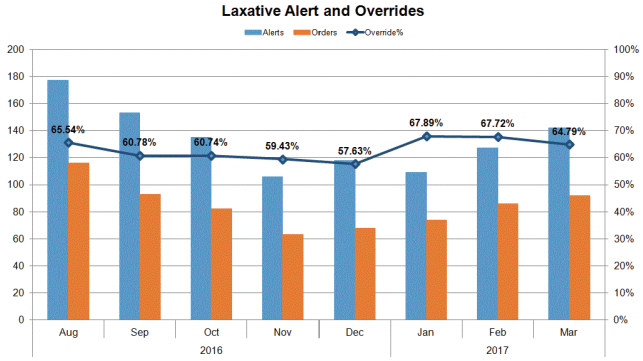
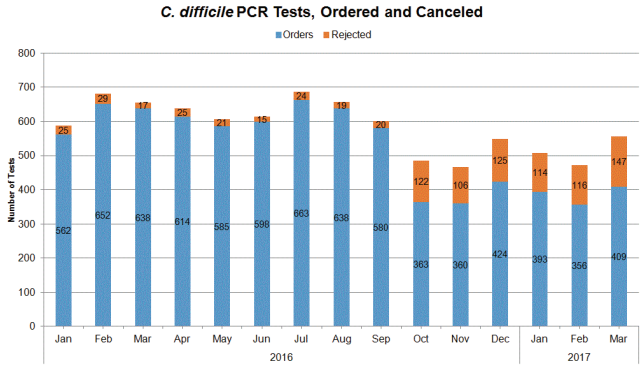
Conclusion. Decreasing inappropriate testing has several distinct advantages, including reducing excessive and unnecessary antibiotic use, avoiding misclassification of carriers as CDI cases, normalizing healthcare-associated CDI rates, and diminishing healthcare costs associated with preventable tests. Laboratories that use PCR only testing for CDI diagnosis should follow stringent policies to ensure that only patients with high pretest probability are tested. EMR systems are a useful and effective resource to achieve this for patients with laxative induced diarrhea.





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

1296. The Impact of Diagnostic Stewardship on *Clostridium difficile* Infections

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Session: 149. HAI: C. difficile *Epidemiology, Impact, and Testing*
Friday, October 6, 2017: 12:30 PM

Background. *Clostridium difficile* infections (CDI) pose a growing threat to hospitalized patients. This study assesses the impact of changing from a nucleic acid amplification test (NAAT) to a stepwise testing algorithm (STA) by using an enzyme immunoassay (GDH and toxin A/B) and confirmatory NAAT confirmation in specific cases.

Methods. In an 885 bed academic medical center a 24 month pre-/post design was used to assess the effect of the STA for the following parameters: rates of enterocolitis due to C.diff (CDE), NHSN C.diff LabID events, CDI complications, mortality, antimicrobial prescription patterns, cluster occurrences; and testing, treatment, and isolation costs. Inpatient data were extracted from ICD-9/10 diagnosis codes, infection prevention, and laboratory databases.

Results. The STA significantly decreased the number of CDE ICD9/10 codes, HO, CO, and CO-HCFA C.diff LabID event rates by 65%, 78%, 75%, and 75%, respectively. Similar reductions were noted for associated complications such as NHSN defined colon surgeries (-61%), megacolon (-64%), and acute kidney failure (-55%). CDE unrelated complication rates for colon surgeries and acute kidney failure remained constant while the diagnosis of megacolon decreased but not significantly (-71%; $P > 0.05$). Inpatient mortality did not change with or without CDE. Significant reductions were observed in the use of oral metronidazole (total: -32%; CDE specific: -70%) and vancomycin (total: -58%; CDE specific: -61%). There were no clusters detected pre-/post STA introduction. The need for isolation decreased from 748 to 181 patients post-intervention (-76%; $P < 0.05$). Annual cost savings were over $175,000 due to decreases in laboratory testing followed by isolation, and antibiotic use.

