

CADTH RAPID RESPONSE REPORT: REFERENCE LIST

# Interventions for the Diagnosis of Clostridioides Difficile: Clinical Effectiveness and Guidelines

Service Line: Rapid Response Service  
Version: 1.0  
Publication Date: August 02, 2019  
Report Length: 7 Pages

**Authors:** Diksha Kumar, Hannah Loshak

**Cite As:** Interventions for the diagnosis of *Clostridioides difficile*: clinical effectiveness and guidelines. Ottawa: CADTH; 2019 Aug. (CADTH rapid response report: reference list).

**Disclaimer:** The information in this document is intended to help Canadian health care decision-makers, health care professionals, health systems leaders, and policy-makers make well-informed decisions and thereby improve the quality of health care services. While patients and others may access this document, the document is made available for informational purposes only and no representations or warranties are made with respect to its fitness for any particular purpose. The information in this document should not be used as a substitute for professional medical advice or as a substitute for the application of clinical judgment in respect of the care of a particular patient or other professional judgment in any decision-making process. The Canadian Agency for Drugs and Technologies in Health (CADTH) does not endorse any information, drugs, therapies, treatments, products, processes, or services.

While care has been taken to ensure that the information prepared by CADTH in this document is accurate, complete, and up-to-date as at the applicable date the material was first published by CADTH, CADTH does not make any guarantees to that effect. CADTH does not guarantee and is not responsible for the quality, currency, propriety, accuracy, or reasonableness of any statements, information, or conclusions contained in any third-party materials used in preparing this document. The views and opinions of third parties published in this document do not necessarily state or reflect those of CADTH.

CADTH is not responsible for any errors, omissions, injury, loss, or damage arising from or relating to the use (or misuse) of any information, statements, or conclusions contained in or implied by the contents of this document or any of the source materials.

This document may contain links to third-party websites. CADTH does not have control over the content of such sites. Use of third-party sites is governed by the third-party website owners' own terms and conditions set out for such sites. CADTH does not make any guarantee with respect to any information contained on such third-party sites and CADTH is not responsible for any injury, loss, or damage suffered as a result of using such third-party sites. CADTH has no responsibility for the collection, use, and disclosure of personal information by third-party sites.

Subject to the aforementioned limitations, the views expressed herein do not necessarily reflect the views of Health Canada, Canada's provincial or territorial governments, other CADTH funders, or any third-party supplier of information.

This document is prepared and intended for use in the context of the Canadian health care system. The use of this document outside of Canada is done so at the user's own risk.

This disclaimer and any questions or matters of any nature arising from or relating to the content or use (or misuse) of this document will be governed by and interpreted in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein, and all proceedings shall be subject to the exclusive jurisdiction of the courts of the Province of Ontario, Canada.

The copyright and other intellectual property rights in this document are owned by CADTH and its licensors. These rights are protected by the Canadian *Copyright Act* and other national and international laws and agreements. Users are permitted to make copies of this document for non-commercial purposes only, provided it is not modified when reproduced and appropriate credit is given to CADTH and its licensors.

**About CADTH:** CADTH is an independent, not-for-profit organization responsible for providing Canada's health care decision-makers with objective evidence to help make informed decisions about the optimal use of drugs, medical devices, diagnostics, and procedures in our health care system.

**Funding:** CADTH receives funding from Canada's federal, provincial, and territorial governments, with the exception of Quebec.

Questions or requests for information about this report can be directed to [requests@cadth.ca](mailto:requests@cadth.ca)

## Research Questions

1. What is the clinical effectiveness of interventions for the diagnosis of *Clostridioides difficile*?
2. What are the evidence-based guidelines regarding interventions for the diagnosis of *Clostridioides difficile*?

## Key Findings

Six evidence-based guidelines were identified regarding interventions for the diagnosis of *Clostridioides difficile*.

## Methods

A limited literature search was conducted by an information specialist on key resources including Medline via OVID, the Cochrane Library, the University of York Centre for Reviews and Dissemination (CRD) databases, the websites of Canadian and major international health technology agencies, as well as a focused Internet search. The search strategy was comprised of both controlled vocabulary, such as the National Library of Medicine's MeSH (Medical Subject Headings), and keywords. The main search concepts were *Clostridioides difficile* and diagnosis. Search filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, or network meta-analyses, and guidelines. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2014 and July 30, 2019. Internet links were provided, where available.

