between December 2017 and May 2019 were included. The vascular access team would forward requests for PICC insertions to the antimicrobial stewardship pharmacist. The pharmacist would approve/disapprove the PICC or recommend an infectious diseases consult. The variables collected were: infection types, infectious diseases consultation, reason for PICC denial and 30-day PICC-related complications.

Results: A total of 215 requests for PICC insertion (for IV antibiotics) were placed. Of these, 54% of the requests were denied, while 46% were approved. The reasons for PICC denial included: midline catheter preferred (47%), switched to oral antibiotics (33%), further work-up required (10%), or no antibiotics needed (7%). The types of infections treated were: bone and joint infections (28%), urinary tract infections (13%), intra-abdominal infections (12%), endocarditis/endovascular infections (11%), skin soft tissue infections (9%), pneumonia (7%), catheter-related bloodstream infections (6%), central nervous system infections (6%), bacteremia (4%) and others (4%).The infectious diseases consult team was involved in the care of 79% of the patients. Of those that received a PICC line, only 5% experienced any PICC-related complications. The overall cost savings for PICCs that were denied was ~ $294,000.

Conclusion: Mandatory antimicrobial stewardship/infectious diseases approval for PICC insertion can decrease healthcare cost and reduce the number of unnecessary PICC lines placed.

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90. Impact of Discrepant Rapid Diagnostic Test (RDT) Results on Antimicrobial Stewardship Program (ASP) Interventions in Patients with Bloodstream Infections (BSI) due to Gram-Negative Bacilli (GNB)

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Session: P-4. Antimicrobial Stewardship: Diagnostics/Diagnostic Stewardship

Background: Implementation of the Accelerate Pheno™ Gram-negative platform (AXDX) paired with ASP intervention projects to improve time to definitive institutional-preferred antimicrobial therapy (IPT). However, few data describe the impact of discrepant RDT results from standard of care (SOC) methods on antimicrobial prescribing. Here we evaluate the prescribing outcomes for discrepant results following the first year of AXDX + ASP implementation.

Methods: Consecutive, non-duplicate blood cultures for adult inpatients with GNB BSI following combined RDT + ASP intervention were included (July 2018 – July 2019). AXDX results were emailed to the ASP in real time then released into the EMR upon ASP review and communication with the treating team. SOC identification (ID; Vitek® MS/Vitek® 2) and antimicrobial susceptibility testing (AST; Trek Sensititre™) followed RDT as the reference standard. IPT was defined as the narrowest susceptible beta-lactam, and a discrepancy was characterized when there was categorical disagreement between RDT and SOC methods. When IPT by AXDX was found to be non-susceptible on SOC, this was characterized as "false susceptible". Conversely, "false resistance" was assessed when a narrower-spectrum agent was susceptible by SOC. Results were also deemed discrepant when the AXDX provided no/incorrect ID for on-panel organisms, no AST, or a polymicrobial specimen was missed.

Results: Sixty-nine of 250 patients (28%) had a discrepancy in organism ID or AST: false resistance (9%), false susceptible (5%), no AST (5%), no ID (4%), incorrect ID (2%), and missed polymicrobial (2%). A prescribing impact occurred in 55% of cases (Table 1), where unnecessarily broad therapy was continued most often. Erroneous escalation (7%) and de-escalation to inactive therapy (7%) occurred less frequently. In-hospital mortality occurred in 4 cases, none of which followed an inappropriate transition to inactive therapy.

Table 1: Discrepant RDT Results and Outcomes

Discrepancy Type	Continued Unnecessary Broad Therapy	Erroneous Escalation	De-escalation to Inactive Therapy	No Impact
Identification				
No ID* (10)	6 (60)	-	-	4 (40)
Incorrect ID (6)	3 (50)	-	-	3 (50)
Missed Polymicrobial* (6)	1 (17)	-	2 (33)	3 (50)
Susceptibility				
False Resistance (23)	7 (30)	5 (22)	-	11 (48)
False Susceptible (12)	3 (25)	-	3 (25)	6 (50)
No AST Result (12)	8 (67)	-	-	4 (33)
Total (69)	**28 (41)**	**5 (7)**	**5 (7)**	**31 (45)**

Data presented as n (% of row).
*On-panel organisms only

Conclusion: Though the AXDX platform provides rapid ID and AST results, close coordination with Clinical Microbiology and continued ASP follow up are needed to optimize therapy. Although uncommon, the potential for erroneous ASP recommendations to de-escalate to inactive therapy following AXDX results warrants further investigation.

