identified risk factors like TBSA and duration of hospitalization, ICU, and ventilator days), was independently associated with increased mortality. FUBC may serve as an additional prognostic factor in burn patients with BSI.

Disclosures: **All Authors**: No reported disclosures

284. Evaluation of Oral Step-Down Therapy for Enterobacteriaceae Bloodstream Infection

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Session: P-9. Bacteremia

Background: Oral antibiotic stepdown therapy for Gram-negative (GN) bloodstream infection (BSI) appears to be a safe option, though high bioavailability drugs like fluoroquinolones (FQ) and trimethoprim-sulfamethoxazole are often recommended without clear evidence demonstrating superiority. Due to increasing concerns of FQ resistance and collateral damage with an increasing community *C. difficile* rate, our organization sought to reduce overall FQ use and a shift toward oral beta-lactams (BL) was observed. A review was conducted to assess the outcomes of this shift.

Methods: This retrospective cohort included all patients within our 3-hospital system who had a positive GN blood culture and were transitioned to oral therapy to complete treatment outpatient for bacteremia between Jan 2017-Sept 2019. The primary outcome was recurrent BSI within 30 days of completing initial treatment. Secondary outcomes included 30-day mortality, 30-day recurrence of organism at an alternate source, 30-day readmission, and 90-day BSI relapse.

Results: Of 191 GN BSIs, 77 patients were transitioned to oral therapy. The mean age was 68 years, 60% were female. The most common source of infection was described as urine (39/77), intra-abdominal (16/77), unknown (13/77). Mean total antibiotic duration (IV plus PO) was 14 days (range 7–33). Patients received an average of 5 days IV prior to transitioning to PO therapy. The most common PO class was a 1st gen cephalosporin (29/77), followed by BL/BL inhibitor (16/77), and a FQ (13/77). There were no 30-day relapse BSIs observed in this cohort. There was 1 patient discharged to inpatient hospice, and no other 30-day mortality observed. There were 4 recurrent UTIs observed within 30 days, none of which required readmission. Of the twelve 30-day readmissions, 1 was considered by the investigators to be related to the initial infection.

Conclusion: An opportunity for education regarding duration of therapy was identified. Oral beta lactam use in our limited population appears to be a reasonable option to facilitate discharge. Results should be confirmed in additional, larger studies.

Disclosures: **All Authors**: No reported disclosures

285. Evaluation of the ePlex® Blood Culture Identification (BCID) Panels for Gram-positive/Gram-negative bacteria and yeasts

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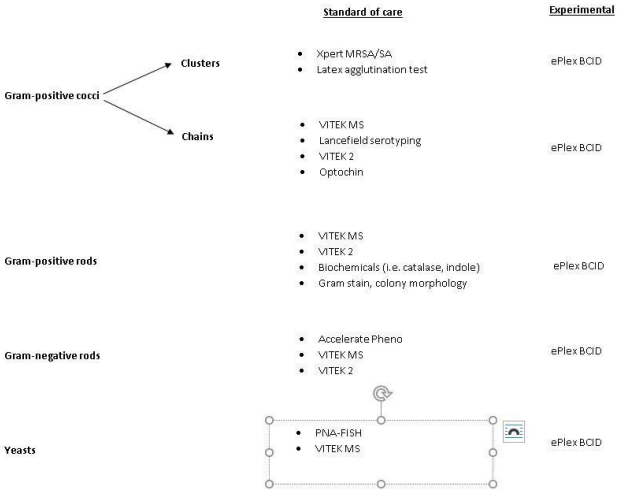
Session: P-9. Bacteremia

Background: Multiple methods used for blood culture identification create inconsistent to reporting of critical results. Study aim was to evaluate performance characteristics of the ePlex BCID panels compared to current standard of care (SOC) methods used in our lab.

