Table 1. Baseline Characteristics and Outcomes Data (N=2,700)

Characteristic	Community-Onset SAB	Hospital-Onset SAB	Overall SAB	Rate Difference (HO-CO)
Number of patients	2,413 (89.4%)	287 (10.6%)	2,700	
Age (Mean, SD)	59.8	59.7	59.8	
Male Gender (%)	62%	57.8%	61.6%	
Mortality	10.3% (249)	25.1% (72)	11.9% (321)	14.8% (95% CI 9.6%, 19.9%)
Complications Rate	29.3% (707)	82.6% (237)	35% (944)	53.3% (95% CI 48.5%, 58.0%)
Mean Length-of-Stay	10.81 (95% CI 10.42, 11.19)	21.87 (95% CI 19.46, 24.57)	11.97	
Cost (per admission)	$25,564 (95% CI $24,391, 26,737)	$58,849 (95% CI $51,406, $66,292)	$29,114	

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

158. Invasive Group B Streptococcal Diseases in Adults: A Retrospective Study in Thailand (2013–2017)

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Background. Group B *Streptococcus* (GBS) has been increasingly associated with invasive diseases in nonpregnant adults. This study aims to describe the epidemiology of invasive GBS (iGBS) diseases in adult patients.

Methods. A retrospective cohort study was conducted at Siriraj Hospital between January 1, 2013 and December 31, 2017. We included adult patients with a positive culture of GBS isolated from sterile sites.

Results. Among 224 patients recruited to the study, 170 patients (75.9%) had bacteremia. The median age of all patients was 63 years (IQR 53–73 years) and 52.7% were female. Approximately 80% of all patients had comorbid diseases. Diabetes mellitus (38.8%), cancer (18.8%) and heart disease (12.5%) were the three most common comorbidities. Skin and soft-tissue infection (30.8%), septic arthritis (21.4%), primary bacteremia (21%), and meningitis (7.1%) were the four most common presenting syndrome of iGBS diseases. Overall mortality within 30 days of infection was 12%. Non-survived patients were older, had chronic kidney disease, bacteremia, pneumonia and had at least one comorbidity than survived patients. However, only pneumonia was found independently associated with the 30-day overall mortality, with adjusted odd ratio (aOR) of 24.96 (95% confidence interval [CI]: 5.95–104.75). Antimicrobial susceptibility testing of 69 isolates demonstrated that 7 (10%) and 9 (13%) were resistant to erythromycin and clindamycin, respectively. All isolates remain susceptible to penicillin.

Conclusion. Invasive GBS is an emerging disease in non-pregnant adults particularly in elderly and diabetes mellitus patients. Two-thirds of iGBS patients have concomittant bacteremia. Even though the overall mortality was 12% but a significant morbidity was observed.

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159. Comparing Clinical Cure and Patient Outcomes Between Intravenous Therapy and Intravenous (IV)-to-Oral (PO) Step-down Therapy for Treatment of Gram-Negative Bloodstream Infections

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Background. There is a paucity of evidence surrounding optimal prescribing practices for the treatment of Gram-negative bloodstream infections (GNBSI). This study aimed to assess the appropriateness of IV-to-PO step-down therapy in the treatment of GNBSI.

Methods. A retrospective cohort study was conducted at the University of Cincinnati Medical Center and West Chest Hospital and included subject's ≥18 years of age with GNBSI caused by *Enterobacteriaceae* spp. or *Pseudomonas aeruginosa*. The primary objective was to compare clinical cure rates between IV-only and IV-to-PO therapy, and to further assess differences in clinical cure rates amongst oral antibiotics of high, moderate, and low bioavailability. The study also aimed to identify factors associated with clinical cure, hospital length of stay, and emergence of multi-drug-resistant organisms (MDRO).

