

**IMPORTANT NEW CHANGE IN C. DIFFICILE LABORATORY TESTING:
TWO-STEP C. DIFFICILE TESTING PROTOCOL
July 6, 2023**

To: Healthcare Providers and Clinical Managers

From: Notify NYP

Who this message is for: All ordering providers and clinicians testing patients for suspected *Clostridioides difficile* (*C. difficile*) infection.

What this message is about:

NEW C. DIFFICILE TWO-STEP TESTING PROTOCOL:

Effective July 10, 2023, stool specimens sent for *C. difficile* testing will automatically be tested by a two-step protocol as follows:

- *C. difficile* PCR-negative specimens will be finalized as negative.
- **C. difficile PCR-positive specimens will automatically be reflexed to a second test: a toxin immunoassay test.**
 - Toxin assay results will be reported within approximately 2 hours after the PCR-positive result is reported.
- The current *C. difficile* PCR order is being renamed as “**C. difficile PCR w/ reflex toxin.**”

Patients with a positive *C. difficile* PCR test result require **SpecialPlus Contact Isolation**, regardless of the toxin result. Discontinuation of isolation may be considered once symptoms have resolved for >72 hours; contact Infection Prevention & Control to discuss.

<https://infonet.nyp.org/EPI/Manual/550CareoftheCdifficilePatientonSPECIALplusContact.pdf>

Results of two-step testing may be interpreted as below:

Laboratory Result	Clinical Interpretation
PCR-negative	Negative for <i>C. difficile</i>
PCR-positive, Toxin-NEGATIVE	Possible colonization without infection. NEGATIVE test for <i>C. difficile</i> toxin production with a positive <i>C. difficile</i> PCR result may indicate <i>C. difficile</i> colonization without active infection. Results should be interpreted in conjunction with clinical signs and symptoms. Consider discussing with ID/antimicrobial stewardship.
PCR-positive, Toxin-POSITIVE	Likely active infection. POSITIVE test for <i>C. difficile</i> toxin production and a positive <i>C. difficile</i> PCR result with compatible signs and symptoms suggest active <i>C. difficile</i> infection.

Why we are making this change:

The two-step testing protocol for *C. difficile* provides additional information about toxin production to guide clinicians’ treatment decisions.

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The *C. difficile* PCR test identifies the presence of *C. difficile* DNA (toxin B **gene**) but does NOT distinguish between active infection and asymptomatic colonization. The toxin immunoassay identifies toxin production. Providing both the PCR result and the toxin result in this two-step testing protocol can help clinicians better distinguish between active infection and asymptomatic colonization and reduce unnecessary treatment of colonized patients. Two-step testing may also reduce over-reporting of hospital-onset *C. difficile* cases that represent colonization and not active infection.

PCR-positive, toxin-positive samples with compatible signs and symptoms for *C. difficile* illness indicate that active infection is likely.

PCR-positive, toxin-negative samples may represent colonization rather than active infection. **Clinical judgment should be used to determine whether the patient requires treatment.**

- If the patient has no/minimal signs and symptoms OR an alternative explanation for signs and symptoms, active *C. difficile* infection is less likely, and treatment may not be warranted as the patient is likely asymptotically colonized.
- A patient with clear signs and symptoms of *C. difficile* infection and a PCR-positive, toxin-negative result may still have active *C. difficile* infection and treatment may be warranted. Clinical judgment should be applied.

Why is this information important?

This information is important for clinicians to interpret the results of the new *C. difficile* two-step testing protocol.

What we need from you:

Please carefully review this information. For additional guidance on *C. difficile* testing, please see the *C. difficile* testing algorithm:

- [NYP *C. difficile* testing algorithm for adult patients](#)
- [NYP *C. difficile* testing algorithm for pediatric patients](#)
- [SHEA/IDSA/APIC Strategies to prevent *Clostridioides difficile* infections in acute-care hospitals: 2022 Update](#)

For any questions, please contact:

- **For clinical questions regarding a case**, please contact Infectious Diseases or Antimicrobial Stewardship/antibiotic approval at the local campus.
- **For questions related to the laboratory testing**, please contact the clinical laboratory at the numbers below:

NYP-AH: 212-932-4234	NYP-CU and NYP-MSCH: 212-305-6276	NYP-W: 914-787-3276
NYP-BMH: 718-780-3570	NYP-WC and NYP-LMH: 212-746-0833	
NYP-HVH: 914-734-3309	NYP-Q: 718-670-1455	