## Selection Criteria

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

**Table 1: Selection Criteria**

<b>Population</b>	Any individual suspected of having <i>C. difficile</i>
<b>Intervention</b>	Any intervention used to diagnose <i>C. difficile</i>
<b>Comparator</b>	Q1: Any other intervention used to diagnose <i>C. difficile</i> Q2: No comparator
<b>Outcomes</b>	Q1: Clinical effectiveness, safety Q2: Evidence-based guidelines
<b>Study Designs</b>	Health technology assessments, systematic reviews, meta-analyses, evidence-based guidelines

## Results

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by evidence-based guidelines.

Six evidence-based guidelines were identified regarding interventions for the diagnosis of *Clostridioides difficile*. No relevant health technology assessments, systematic reviews, or meta-analyses were identified.

Additional references of potential interest are provided in the appendix.

### Health Technology Assessments

No literature identified.

### Systematic Reviews and Meta-analyses

No literature identified.

### Guidelines and Recommendations

1. McDonald LC, Gerding DN, Johnson S, et al. Clinical practice guidelines for Clostridium difficile Infection in adults and children: 2017 update by the Infectious Diseases Society of America (IDSA) and Society for Healthcare Epidemiology of America (SHEA). *Clin Infect Dis*. 2018;66(7):987-994.  
[PubMed: PM29562266](#)  
*See: Diagnosis, page 3*
2. Guidance on prevention and control of Clostridium difficile infection (CDI) in health and social care settings in Scotland. Glasgow (UK): Health Protection Scotland; 2017: [https://hpspubsrepo.blob.core.windows.net/hps-website/nss/2060/documents/1\\_shpn-6-cdi-in-scotland%202017.pdf](https://hpspubsrepo.blob.core.windows.net/hps-website/nss/2060/documents/1_shpn-6-cdi-in-scotland%202017.pdf). Accessed 2019 Aug 1.  
*See: Section 2.2.1*
3. Institut national d'excellence en santé et en services sociaux. Treatment of clostridium difficile- associated diarrhea or colitis. Montreal (QC): INESSS; 2017: [https://www.inesss.qc.ca/fileadmin/doc/INESSS/Rapports/Traitement/Guide\\_Cdifficile-EN.pdf](https://www.inesss.qc.ca/fileadmin/doc/INESSS/Rapports/Traitement/Guide_Cdifficile-EN.pdf). Accessed 2019 Aug 1.  
*See: Diagnosis, page 2*
4. Crobach MJ, Planche T, Eckert C, et al. European Society of Clinical Microbiology and Infectious Diseases: update of the diagnostic guidance document for Clostridium difficile infection. *Clin Microbiol Infect*. 2016;22 Suppl 4:S63-81.  
[PubMed: PM27460910](#)

5. Surveillance, diagnosis and management of Clostridium difficile infection in Ireland. Dublin (IE): An Roinn Slainte Department of Health; 2014:  
<http://www.hpsc.ie/a-z/microbiologyantimicrobialresistance/clostridioidesdifficile/guidelines/File.13950,en.pdf>  
f. Accessed 2019 Aug 1.  
*See: Section 2.5*
6. Surawicz CM, Brandt LJ, Binion DG, et al. Guidelines for diagnosis, treatment, and prevention of Clostridium difficile infections. *Am J Gastroenterol*. 2013;108(4):478-498.  
[PubMed: PM23439232](#)  
*See: Microbiology and Diagnosis*

