

# Annual Survey of Laboratory Testing Practices for *C. difficile* Infection

CDC's Emerging Infections Program - *Clostridioides difficile* Infection Surveillance

## Section 1: Laboratory Information

To be completed by surveillance officer

**LABID#:** \_\_\_\_\_

**Completed By:** \_\_\_\_\_

**Date survey was completed:** \_\_\_\_ / \_\_\_\_ / \_\_\_\_

**Is this a new laboratory?**

- Yes  
 No

**Year added to surveillance:** \_\_\_\_\_

**Is this lab in another EIP site?**

- Yes

**What state?** \_\_\_\_\_

**LabID in other EIP site:** \_\_\_\_\_

- No

**Is this lab participating in surveillance?**

- Yes  
 No

**How often do you receive line lists from this lab?**

- Daily  
 Weekly  
 Monthly  
 Annually  
 Never  
 Other

**Specify:** \_\_\_\_\_

**How do you receive line lists from this lab?**

- Electronic laboratory reporting (e.g. HL7 messaging)
- Fax
- Email
- Mail
- Secure file transfer
- Other

**Specify:** \_\_\_\_\_

**Do you receive specimens from this lab?**

- Yes
- No

**Was this lab audited in 2020?**

- Yes, in person
- Yes, not in person
- No, not in catchment
- No, not audited

**Specify reason:** \_\_\_\_\_

**Is this a private, commercial lab (e.g. Quest or LabCorp)?**

- Yes
- No

**Types of facilities in your catchment area served by this lab (select all that apply):**

- Hospitals
- LTACHs
- LTCFs
- Outpatient facilities

## Section 2: Survey

To be completed by lab personnel

### Position of the staff who responded to the survey:

- Laboratory Supervisor
- Microbiology Supervisor
- Other

**Specify:** \_\_\_\_\_

### Offsite Testing

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#### 1. Does your laboratory ever send specimens off-site for *Clostridioides difficile* testing? (Choose one)

- Always (no onsite testing performed)  
**LabID of Offsite Lab:** \_\_\_\_\_
- Regularly, as part of standard testing algorithm  
**LabID of Offsite Lab:** \_\_\_\_\_

**Which tests are done offsite, and at which point in the testing algorithm?**

- Not regularly, but when a test ordered by a physician cannot be performed onsite  
**Specify tests performed offsite:** \_\_\_\_\_
- Never (All testing performed onsite)
- Unknown
- Other  
**Specify:** \_\_\_\_\_

Testing Routine for CDI

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**2. What type and order of testing is routinely used by your laboratory in standard testing for *C. difficile*?**

*(Enter letter from choices below; choose only one option for each line of testing)*

**1<sup>st</sup> line of testing:** \_\_\_\_\_ **2<sup>nd</sup> line of testing:** \_\_\_\_\_ **3<sup>rd</sup> line of testing:** \_\_\_\_\_

- A. EIA Toxin A and B
- B. EIA for Toxin A only
- C. EIA for Toxin B only
- D. EIA Antigen (GDH)
- E. EIA Toxin A/B and Antigen (Simultaneous testing)
- F. EIA Other

**Specify other EIA type:** \_\_\_\_\_

- G. Nucleic Acid Amplification (e.g. PCR, Illumigene, Luminex, Biofire)
- H. Culture
- I. Cytotoxin
- J. Other

**Specify other test type:** \_\_\_\_\_

- K. No one routine test; clients can order from among several tests

**Specify types:** \_\_\_\_\_

- L. None

**2a. Which specimens are used during your 2<sup>nd</sup> line of testing? (Choose one)**

- Positive by the 1<sup>st</sup> line of testing
- Negative by the 1<sup>st</sup> line of testing
- Specimens with discordant results (e.g. EIA+/GDH- or GDH+/EIA-)
- All specimens
- Do not use 2<sup>nd</sup> line of testing

**2b. Which specimens are used during your 3<sup>rd</sup> line of testing? (Choose one)**

- Positive by the 2<sup>nd</sup> line of testing
- Negative by the 2<sup>nd</sup> line of testing
- Specimens with discordant results (e.g. EIA+/GDH- or GDH+/EIA-)
- All specimens
- Do not use 3<sup>rd</sup> line of testing

**2c. Does your laboratory perform any onsite testing for *C. difficile* outside of your normal testing algorithm?**

- No, all onsite testing is done according to the testing algorithm specified above
- Yes, on physician request

**Specify tests:** \_\_\_\_\_

- Other

**Specify:** \_\_\_\_\_

## Testing Kits for CDI

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### 3a. Which EIA test kit is currently used by your laboratory? (Check all that apply)

- Premier (Meridian) Toxins A & B
- Premier (Meridian) Toxin A
- Remel ProSpecT Toxins A & B
- TechLab Toxins A & B
- Inverness Medical/Wampole Toxins A & B QuikCheck
- Inverness Medical/Wampole QuikCheck Complete (Toxins A & B and Antigen)
- Antigen Testing  
**Specify antigen testing kit name/manufacturer:** \_\_\_\_\_
- Other  
**Specify other kit name/manufacturer:** \_\_\_\_\_
- N/A (Do not use EIA testing)

### 3b. Which Nucleic Acid Amplification test is currently used by your laboratory? (Check all that apply)

- BD-GeneOhm *C. difficile*
- BD MAX *C. difficile*
- Cepheid Xpert *C. difficile*
- Meridian Illumigene
- Prodesse (Gen-Probe) Progestro CD
- Luminex xTAG GPP
- Biofire Filmarray GI Panel
- Quidel AmpliVue *C. difficile* Assay
- Great Basin Portrait Toxigenic *C. difficile* Assay
- Nanosphere Verigene SP
- Other  
**Specify other test:** \_\_\_\_\_
- N/A (Do not use nucleic acid amplification)

