Annex C: Testing, Surveillance and Management of Clostridium difficile in All Health Care Settings

This document is current to May 2010, and is not updated. It was prepared at a time when PIDAC reported directly to the Minister of Health and Long-Term Care and Chief Medical Officer of Health. Note that effective April 1, 2011, the responsibility for and functions of the Provincial Infectious Diseases Advisory Committee ("PIDAC") were transferred to the Ontario Agency for Health Protection and Promotion ("Agency"), and that PIDAC now reports to that Agency. You may wish to consult www.pidac.ca or the Agency's website at www.oahpp.ca for more information.

Provincial Infectious Diseases Advisory Committee (PIDAC)

ANNEX to

Routine Practices and Additional Precautions

Annex C:

Testing, Surveillance and Management of *Clostridium difficile*

In All Health Care Settings

NOTE: This document REPLACES:

Best Practices Document for the Management of *Clostridium difficile* in All Health Care Settings

Published – December 2004

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THIS DOCUMENT IS INTENDED TO PROVIDE BEST PRACTICES ONLY.

HEALTH CARE SETTINGS ARE ENCOURAGED TO WORK TOWARDS THESE BEST PRACTICES IN AN EFFORT TO IMPROVE QUALITY OF CARE

Ministry of Health and Long-Term Care
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Ontario

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Additional Abbreviations for this Annex

Refer to abbreviations in '*Routine Practices and Additional Precautions in All Health Care Settings*' for additional abbreviations not found in this annex.

CDI	*Clostridium difficile* Infection
EIA	Enzyme Immunoassay
PCR	Polymerase Chain Reaction

Glossary of Additional Terms for this Annex

Refer to glossary in '*Routine Practices and Additional Precautions in All Health Care Settings*' for additional terms not found in this annex.

Case Finding: A standard procedure in the control of certain contagious diseases whereby diligent efforts are made to identify people who are or may be infected.

Cluster: A grouping of cases of a disease within a specific time frame and geographic location suggesting a possible association between the cases with respect to transmission.

Outbreak: For the purposes of this document, an outbreak is an increase in the number of cases above the number normally occurring in a particular health care setting over a defined period of time.

I. PREAMBLE

About This Annex

This annex is added as an extension to the Ministry of Health and Long-Term Care's '*Routine Practices and Additional Precautions in All Health Care Settings*' and deals with the prevention and control of transmission of *Clostridium difficile* (*C. difficile*) in acute and non-acute health care settings across the continuum of care including, but not limited to, acute care, long-term care, chronic (including mental health) care and home health care. This annex does not address province-wide surveillance and reporting of *C. difficile* infection (CDI). Each facility should develop a plan for the prevention and control of CDI.

This annex sets out the specific infection prevention and control practices to:

- prevent the transmission of CDI to other patients;
- assist health care providers to promptly identify clusters of CDI; and
- assist health care providers in the management of patients with CDI and outbreaks related to CDI.

➢ More information regarding the infection prevention and control management of clients/patients/residents with *C. difficile* infection is detailed in Section II.2.E of '*Routine Practices and Additional Precautions in All Health Care Settings*'.

II. BACKGROUND

1. What are Clostridium difficile (C. difficile) and Clostridium difficile Infection (CDI)?

Clostridium difficile is a Gram positive, spore-forming, anaerobic bacillus. It is widely distributed in the environment and colonizes up to 3-5% of adults without causing symptoms.[1] Certain strains can produce two toxins: toxin A and toxin B, which are responsible for diarrhea.

C. difficile produces spores that are resistant to destruction by many environmental interventions, including a number of chemicals. Spread of *C. difficile* occurs due to inadequate hand hygiene and environmental cleaning; therefore, consistent hand hygiene and thorough cleaning of the client/patient/resident environment are necessary for control.[2-5]

C. difficile has been a known cause of health care-associated (nosocomial) diarrhea for over 30 years. Reported rates of CDI range from 1 to 10 cases per 1000 discharges and 17 to 60 cases per 100, 000 bed-days.[6] *C. difficile* can cause asymptomatic infections or may result in severe, life-threatening disease.[7-10] It can be acquired in both hospital and community settings.