Disclosures: Amy J. Mathers, MD, D(ABMM), Accelerate Diagnostics (Consultant)

91. Implementing Criteria to Reduce Blood Cultures Ordering: A Pre- and Post-Intervention Retrospective Study in a Critical Access Hospital

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Session: P-4. Antimicrobial Stewardship: Diagnostics/Diagnostic Stewardship

Background: Blood culture utilization has been performed widely. Typically, clinicians order blood cultures in patients whom bacteremia is suspected. Our previous study showed that 35% of blood cultures performed in May 2019 could have been prevented since they did not meet the certain criteria. This study sought to examine the outcomes after education intervention by implementing criteria of blood culture ordering whether it could reduce unnecessary blood cultures.

Methods: Electronic medical records of adult patients who had blood cultures done during pre-and post-study period were reviewed. Demographic data, clinical presentation, vital signs, location, quantities and sites of blood cultures were obtained. The measurement of qSOFA, SIRS and severe sepsis criteria were collected on the presentation. There were some clinical prediction rules for blood stream infection described in the previous studies. For this study, we use the criteria of at least 2 SIRS and/or at least one of the qSOFA criteria or severe sepsis to be a minimum indication for ordering blood cultures. The follow-up study was done after 6 weeks of educational intervention with implementation of criteria. Chi-square was used to compare the differences between two groups.

Results: There were a total of 165 patients included in our study (112 in pre- and 53 in post-intervention group). There were a total of 18 patients with positive blood cultures (12/112;10.71% in pre-intervention gr. vs 6/53;11.32% in post-intervention gr., p=0.91). Six out of 18 (33%) were deemed to be contaminated (3/12;25% vs 3/6;50%, p=0.29). Gram positive cocci were the most common organisms of the true positive blood cultures (10/12;83%). Of 165 patients, 78 (47%) had at least one of qSOFA (47/112;41% vs 31/53;58%, p=0.05), 18 (11%) had met severe sepsis criteria (9/112;8% vs 9/53;17%, p=0.09). There were 47 (28%) patients who had less than 2 criteria of SIRS and did not meet either criteria of qSOFA or severe sepsis (39/112; 35% vs 8/53; 15%, chi 6.87, p< 0.01). There was no true bacteremia in this group of patients.

Conclusion: Our study found that implementation of criteria for blood cultures successfully reduces the unnecessary blood cultures orders approximately 20% without missing true bacteremia in suspected patients.

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92. Utility of Sinus CT in the Evaluation of Patients with Febrile Neutropenia

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Session: P-4. Antimicrobial Stewardship: Diagnostics/Diagnostic Stewardship

Background: The etiology of febrile neutropenia in patients with hematological malignancy is identified in only 20–30% of cases. Sinus computed tomography (CT) is often used, regardless of symptoms, to rule out rhinocerebral source of infection. There are no clear guidelines on when to perform sinus CT in this population. In this study, we evaluated the role of sinus CT in febrile neutropenic patients.

Methods: We retrospectively reviewed medical records of all adults (age ≥18 years) with febrile neutropenia (T≥ 38.3°C, ANC < 0.5 x 10^9/L) and hematological malignancies who underwent sinus CT from January 2014 to May 2020. We present the preliminary analysis of the impact of sinus CT findings on the management of febrile neutropenia.

Results: 47 patients with a total of 56 episodes of febrile neutropenia met the inclusion criteria. The median age at presentation was 57 years (IQR: 42 - 68 years). The most common underlying malignancy was acute myeloid leukemia (51%), followed by myelodysplastic syndrome (19%). At presentation, 47% had refractory disease, 21% were newly diagnosed, 15% had relapsed, 15% were in complete remission, and 2% were in partial remission. Of the total 56 episodes, 29 (52%) had symptoms of rhinorrhea (20%), facial pain (14%), and sinus congestion (14%). The remaining 27 of 56 episodes (48%) had no sinus symptoms. Sinus CT was abnormal in 48 of 56 episodes (86%); the most common finding was mucosal thickening (47/48; 98%), followed by air-fluid levels (7/48; 14.5%), partial opacification (6/48; 12.5%), complete opacification (2/48; 4%), and bony invasion (2/48; 4%). The source of febrile neutropenia was attributed to the CT sinus findings in 9 cases (9/48; 29%), leading to a change in therapeutic management. All 9 patients were symptomatic, with evidence of necrosis in 22% (2/9) and purulence in 22% (2/9) on nasal endoscopy.