

C. diff Testing and Ordering

Effective January 1, 2024, all specimens ordered for *Clostridioides difficile* will only receive GDH and toxin testing. There will no longer be an order or automatic reflex to C. diff PCR.

- Current EIA toxin testing detects both Toxin A and Toxin B
- PCR only detected the toxin gene for Toxin B and does not represent actual toxin production only the allelic presence of the gene to produce the Toxin B.
- Testing for C.diff PCR can be requested directly from the laboratory within 72 hours of specimen collection if it meets indication. C. diff PCR testing cannot be interpreted alone.

Testing algorithm

- GDH Positive and Toxin Positive = testing consistent with C. Diff infection
- GDH Positive and Toxin Negative - indeterminate result.
 - **treatment based on symptom as toxin level could be below threshold or Patient may have a nontoxigenic colonization**
 - **PCR does not resolve indeterminate result and not indicated**
- GDH Negative and Toxin Positive = **invalid result. Suggests recollection.**
 - Result due to cross reactivity of toxins formed by other clostridial species, typically *C. sordellii*

Specimen ordering and requirements (Clin Infect Dis. Vol 66, Issue 7, 1 April 2018, Pages e1-e48)

- Have new onset of ≥ 3 liquid unformed stools in 24 hr period.
- If specimen cannot be collected with 24 hrs order will be cancelled.
- Patient cannot have received Laxatives within 48 hrs of testing, oral contrast within 24 hrs, or currently be receiving tube feedings
- Previous C. diff positive tested patients are not eligible for repeat testing within 30 days.

Testing Sensitivity and Specificity

- GDH - Sensitivity 90.5% Specificity 93.1%
- Toxin A and Toxin B - Sensitivity 87.8% Specificity 99.4%