Conclusion. The switch to an STA from NAAT did not affect the diagnosis, treatment, or control of clinically relevant CDI in our institution. Benefits included avoidance of unnecessary antibiotic treatment, reduction in isolation, achieving publicly reported objectives, and costs savings. Selection of clinically relevant tests can help to improve hospitalization and treatment of patients and should be considered as part of diagnostic stewardship.

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

1297. Enzyme Immunoassay for *C. difficile* Toxin Reduces Lab ID Events but Fails to Detect Clinically Significant *C. difficile* Infection

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Session: 149. HAI: C. difficile *Epidemiology, Impact, and Testing*
Friday, October 6, 2017: 12:30 PM

Background. The National Health Safety Network (NHSN) requires reporting of Lab ID events for *C. difficile* infection (CDI) including all positive clinical tests after day three of hospitalization. Nucleic acid amplification tests (NAAT) that detect genes for toxins A and/or B may be overly sensitive, in some cases detecting *C. difficile* colonization. Some have advocated for two-stage testing, with positive NAAT tests followed by confirmatory enzyme immunoassay (EIA) to detect the presence of toxin and minimize the downside of false positives (i.e. additional NHSN reports or overuse of antibiotics). We aimed to better understand clinical characteristics of patients with positive NAAT and/or EIA tests.

Methods. Our hospital uses Xpert *C. difficile* assay (Cepheid), a NAAT method utilizing polymerase chain reaction (PCR), to diagnose CDI on unformed stool only. As part of a 6 month quality initiative, we pilot tested the *C.DIFF* QUIK CHEK COMPLETE® test (Alere), an EIA that tests for *C. difficile*antigen (Ag) and toxin, on all specimens that tested positive by NAAT. We abstracted clinical data from the medical record for a subset of patients who underwent EIA testing.

Results. Over 6 months, 294 patients had a positive test by NAAT. Of these, 258 (87.8%) underwent EIA testing. 67 (26.0%) were Ag+/toxin+, 173 (67.1%) were Ag+/toxin-, and 18 (6.8%) were Ag-/toxin-. Mortality rates were as follows: Ag+/toxin+, 17.9% (12/67); Ag+/toxin-, 13.9% (24/173); Ag-/toxin-, 27.8% (5/18), $P = 0.27$. Among the EIA toxin negative patients who underwent chart review, 81% had 3 or more loose stools within 24 hours, 62% had abdominal pain, nausea, or vomiting, and 27% had a WBC > 15.

Conclusion. The majority of patients testing positive for CDI by NAAT had a negative EIA test for toxin. There was no significant difference in mortality between EIA toxin positive and negative. Those with negative EIA toxin tests often had clinically significant symptoms of CDI. A two-stage CDI testing algorithm with NAAT followed by EIA for toxin may exclude patients with clinically significant CDI but would have resulted in a 75% reduction in reported NHSN LabID events.

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

1298. *Clostridium difficile* Laboratory Identification Event Reporting – A Need for Diagnostic Stewardship

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Session: 149. HAI: C. difficile *Epidemiology, Impact, and Testing*
Friday, October 6, 2017: 12:30 PM

Background. *Clostridium difficile* LabID event reporting uses electronic laboratory results without chart review. Nucleic acid amplification testing is common in the US. A positive result may represent colonization or *C. diff* infection (CDI). We review *C.difflab*ID events to ascertain if Hospital-Onest CDI (HO CDI). For non-HO CDI, we identify reason and use a matrix to prioritize clinical areas for intervention efforts.

Methods. Each *C. difflab* ID event from Jan 2015 to June 2016 at academic center had chart review for HO CDI; defined significant diarrhea, not present on admission, with no laxatives in prior 48 hours. For non HO-CDI events, reason and receipt of antibiotic treatment within 14 days of the positive test were retrospectively noted.

A prioritization matrix, where clinical services were ranked according to number of lab ID events (service's contribution to the facility *C. diffLabID*), was multiplied by