

2017 Survey Report

***Clostridium difficile* Infection**

Gastrointestinal Society



badgut.org
Gastrointestinal Society
Canadian Society of Intestinal Research

The **GI Society** represents Canadians living with gastrointestinal diseases and disorders, including those who have experienced *Clostridium difficile* infection (CDI), and the devastating digestive symptoms that occur from this infection. We offer patient education on a wide array of GI conditions, in text and video formats, including a video on the development, symptoms, and treatments of CDI. The Society advocates to ensure Canadians have access to the best treatment and care. Between the spring and autumn of 2016, we hosted a survey on our English (www.badgut.org) and French (www.mauxdeventre.org) websites to help understand how CDI affects people. To qualify, survey participants had to confirm that they were either an individual who had experienced CDI or a caregiver of someone with CDI. We had 167 respondents. Check our websites for the full survey results.

Background

Clostridium difficile infection, or CDI for short, occurs when the *Clostridium difficile* – commonly referred to as *C. difficile*, or *C. diff* – bacterium grows out of control in the digestive tract. The healthy adult colonic microbiota usually provides resistance to *C. difficile* infection and as many as 20% of adults older than 65 years-of-age may carry *C. difficile* without illness.¹ However, if this bacterial balance is altered, for example through antibiotic treatment, this resistance can be lost and result in infection.² Patients often develop the infection after going to the hospital or another health care setting to receive treatment for an unrelated ailment. This is because the *C. diff* bacterium and its spores are found in high amounts in the feces of infected people, who can then spread the infection to surfaces, such as food or other objects, if they don't wash their hands properly after using the toilet, and if proper cleaning protocols are not in place in health care facilities. CDI is the most common cause of infectious diarrhea in hospitals and long-term care facilities.³

The symptoms of CDI include liquid diarrhea, dehydration, fever, appetite loss, and abdominal pain or tenderness, which are often severe, causing major distress and pain. In very serious cases, *C. diff* infection can even result in death.

Demographics

- respondents are from all provinces, (no respondents from territories); the majority are from Ontario (32%), British Columbia (24%), or Alberta (16%)
- the majority (77%) are female
- most (77%) are between 30-69 years of age, 10% are younger than 30 years of age, and 13% are 70 years-of-age or older
- 19% of respondents are health care professionals, 49% of whom work at a hospital

Symptoms



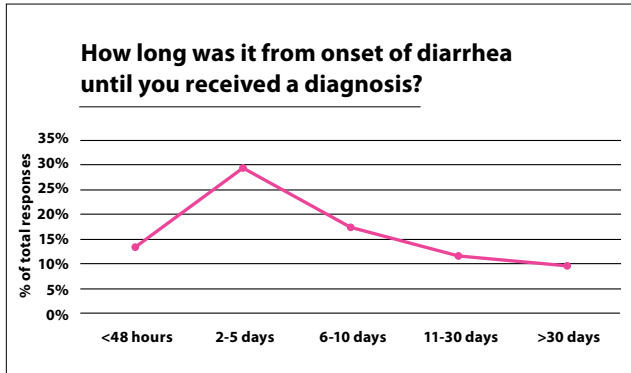
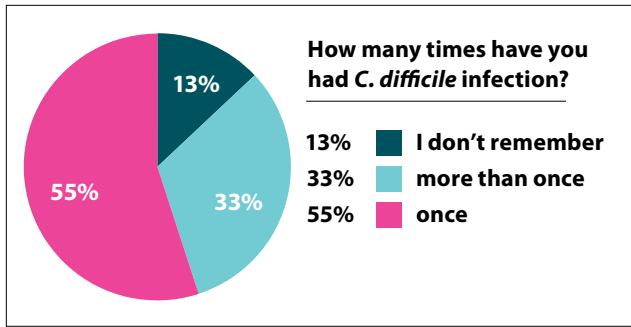
The most commonly reported symptoms were watery, severe diarrhea (72%), diarrhea (65%), fatigue (63%), abdominal pain/tenderness (63%), weight loss (54%), and loss of appetite (53%). Many individuals who experience CDI have recurrent bouts of the infection. Of our survey respondents, 33% reported experiencing CDI more than once.

We asked respondents to rate their quality of life before, during, and after CDI infection on a scale of 1-6, separating answers from those who experienced CDI and caregivers of those who experienced CDI. While we expected, and found, a decrease in quality of life during infection, many patients continued to experience a decreased quality of life after resolution of CDI. This was especially strong for caregivers, who responded on behalf of the patients, with 13% of their responses having a quality of life of 1 or 2 (lowest quality of life) before CDI, and 73% having a quality of life at 1 or 2 after resolution of CDI. This infection might cause a long-lasting impact.

Concurrent Diseases and Disorders



In our survey, many respondents had other digestive conditions, including irritable bowel syndrome (34%), inflammatory bowel disease (18%), gastroesophageal reflux disease (17%), or diverticular disease (11%). We could not determine whether people living with GI disorders are more likely to have experienced CDI, or are more likely to connect with the GI Society and find our survey.