## Multiplex GI panels

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**4a. If your laboratory uses a multiplexed molecular diagnostic (e.g., Biofire Filmarray GI Panel, Luminex xTAG GPP) to test for several GI pathogens, does your laboratory suppress the C. diff result so that clinicians cannot see it?**

- Yes, always
- Yes, at clinician request
- Yes, but will release the result upon clinician request
- Yes, sometimes

**Specify:** \_\_\_\_\_

- No, clinicians always see C. diff result
- N/A (Do not use multiplexed molecular diagnostic)

**4b. If your laboratory uses a multiplexed diagnostic and the result is suppressed, where does the suppression occur?**

- At the multiplexed molecular diagnostic instrument level (the result is not entered into the laboratory information management system (LIMS))
- At the laboratory information management system (LIMS) level
- Other

**Specify:** \_\_\_\_\_

- N/A (Do not use multiplexed molecular diagnostic or the result is never suppressed)

## Testing Codes

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**5. What are the LOINC or internal testing codes associated with the tests your lab currently uses (e.g. LOINC codes 13957-6, 34713-8, or 54067-4)?**

**Specify:** \_\_\_\_\_

## Laboratory Algorithm Changes

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**6. Has your lab testing algorithm for *C. difficile* changed since January 1, 2020?**

Yes

**What date did this change occur?** \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

No

**6a. (If yes) What was your previous type and order of testing?**

(Enter letter from choices below; choose only one option for each line of testing)

**1<sup>st</sup> line of testing:** \_\_\_\_\_ **2<sup>nd</sup> line of testing:** \_\_\_\_\_ **3<sup>rd</sup> line of testing:** \_\_\_\_\_

A. EIA Toxin A and B

B. EIA for Toxin A only

C. EIA for Toxin B only

D. EIA Antigen (GDH)

E. EIA Toxin A/B and Antigen (Simultaneous testing)

F. EIA Other

**Specify other EIA type:** \_\_\_\_\_

G. Nucleic Acid Amplification (e.g. PCR, Illumigene, Luminex, Biofire)

H. Culture

I. Cytotoxin

J. Other

**Specify other test type:** \_\_\_\_\_

K. No one routine test; clients can order from among several tests

**Specify types:** \_\_\_\_\_

L. None

**6b. Which specimens were used during your 2<sup>nd</sup> line of testing? (Choose one)**

Positive by the 1<sup>st</sup> line of testing

Negative by the 1<sup>st</sup> line of testing

Specimens with discordant results (e.g. EIA +/GDH- or GDH+/EIA-)

All specimens

Do not use 2<sup>nd</sup> line of testing (go to question 6)

**6c. Which specimens were used during your 3<sup>rd</sup> line of testing? (Choose one)**

Positive by the 2<sup>nd</sup> line of testing

Negative by the 2<sup>nd</sup> line of testing

Specimens with discordant results (e.g. EIA+/GDH- or GDH+/EIA-)

All specimens

Do not use 3<sup>rd</sup> line of testing (go to question 6)

Laboratory Policies

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**7. Does your lab have a policy to reject stool specimens for *C. difficile* testing? (Read all options. Check all that apply)**

- Yes, when stools are formed (formed stools are defined as stools that do NOT take the shape of the container)
- Yes, if there is a stool specimen already positive within 24 hrs of a new stool specimen
- Yes, if there is a stool specimen already positive within 48 hrs of a new stool specimen
- Yes, if there is a stool specimen that tested negative for *C. difficile* within 48 hours of a new stool specimen
- Yes, will not accept more than one stool specimen in a 24 hr period
- No rejection policy
- Other rejection policies

**Specify other rejection policy:** \_\_\_\_\_

**7a. Has your rejection policy for stool specimens changed since January 1, 2020?**

Yes

**What date did this change occur?** \_\_\_\_ / \_\_\_\_ / \_\_\_\_

**Specify changes:** \_\_\_\_\_

No



**8. How many stool samples did you test for C. diff each month in 2020?**

<b>Month</b>	<b>Stool samples tested</b>	<b>C. diff+ samples</b>
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		

## Appendix: Common *C. difficile* Test Kit Names and Manufactures

### **EIA Toxin A & B**

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Wampole\* Toxin A/B Quik Chek  
Techlab\* *C. difficile* Toxin A/B II  
BioMerieux Vidas *C. difficile* Toxin A/B  
Meridian Immunocard Toxin A/B  
Meridian Premier Toxin A/B  
Remel Xpect *C. difficile* Toxin A/B  
Remel ProSpecT Toxin A/B

### **EIA Antigen (GDH)**

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Wampole\* *C. difficile* Chek-60  
Wampole\* *C. difficile* Quik Chek  
Meridian Immunocard *C. difficile*

### **EIA Toxin A/B and Antigen (Simultaneous Testing)**

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Wampole\* *C. difficile* Quik Chek Complete

### **Nucleic Acid Amplification**

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BD-GeneOhm *C. difficile*  
Cepheid Xpert *C. difficile*  
Great Basin Portrait Toxigenic *C. difficile* Assay  
Luminex xTAG Gastrointestinal Pathogen Panel (xTAG GPP)  
Meridian BioScience Illumigene  
Nanosphere Verigene SP  
Prodesse (Gen-Probe) Progastro CD  
Quidel AmpliVue *C. difficile* Assay

### **EIA for Toxin B Only**

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Alere\* *C. difficile* Toxin B

\*Techlab, Inverness Medical, Alere, Wampole may be used interchangeably for these test kits