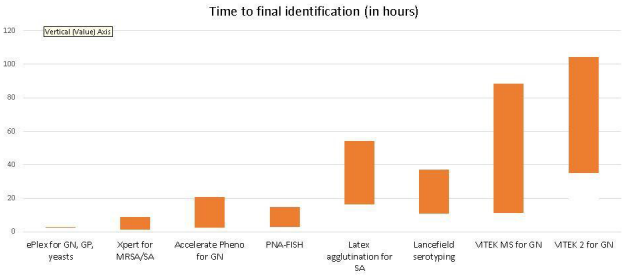
Methods: Identification sensitivity and specificity were assessed across all targets detected by the ePlex as well as time to final identification (from time of bottle positive Gram stain) between ePlex and SOC testing. SOC included Xpert MRSA/SA or latex agglutination for Gram-positive cocci in clusters (GPCC), Vitek MS + Accelerate Pheno for Gram-negative rods (GNRs), serotyping or optochin disk ± Vitek MS for Gram-positive cocci in chains (GPC chains), Vitek MS or Vitek-2 for Gram-positive rods (GPR), and PNA-FISH or Vitek MS for yeasts.

Results: 313 unique prospective blood culture specimens were tested with ePlex BCID panels during a 3-month period (January-March 2020). The positive percent agreement was 100% for GNR (n= 98), *S. aureus* (n= 42), coagulase-negative staphylococci (n= 38), Group A *Streptococcus* (n= 3), Group B *Streptococcus* (n= 5), *S. pneumoniae* (n= 10), GPR (n= 21), and yeasts (n= 20). There was 1 false negative, (*S.mutans*) which should have been detected. The negative percent agreement was 100% across all targets except for 1 false positive *Corynebacterium* spp. In total, 6.7% of blood cultures had an off-panel organism which ePlex did not detect. The median time to final identification was 3 (2 – 4) hrs. for ePlex and calculated for all other SOC methods. Compared to SOC molecular methods, the ePlex reduced time to identification 0.5 h compared to Xpert MRSA/SA, 6.7 h compared to Accelerate Pheno for GNR (but Accelerate Pheno provides susceptibilities), and 3 h compared to PNA-FISH for yeasts ($p< 0.05$). ePlex compared to non-molecular techniques (MALDI-TOF), SOC for *Streptococcus* spp. and *Enterococcus* spp., the time to final identification was reduced by 24 – 30 hours ($p< 0.05$).

Workflow chart comparison eplex to SOC



Time to results eplex vs SOC



Conclusion: The ePlex BCID system provided highly accurate identification results for GP and GN bacteria as well as for yeasts. Our evaluation showed that this system significantly reduced time to final identification compared to SOC testing methods.

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286. Exploratory Cost-Effectiveness Analysis for Treatment of Methicillin-Resistant *Staphylococcus aureus* Bloodstream Infections: Are Daptomycin and Linezolid Favored over Vancomycin and Other Antibiotics?

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Session: P-9. Bacteremia

Background: Methicillin-resistant *Staphylococcus aureus* bloodstream infections (MRSAB) cause significant mortality and often require extended antibiotic therapy. Vancomycin, the most common initial MRSAB treatment, carries significant monitoring burden and nephrotoxicity risks. We compared cost-effectiveness of vancomycin and other antibiotic regimens as MRSAB treatment.

Methods: We estimated cost-effectiveness of intravenous antibiotics (vancomycin, daptomycin, linezolid, ceftaroline/daptomycin, dalbavancin) for Veterans Health Administration (VA) patients with MRSAB using an exploratory decision-tree model. Primary effectiveness outcome was composite of microbiological failure and adverse drug event (ADE)-related discontinuation at 7-days.

Results: In base-case analyses, linezolid and daptomycin were less expensive and had fewer treatment failures than other regimens at 4 and 6-weeks. Compared to linezolid, daptomycin incremental cost-effectiveness ratios were ~$45,000 (4-weeks) and ~$61,000 (6-weeks) per composite failure avoided, respectively. In one-way sensitivity analyses, daptomycin (4-weeks) was favored over linezolid if linezolid microbiological failure or ADE-related discontinuation rates were >14.8% (base case: 14.0%) or >14.3% (base case: 14.0%), respectively, assuming a willingness to pay (WTP) threshold of $40,000/ composite treatment failure avoided. Vancomycin was favored if its microbiological failure risk was < 16.4% (base case: 27.2%). In two-way sensitivity analyses, daptomycin was favored if linezolid microbiological failure and ADE-related discontinuation rates were >19% and > 16%, respectively. Linezolid, daptomycin and vancomycin were favored in 47%, 39%, and 11% of 4-week probabilistic iterations, respectively, at $40,000 WTP.

