



CLINICAL COMMUNICATION FROM THE CLINICAL MICROBIOLOGY LABORATORY
IMPLEMENTATION OF CLOSTRIDIUM DIFFICILE PCR WITH REFLEX TO TOXIN ANTIGEN

- *Clostridium difficile* (*C.difficile*) an important pathogen associated with infections in healthcare facilities.
- Recently published clinical practice guidelines from the Infectious Diseases Society of America recommends the usage of a multiple-step testing algorithm.
- Multiple-step algorithms play an instrumental role in helping clinicians differentiate *C.difficile* infection from *C.difficile* colonization.
- In light of these recommendations, the Clinical Microbiology Laboratory will be implementing a two-step algorithm which consist of *Clostridium difficile* PCR testing followed by a reflex to toxin antigen testing for PCR-positive specimens.

Go LIVE Date: **March 13, 2019**

New Name of *C.difficile* orderable in Epic: ***C. Difficile* DNA PCR with Reflex to Toxin Antigen**

Interpretation of Results for New *C.difficile* Testing Algorithm

METHOD	INTERPRETATION
RESULT EXAMPLE #1	
<i>C.difficile</i> Toxin PCR: Not Detected	FINAL COMMENT: The result indicates the absence of toxigenic <i>C.difficile</i> from stool specimen.
RESULT EXAMPLE #2	
<i>C.difficile</i> Toxin PCR: Detected	Initial Comment: DNA from a toxigenic strain of <i>C.difficile</i> has been detected. Antigen testing for the presence of free <i>C.difficile</i> toxin is currently in progress, to help determine the clinical significance of this PCR result.
<i>C.difficile</i> Toxin Antigen: Detected	FINAL COMMENT: DNA from a toxigenic strain of <i>C.difficile</i> was detected, along with the presence of free toxin. These results are suggestive of <i>C. difficile</i> infection, in context of an appropriate clinical scenario.
RESULT EXAMPLE #3	
<i>C.difficile</i> Toxin PCR: Detected	Initial Comment: DNA from a toxigenic strain of <i>C.difficile</i> has been detected. Antigen testing for the presence of free <i>C.difficile</i> toxin is currently in progress, to help determine the clinical significance of this PCR result.
<i>C.difficile</i> Toxin Antigen : Not Detected	FINAL COMMENT: DNA from a toxigenic strain of <i>C.difficile</i> was detected, although the free toxin itself was not detected. These findings are consistent with <i>C.difficile</i> colonization and may not reflect actual <i>C.difficile</i> infection. The significance of these results must be interpreted on light of the individual clinical scenario.