – 0.97)	0.93 (0.84 – 1)
Aztreonam	MS = 79 PHX = 123	0.64 (0.42 – 0.86)	0.69 (0.55 – 0.83)
Cefepime	MS = 175 PHX = 144	0.61 (0.52 – 0.70)	0.79 (0.71 – 0.88)
Cefotaxime	MS = 89 PHX = 2	0.39 (0.14 – 0.65)	N/A
Ciprofloxacin	MS = 168 PHX = 152	0.87 (0.80 – 0.94)	0.81 (0.73 – 0.89)
Ertapenem	MS = 156 PHX = 149	0.08 (-0.02 – 0.17)	0.19 (0.09 – 0.29)
Gentamicin	MS = 170 PHX = 146	0.89 (0.82 – 0.95)	0.88 (0.79 – 0.96)
Imipenem	MS = 153 PHX = 61	0.71 (0.61 – 0.80)	0.44 (0.26 – 0.62)
Levofloxacin	MS = 172 PHX = 144	0.89 (0.83 – 0.95)	0.82 (0.74 – 0.91)
Meropenem	MS = 209 PHX = 158	0.77 (0.69 – 0.85)	0.73 (0.61 – 0.84)
Tobramycin	MS = 173 PHX = 129	0.92 (0.87 – 0.96)	0.80 (0.70 – 0.90)

Presentation Type:
Poster Presentation
Subject Category: Diagnostic Stewardship
Optimizing the Role of Streptococcus pneumoniae and Legionella Urinary Antigen testing‡

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Background: Community-acquired pneumonia (CAP) is most commonly caused by Streptococcus pneumoniae, Haemophilus influenzae, Moraxella catarrhalis or atypical bacteria. Legionella pneumonia is most commonly associated with contaminated man-made water systems. The 2019 CAP guidelines endorsed by the American Thoracic Society and Infectious Diseases Society of America are the only national guidelines that recommend the Streptococcus pneumoniae urinary antigen test (UAT) in patients presenting with severe CAP, and the Legionella UAT in patients presenting with either severe CAP or with recent travel to an area associated with a Legionella outbreak. Since the publication of this guideline, several publications have questioned the utility of these UATs in clinical practice. **Methods:** We conducted a retrospective review of Streptococcus pneumoniae and Legionella UATs ordered for inpatient adult patients at the University of Kentucky Healthcare during the calendar year 2024. Chart review was conducted for all patients with a positive UAT to determine indication and appropriateness of test ordering, and details of antimicrobial prescription and duration. **Results:** Of the 6,421 orders, only 168 (2.8%) were positive – 153 Streptococcus pneumoniae UAT and 15 Legionella UAT. Patients with a positive test were reviewed to determine diagnostic indication for the test as well as to evaluate antibiotic de-escalation practices. Of the positive UATs, 37.5% of the orders were obtained in patients who did not have CAP. Most common indications were VAP, HAP, aspiration pneumonia, acute respiratory failure, sepsis, COPD exacerbations, and CHF exacerbations. None of the patients with a positive Streptococcus pneumoniae UAT were narrowed to amoxicillin to target the pathogen. Most commonly, patients were narrowed from cefepime to ceftriaxone or atypical coverage was discontinued. For patients with Legionella pneumonia, macrolide therapy was extended beyond the typical three-day regimen used in CAP or changed to a respiratory fluoroquinolone. **Conclusion:** Based on our review, we are recommending removing the Streptococcus pneumoniae UAT from our institution's formulary and optimizing the Legionella UAT order by limiting use to patients with risk factors. This proposal will result in significant cost savings as our enterprise spent $164,211 on UATs that did not significantly influence care for most patients.

‡The abstract titles in this supplement have been corrected since original publication. A notice detailing the changes has been published at https://doi.org/10.1017/ash.2026.10802.

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Presentation Type:
Poster Presentation
Subject Category: Diagnostic Stewardship
Design and implementation of a comprehensive stewardship intervention for a Multiplex Respiratory Panel‡

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Background: Multiplex respiratory panels are commonly utilized in the clinical care of respiratory infections. This usage occurs despite their high cost and absence of impact on clinical decision making. Guidance from national societies such as the Society of Hospital Medicine and American Association of Family Practice suggest limiting use to immunocompromised hosts or targeted testing based on seasonal prevalence, however clinical practice often does not mirror these recommendations. **Methods:** We conducted a retrospective review of the ePlex repiratory panel, an automated polymerase chain reaction for detection and identification of multiple respiratory viral and bacterial nucleic acids, at University of Kentucky Healthcare during July 2024-June 2025. Test volumes were stratified by location and month. We assessed the frequency of insurance denials, and the estimated cost of unreimbursed testing. These results were then utilized to create a multi-pronged stewardship intervention. **Results:** A total of 15,320 tests were ordered, with 32.2% reporting at least one positive analyte, most commonly rhinovirus/enterovirus (25.5%) (Figure 1). Tests were most frequently ordered inpatient (7315 tests, 47.7%). Of the 3787 (24.7%) outpatient tests, urgent and primary care settings accounting for the largest propotion (46.5%). Insurance denials led to an unreimbursed cost of 1.78 million USD. Testing peaked in the winter months (1873 tests in December 2024), with a nadir of 935 tests in August 2024 (Figure 2). The intervention comprised three domains. First, the intervention was discussed and approval sought from key stakeholders including Lab formulary committee, inpatient and outpatient medical directors, Infectious Diseases, Laboratory services, and Pharmacy. Second, a comprehensive modification of the EMR including creation of nested order panels that led ordering users through clinical scenarios to determine if testing was indicated, selection of an appropriate use criteria if the test was ordered, and redirecting keywords to the order panel instead of the individual test order. Last, a patient/caregiver handout was created on supportive care for viral infections, and the lack of impact of multiplex testing in non-immunocompromised hosts. After the interventions went live in late-November 2025, test volume saw a significant decline with a 29% decline in November 2025, and a 73% decline in December 2025 (Figure 2). **Conclusion:** Our preliminary results show remarkable impact of a comprehensive diagnostic stewardship effort targeting appropriate test

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