Conclusion: Daptomycin or linezolid are likely less expensive and more effective than vancomycin or other initial regimens for MRSAB. More data are needed to support safety of linezolid in MRSAB patients.

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288. Follow-Up Blood Cultures in Gram-Negative Bacteremia: How Do They Impact Outcomes

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Session: P-9. Bacteremia

Background: As opposed to *Staphylococcus. aureus* bacteremia, there are no guidelines to recommend repeating blood cultures in Gram-negative bacilli bacteremia (GNB). Several studies have questioned the utility of follow-up blood cultures (FUBCs) in GNB, but the impact of this practice on clinical outcomes is not fully understood.

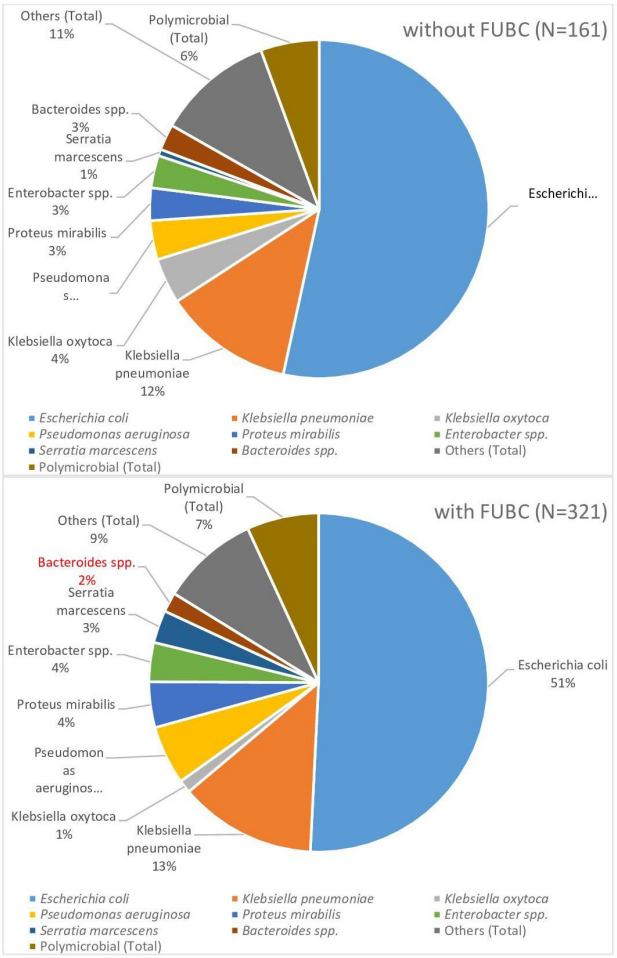
Our aim was to study the practice of obtaining FUBCs in GNB at our institution and to assess it's impact on clinical outcomes.

Methods: We conducted a retrospective, single-center study of adult patients, ≥ 18 years of age admitted with GNB between January 2017 and December 2018. We aimed to compare clinical outcomes in those with and without FUBCs. Data collected included demographics, comorbidities, presumed source of bacteremia and need for intensive care unit (ICU) admission. Presence of fever, hypotension /shock and white blood cell (WBC) count on the day of FUBC was recorded. The primary objective was to compare 30-day mortality between the two groups. Secondary objectives were to compare differences in 30-day readmission rate, hospital length of stay (LOS) and duration of antibiotic treatment.

Mean and standard deviation were used for continuous variables, frequency and proportion were used for categorical variables. P-value < 0.05 was defined as statistically significant.