Results. Amongst 215 subjects screened, 99 subjects were included and 64 subjects met criteria for clinical cure. In the univariate analysis, the IV-to-PO group had a higher percentage of clinical cure than IV only therapy (82% vs. 48%, $P = 0.001$). Of note, the two study groups were significantly different in regards to intensive care status, Pitt bacteremia score, and primary site of infection. Upon further analysis, data from the multivariate logistic regression revealed that critical illness was the only significant factor that negatively impacted clinical cure (OR = 0.208; 95% CI 0.04–0.99; $P = 0.049$). A total of 49 subjects received oral antibiotics. Majority of patients (82%) in the IV-to-PO group received a moderately bioavailable oral antibiotic. No difference in respect to clinical cure rate was found between the three PO antibiotic bioavailability groups ($P = 0.346$). The median duration of hospital stay was shorter in the IV-to-PO compared with IV alone group (4 days vs. 9.5 days, respectively, $P \leq 0.001$). There was a trend in emergence of MDROs with IV therapy compared with IV-to-PO therapy (10% vs. 2%, $P = 0.204$).

Conclusion. IV-to-PO stepdown therapy compared with IV therapy alone was noninferior in clinical cure rates in the treatment of GNBSI and may result in fewer hospital days and less emergence of multidrug-resistant organisms. These conclusions are limited by significant differences in severity of illness between groups in this study.

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160. Could Reducing Time to Bacterial Identification From Positive Blood Cultures Improve Outcomes in Bacteremic Patients?

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Background. Survival of patients with septic shock is dependent on the timing of effective antibiotic administration. The initial notification by the microbiology lab of a positive blood culture is a key factor in improving patient outcomes. It can take >24 hours to definitively identify bacteria from positive blood cultures. Accordingly, we employed rapid organism identification and studied the impact of this on patient management from a quality improvement perspective.

Methods. Rapid organism identification was performed for bacteremic patients admitted to an ICU at St. Michael's Hospital in Toronto, ON, by creating a pellet from positive blood culture bottles using a lysis centrifugation technique. MALDI-TOF was then used to obtain an organism identification. The microbiology lab verbally notified the ward clerk of the identification and surveys were conducted with treating physicians within 24–48 hours to evaluate the downstream impact of the rapid identification including changes to antibiotics, diagnostic testing, central line management and requests for specialty consultations.

Results. Between January 28 and April 28, 2019, 17 rapid blood culture results were included for study. When asked how physicians received the result, in 7 cases the physician did not remember; other responses included microbiology report (2), nurse (2), pharmacist (1), antimicrobial stewardship or lab (1), on-call team (1) and residents (1). Antibiotics were adjusted in 13 patients; 3 of which may have changed antibiotics for reasons other than the organism identification. Reasons for not changing therapy include: appropriate empiric treatment, likely contaminants, or physician not being notified of the result. In 5 cases, all antibiotics were discontinued, in another 2 cases the antibiotics were broadened and a further 5 narrowed to cover the organism; the remaining 5 continued the same empiric therapy. Repeat blood cultures were obtained for 5 cases, follow-up imaging in 5 cases and lines were changed/removed in 5 cases. Consultation was requested for 7 cases.

Conclusion. Based on preliminary data, rapid organism identification shows promise of improved patient management with line removal and antibiotics adjustments occurring 1 day sooner with rapid results.

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161. Evaluating the Predictive Value of Blood Culture Bottle Reporting for Coagulase Negative Staphylococci-Positive Cultures: Assessing Contamination vs. True Bacteremia

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Background. Coagulase-negative staphylococci (CoNS) are common blood culture (BCx) contaminants, but can also be causes of true blood stream infection (BSI). As a result, the clinical interpretation of CoNS positive BCx poses a significant challenge for providers and drives unnecessary antibiotic use, extended lengths of stay, and increased hospital costs. Despite these challenges, little is known about whether the number of positive BCx bottles within a set can be used to predict contamination vs. true BSI.

Methods. This study was conducted in an 865-bed tertiary care academic medical center in Richmond, VA. A retrospective chart review of CoNS-positive BCx from October to December 2018 was performed. Data collection included patient demographics, number of positive bottles within a set (i.e., were 1 or 2 bottles positive), care setting, antibiotic use, clinical judgement of contamination, and additional workup following the positive BCx result. Polymicrobic BCx were excluded.

Results. 50 patients (mean age 58.2 years, 60% male) with CoNS-positive BCx were included in this study. Forty (80%) of the cultures had only 1 of 2 BCx bottles positive within a set. 10 (20%) were positive from both bottles in the set. All patients were drawn in the Emergency Department and 90% were subsequently admitted to the hospital. Upon chart review, 47 (94%) and 3 (6%) of cultures were considered to be contaminants and