**Conclusion.** In hvKP-rich settings, diabetes mellitus, community-acquisition, and sideloaders other than aerobacter were not remarkable predictors of hvKP infection. However, the K1 genotype, mpA, and aerobacter were found to be substantial predictors, warranting clinical assessment of any possible/further pyogenic (metastatic) infection. We believe that these findings shed light on key hvKP virulence factors.

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

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**658. Diagnostic Testing Among Patients with Suspected Recurrent Clostridioides difficile Infection (rCDI) in ECOSPOR III: Phase 3 Clinical Trial: Implications for Clinical Practice vs Clinical Trials**

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**Session.** P-29. Diagnostics: Bacteriology/mycobiology

**Background.** Accurate diagnosis of rCDI is challenging because of limitations in test performance and alternative causes of recurrent diarrhea, such as post-infectious irritable bowel syndrome (IBS). Stool enzyme immunoassay (EIA) toxin testing (TOX) is the best predictor of active disease, but may miss cases of CDI when toxins are below the limit of detection. In contrast, glutamate dehydrogenase (GDH) or PCR have high sensitivity but cannot differentiate colonization from infection, leading to possible overdiagnosis due to low specificity. In ECOSPOR III, SER-109, an investigational purified microbiome therapeutic, was superior to placebo in reducing rCDI (12.4% vs 39.8%, respectively; p-value < 0.001). We examined diagnostic testing patterns among screened subjects.

**Methods.** Patients with ≥2 prior episodes and ≥3 unformed bowel movements over 48 hours were screened. To ensure enrollment of patients with active CDI, toxin testing was required at entry via a local certified or central lab (Framingham, MA). Subjects with discordant GDH+/TOX- tests at the central lab had reflex confirmatory testing with a cell cytotoxicity neutralization assay (CCNA), considered the ‘gold standard’ for toxin testing.

**Results.** The leading reason for screen failure among 281 subjects screened was a negative toxin test (50/99; 50.5%). Of 182 patients enrolled, 59 (32.4%) qualified with “gold standard” for toxin testing.

**Conclusion.** These diagnostic testing patterns suggest a subset of patients with suspected rCDI have toxin concentrations below the EIA threshold for detection or may have an alternative cause of diarrhea, such as post-infectious IBS. Thus, the limitations of EIA toxin testing need to be considered in clinical practice when evaluating patients with compatible symptoms of rCDI and a high prior probability of infection.

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**Sample requisition clinical details-adequacy and completion rates**

Sample requisition form completion details in %

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**Session.** P-29. Diagnostics: Bacteriology/mycobiology

**Background.** Microbial identification & antibiotic susceptibility testing is an important investigation in clinical microbiology laboratory. In many centres in India the report has only the isolate and antibiotics tested. The additional comments if added give guidance to the clinicians to utilize the results. Pre-analytical issues of adequate & relevant clinical history, appropriate sampling techniques, timely transport & storage, history of antibiotic usage along with post analytical issues of recommended line of antibiotic therapy and infection control practices are better addressed with this practice.
Conclusion. Interpretative comments in reports act as a bridge between clinical microbiology, infectious diseases and infection control. They help us to choose the correct antibiotics or sometimes no antibiotics when the situation demands it. With all the recent advancements, the clinico-microbiological utility of culture reports is the need of the hour.

Few interpretative comments

Sample collection site and clinical details are not mentioned to elicit pathogenic significance of microbial isolate. (Req: contact the Microbiology department. Ext no: XXX)

Provident mirabilis is inherently resistant to ciprofloxacin hence not reported and recommended for therapy.

Proteus mirabilis is inherently resistant to ciprofloxacin, hence not reported and recommended for therapy.

Advised rigorous hand hygiene measures and contact precautions.

Advised rigorous hand hygiene measures and contact precautions.

Pus/essuette/debrided tissue preferred over swabs for culture in skin and soft tissue infections.

Disclosures. All Authors: No reported disclosures

660. Effect of the COVID-19 Pandemic on Blood Culture Contamination Rates and Quality Improvement Processes
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Session: P-29. Diagnostics: Bacteriology/mycobacteriology

Background. Blood cultures are the gold standard for diagnosing bloodstream infections and a vital part of the work-up in systemic infections. However, contamination of blood cultures represents a significant burden on patients and the healthcare system with increased hospital length of stay, unnecessary antibiotics, and financial cost. The data discussed here offer insight into blood culture contamination rates before and through the COVID-19 pandemic at a community hospital and the processes that were affected by the pandemic.

Methods. Blood culture contaminations were determined by using the number of sets of blood cultures with growth and the presence of an organism from the National Healthcare Safety Network’s (NHSN) commensal organism. Contamination rates were evaluated by status as a standard unit or a COVID-19 isolation unit in either the emergency department and inpatient units. The red line represents the hospital goal of less than 2.25% for blood culture contamination rate.

Results. The inpatient COVID units were consistently elevated above the other units and the institutional contaminant goal of 2.25%, ranging from 9.6% to 13.3% and the use of diversion devices in the different units.

Conclusion. Evaluation revealed that nursing staff with less training in blood culture collection, particularly the use of diversion devices, were the primary staff collecting blood cultures in the inpatient COVID units. The difference in training is felt to be the primary driver of the increase in contaminants in the inpatient COVID units. The marked increase in contaminations highlights the difficulties of maintaining quality control processes during an evolving pandemic and the importance of ongoing efforts to improve the quality of care. These findings demonstrate the importance of training and routine use of procedures to reduce contaminations even during.

Disclosures. All Authors: No reported disclosures

661. Clinical Utility and Impact of the Metagenomic Microbial Plasma Cell-Free DNA Next-Generation Sequencing Assay on Treatment Decision: a Single-Center Retrospective Study
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Session: P-30. Diagnostics: Typing/sequencing

Background. Metagenomic next-generation sequencing (mNGS) of microbial cell-free DNA (mcfDNA) allows for non-invasive broad-range pathogen detection from plasma. The Karius test that emerged in 2016 made mNGS widely available. However, there is little data describing the optimal role for this assay in clinical decision making.

Methods. We performed a single-center retrospective cohort study of adult patients for whom a Karius test was sent between May 2019 and February 2021 to assess clinical utility. We predefined criteria for clinical impact categories (Table 1) and stratified data by patient comorbidities, infectious syndromes, duration of antimicrobial therapy prior to Karius testing, reasons for sending the test, and final clinical diagnoses. Clinical impact was arbitrated by all authors after review and discussion of each case.