Results: 482 patients were included, and of these, 321 (67%) had FUBCs. 96% of FUBCs were negative and 2.8% had persistent bacteremia. There was no significant difference in 30-day mortality between those with and without FUBCs (2.9% and 2.7% respectively), or in 30-day readmission rate (21.4% and 23.4% respectively). In patients with FUBCs compared to those without FUBCs, hospital LOS was longer (7 days vs 5 days, P < 0.001), and mean duration of antibiotic treatment was longer (14 days vs 11 days, P < 0.001). A higher number of patients with FUBCs needed ICU care compared to those without FUBCs (41.4% and 25.5% respectively, P < 0.001)

Microbiology of index blood culture in those with and without FUBCs



Outcomes in those with and without FUBCs

Table 1: Outcomes

Variable	with FUBC (N = 321)	without FUBC (N = 161)	*p*-value
30-day mortality	9 (2.9%)	4 (2.7%)	> 0.999
Re-admission within 30 days	67 (21.4%)	37 (23.4%)	0.704
Length of stay	7 [5, 11]	5 [4, 7]	< 0.001
Duration of antibiotic treatment	14 [10, 14]	11 [10, 14]	< 0.001
Needed Intensive Care	133 (41.4%)	41 (25.5%)	< 0.001

Note. P-values come from Mann-Whitney U and χ^2-tests depending on the distribution of the variable.

FUBCs characteristics

Table 2: FUBC Characteristics

Variable	N = 321
Mean number of FUBC	1.19 (SD 0.44)
Negative FUBC	309 (96.3%)
Positive FUBC	
Same pathogen (persistent bacteremia)	9 (2.8%)
Different pathogen	2 (0.6%)
Contaminant	1 (0.3%)
At time of FUBC	
Fever (>100.3 °F)	47 (14.6%)
Hypotension (SBP < 90, or on vasopressors)	22 (6.9%)
Mean WBC count	12 (SD 6.74)
Recorded reason for obtaining FUBC	91 (28.5%)
To document clearance	69 (75.8%)
Fever	18 (19.8%)
Others (leukocytosis, high lactate, unclear source)	4 (4.4%)

Note. P-values come from t-tests, chi-squared tests, and Fisher's exact tests depending on the distribution of the variable.

Conclusion: Obtaining FUBCs in GNB had no impact on 30-day mortality or 30-day readmission rate. It was associated with longer LOS and antibiotic duration. Our findings suggest that FUBCs in GNB are low yield and may not be recommended in all patients. Prospective studies are needed to further examine the utility of this practice in GNB.

Disclosures: **All Authors**: No reported disclosures

289. Impact of Clinician Specialty on the Use of Oral Antibiotic Therapy for Definitive Treatment of Uncomplicated Bloodstream Infections

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Session: P-9. Bacteremia

Background: No established guidelines exist regarding the role of oral antibiotic therapy (OAT) to treat uncomplicated bloodstream infections (uBSIs) and practices may vary depending on clinician specialty and experience.

Methods: An IRB-exempt web-based survey was emailed to Nebraska Medicine clinicians caring for hospitalized patients, and widely disseminated using social media. The survey was open access and once disseminated on social media, it was impossible to ascertain the total number of individuals who received the survey. Chi-squared analysis for categorical data was conducted to evaluate the association between responses and demographic groups.

Results: Of 275 survey responses, 51% were via social media, and 94% originated in the United States. Two-thirds of respondents were physicians, 16% pharmacists, and infectious diseases clinicians (IDC) represented 71% of respondents. The syndromes where most were comfortable using OAT routinely for uBSI were urinary tract infection (92%), pneumonia (82%), pyelonephritis (82%), and skin/soft tissue infections (69%). IDC were more comfortable routinely using OAT to treat uBSIs associated with vertebral osteomyelitis and prosthetic joint infections than non-infectious diseases clinicians (NIDC), but NIDC were more likely to report comfort with routine use of OAT to treat uBSIs associated with meningitis and skin/soft tissue infections. IDC were more likely to report comfort with routine use of OAT for uBSIs due to *Enterobacteriaceae* and gram-positive anaerobes, while NIDC were more likely to be comfortable with routinely using OAT to treat uBSIs associated with *S. aureus*, coagulase-negative staphylococci and gram-positive bacilli. In one clinical vignette of *S. aureus* uBSI due to debrided abscess, 11% of IDC would be comfortable using OAT vs 28% of NIDC; IDC were more likely to report routinely repeating blood cultures (99% vs 83%, p< 0.05).