## Appendix — Further Information

### Guidelines and Recommendations – Methodology Not Specified

7. Abreu-y Abreu AT, Velarde-Ruiz Velasco JA, Zavala-Solares MR, et al. Consensus on the prevention, diagnosis, and treatment of Clostridium difficile infection. *Rev Gastroenterol Mex.* 2019;84(2):204-219.  
[PubMed: PM30987771](#)
8. Clostridioides difficile infection (CDI). Winnipeg (MB): Manitoba Public Health Branch; 2019: <https://www.gov.mb.ca/health/publichealth/cdc/protocol/cdi.pdf>. Accessed 2019 Aug 1.  
*See: Section 6*
9. Sartelli M, Di Bella S, McFarland LV, et al. 2019 update of the WSES guidelines for management of Clostridioides (Clostridium) difficile infection in surgical patients. *World J Emerg Surg.* 2019;14:8.  
[PubMed: PM30858872](#)  
*See: Diagnosis*
10. Upton AD. Clostridium difficile in paediatric populations. Ottawa (ON): Canadian Paediatric Society; 2018: <https://www.cps.ca/en/documents/position/clostridium-difficile-in-paediatric-populations>. Accessed 2019 Aug 1.  
*See: Laboratory Diagnosis*
11. Laboratory procedures for diagnosis and typing of human Clostridium difficile infection. Solna (SE): European Centre for Disease Prevention and Control; 2018: <https://ecdc.europa.eu/en/publications-data/laboratory-procedures-diagnosis-and-typing-human-clostridium-difficile-infection>. Accessed 2019 Aug 1.  
*See: Section 1*
12. Krutova M, Nyc O. Updated Czech guidelines for the laboratory diagnosis of Clostridium difficile infections. *Epidemiol Mikrobiol Imunol.* 2018;67(2):92-95.  
[PubMed: PM30126287](#)
13. Van Schooneveld T, Bergman S, Rupp M. Clostridium difficile infection (CDI) management guideline. Omaha (NE): Nebraska Medicine; 2018: [https://www.nebraskamed.com/sites/default/files/documents/for-providers/asp/CDI\\_final.pdf](https://www.nebraskamed.com/sites/default/files/documents/for-providers/asp/CDI_final.pdf). Accessed 2019 Aug 1.
14. SUNY Downstate Medical Center. Adult Clostridioides difficile management guidelines (formerly Clostridium difficile); 2018: [https://www.downstate.edu/stewardship/pdf/adult\\_clostridioides\\_difficile\\_management\\_guidelines.pdf](https://www.downstate.edu/stewardship/pdf/adult_clostridioides_difficile_management_guidelines.pdf). Accessed 2019 Aug 1.  
*See: Testing, page 2*

15. Public Health Laboratory Network. Clostridium difficile infection (CDI). Canberra (AU): Australian Government Department of Health; 2016: [https://www1.health.gov.au/internet/main/publishing.nsf/Content/cda-phlncd-clostridium-difficile-infection-\(CDI\).htm](https://www1.health.gov.au/internet/main/publishing.nsf/Content/cda-phlncd-clostridium-difficile-infection-(CDI).htm). Accessed 2019 Aug 1.  
*See: Section 2.6*
16. Pediatric Evidence Based Outcome Centre. Pediatric C. difficile infection diagnosis pathway. Dell Children's Center of Central Texas; 2016: <https://www.dellchildrens.net/wp-content/uploads/sites/60/2015/10/DCMC-C.Difficile-Infection-Clinical-Pathway.pdf>. Accessed 2019 Aug 1.
17. Michigan Medicine. Clostridium difficile infection in adults and children. Ann Arbor (MI): University of Michigan; 2016: <http://www.med.umich.edu/1info/FHP/practiceguides/lnptCDiff/C-Diff.pdf>. Accessed 2019 Aug 1.  
*See: Diagnosis, page 1; Diagnosis, page 2*
18. Clostridium difficile infection: infection prevention and control guidance for management in acute care settings. Ottawa (ON): Public Health Agency of Canada; 2013: <https://www.canada.ca/en/public-health/services/infectious-diseases/nosocomial-occupational-infections/clostridium-difficile-infection-prevention-control-guidance-management-acute-care-settings.html>. Accessed 2019 Jul 26.  
*See: Sections 3 and 5*
19. Clostridium difficile infection: infection prevention and control guidance for management in long-term care facilities. Ottawa (ON): Public Health Agency of Canada; 2013: <https://www.canada.ca/en/public-health/services/infectious-diseases/nosocomial-occupational-infections/clostridium-difficile-infection-prevention-control-guidance-management-long-term-care-facilities.html>. Accessed 2019 Jul 26.  
*See: Sections 2 and 4*

## Review Articles

20. Lubbert C, John E, von Muller L. Clostridium difficile infection: guideline-based diagnosis and treatment. *Dtsch Arztebl Int.* 2014;111(43):723-731.  
[PubMed: PM25404529](#)