Health Care



Diagnosing CDI in a timely manner remains a concern. CDI can be dangerous, leading to severe dehydration and even death in some cases. The longer it takes to diagnose, the longer it takes for patients to get the treatment they need to recover. Yet, far too many patients remain undiagnosed for too long. While 29% of patients received a CDI diagnosis 2-5 days after onset of symptoms, diagnosis took 6-10 days for 17%, 11-30 days for 12%, and more than 30 days for 10% of respondents. Unsurprisingly, 47% of respondents working in the health care sector cite concern over timeliness of diagnosis.

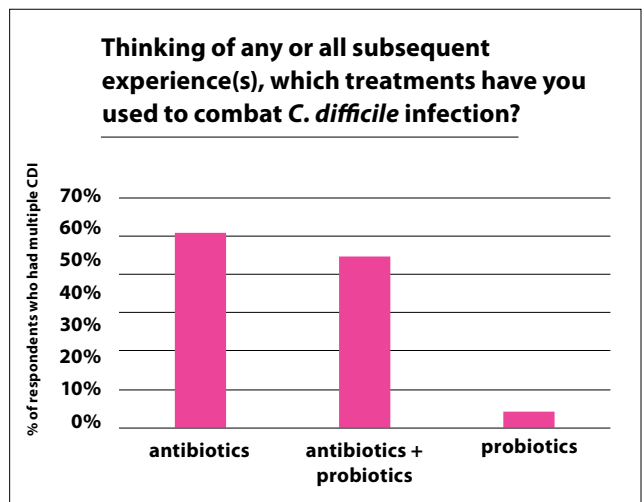
One known contributing factor of CDI is prior use of antibiotics, which can affect the balance of microorganisms in the intestine, and make it more likely for the *C. diff* bacteria to overgrow. In our survey, 63% of respondents had taken antibiotics in the three months preceding onset of CDI and 29% of survey respondents first experienced CDI after a hospital stay for another illness or concern.

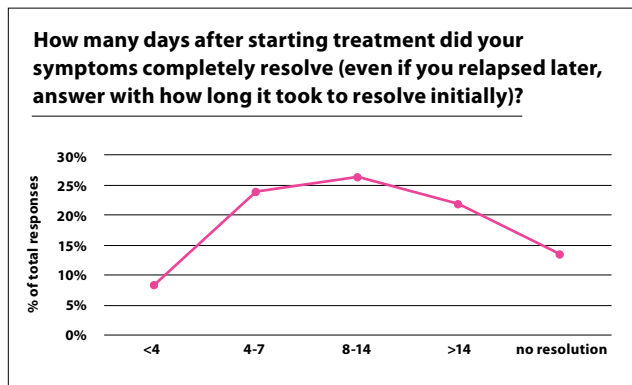
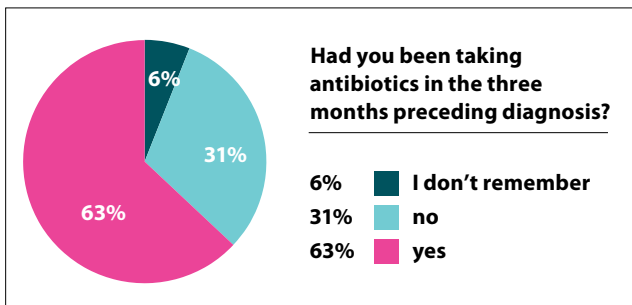
Treatment



Treating CDI can be difficult. While the initial infection is often associated with antibiotic use, antibiotics are also one of the only treatments for this infection, in fact, 85% of respondents took antibiotics to treat CDI and 32% took probiotics, a treatment that focuses on rebuilding the good gut bacteria to reduce the impact of the *C. diff* bacteria. Some individuals took the two treatments together. However, these treatments aren't always adequate for eliminating symptoms. 14% of respondents say that their symptoms did not resolve, and 22% say that it took more than 14 days for the treatment to work. Only 8% experienced symptom resolution within 4 days of treatment.

CDI is a serious infection. While antibiotics and probiotics are the typical treatments for CDI, many individuals need to stay in the hospital while receiving treatment, so health care professionals can monitor symptoms, treat dehydration, and provide extra care as needed. Of our respondents, 33% required hospitalization for their first bout of CDI. About one third of patients required a hospital stay of less than 1 week (30%), but many required 1-2 weeks (25%) or 3-4 weeks (26%). The remaining respondents required hospital stays between 4 weeks to 6 months with some requiring multiple hospitalizations. In addition, of those who were already in hospital for another reason, 69% had to prolong their stay due to CDI.





Conclusion

CDI is a serious infection with devastating symptoms that greatly affects quality of life. Many of our respondents experienced several bouts of CDI and had to be hospitalized. Timeliness of diagnosis remains an important hurdle for health care professionals to overcome in order to treat the infection before it becomes too severe, and increases its prevalence.

- 1 Bartlett JG. Narrative review: the new epidemic of Clostridium difficile-associated enteric disease. *Annals of Internal Medicine*. 2006;145(10):758-64.
- 2 Wilson KH. The microecology of Clostridium difficile. *Clinical Infectious Diseases: An Official Publication of the Infectious Diseases Society of America*. 1993;16 Suppl 4:S214-8.
- 3 Poutanen SM *et al*. Clostridium difficile-associated diarrhea in adults. *Canadian Medical Association Journal*. 2004;171(1):51-8.

Clostridium Difficile Infection
Patient Information

Order free copies of our pamphlet or watch our video on Clostridium difficile Infection online at www.badgut.org

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