In recent years there has been an increase in the rates of *C. difficile* infection (CDI) across Canada.[7, 11-13] Outbreaks in Quebec and other areas have been associated with a new, hypervirulent epidemic strain of *C. difficile*, typed the NAP1/BI/027 strain.[14-16] Characteristics of

this strain include the presence of a binary toxin; increased resistance to clindamycin and the fluoroquinolone class of antibiotics; and the increased potential for severe adverse events.[14, 17] The NAP1 strain has been associated with outbreaks in Europe,[18, 19] the United States[16, 18] and Canada[10, 18, 20] and is responsible for a large proportion of CDI in Ontario. However, although this strain of *C. difficile* causes more severe disease, the infection prevention and control practices for this strain are the same as for other strains of *C. difficile*.[21]

The increase in CDI has resulted in significant additional costs to the health care system. In a 2006 study in U.S. hospitals it was estimated that each case of CDI in a hospital was associated with USD $3699.00 in excess health care costs and 3.6 extra days of hospitalization.[11] In 2008, Dubberke calculated an attributable cost for each CDI episode to range from USD $2454 to $3240.[22] The cost of CDI readmissions alone is estimated to be a minimum of CAD $128,200 per year per hospital.[7]

Mandatory public reporting of CDI has been underway in Ontario since September, 2008.

2. Risk Factors for CDI

Factors associated with CDI include:

a) a history of antibiotic usage, particularly fluoroquinolones[3, 23, 24];
b) immunosuppressive therapy post-transplant[25-27];
c) proton pump inhibitors[28-30];
d) bowel disease and bowel surgery[31];
e) chemotherapy[32]; and
f) prolonged hospitalization.

Additional risk factors that predispose some people to develop more severe disease include[8]:

a) history of CDI[33];
b) increased age[14, 18];
c) immunosuppressive therapy[34];
d) recent surgery[33]; and
e) CDI with the NAP1 strain of *C. difficile*.[14]

III. INFECTION PREVENTION AND CONTROL MEASURES FOR CDI

Sustained control of CDI may be achieved with infection prevention and control measures directed at interrupting the horizontal spread of *C. difficile*.[3, 4] Discontinuing antibiotics (except metronidazole or vancomycin initiated as treatment for CDI) as soon as the patient's condition permits is an important aspect of CDI control.[1, 6, 35, 36]

1. Initiation of Contact Precautions

In addition to Routine Practices, Contact Precautions should be initiated at onset of diarrhea and prior to receipt of *C. difficile* cytotoxin testing results for any patient/resident that has risk factors for CDI. Contact Precautions should be initiated by the regulated health care provider (e.g., physician, nurse) as soon as CDI is suspected. Discontinuation of precautions should only be done by Infection Prevention and Control.

- Refer to '*Routine Practices and Additional Precautions in All Health Care Settings*' for more information regarding Contact Precautions.

Contact Precautions are initiated when:

a) there is a suspected or confirmed case of CDI;
b) there is diarrhea with risk factors for CDI;
c) there is toxic megacolon and pseudomembranous colitis; or
d) there is any other indication for CDI.

While the majority of patients with CDI have diarrhea, severe cases of CDI may exhibit presentations that do not include diarrhea, such as toxic megacolon[31] or pseudomembranous colitis.

2. Accommodation

Decision-making regarding accommodation for patients/residents with CDI is based on the mode of transmission of *C. difficile* (i.e., spread of faeces containing *C. difficile* spores) and the patient/resident's condition (e.g., faecally incontinent individuals are more likely to contaminate the environment with *C. difficile*).

The following are general guidelines for placement of patients/residents suspected of having, or confirmed with, CDI:

a) All clients/patients/residents with CDI should remain in their room or bed space while symptomatic with CDI;
b) **Acute Care, Complex Continuing Care, Rehabilitative Medicine**
    i) A single room with dedicated toileting facilities (i.e., private bathroom or individual commode chair) is preferred;
    ii) Terminal cleaning of the patient's previous bed space and bathroom should be done on transfer to the single room;
    iii) If single rooms are limited, patients who are faecally incontinent should be assigned to those rooms[21];
    iv) If a single room is not available, placement should be assessed by Infection Prevention and Control and the patient care team; laboratory-confirmed CDI cases should only share a room with other laboratory-confirmed CDI cases.[21]
c) **Long-Term Care Homes**
    i) A single room with dedicated toileting facilities (i.e., private bathroom or individual commode chair) is preferred; this may require limiting a shared bathroom to one resident;
    ii) In a multi-bed room:
        a. display visible signage indicating the precautions to be used;
        b. maintain physical separation and draw privacy curtain between residents to promote separation of items[18, 21];
        c. provide an easily accessible barrier supply cart;
        d. place a laundry hamper as close to the resident's bed space as possible; and
        e. dedicate a commode chair and other personal care items for the resident's use[18].

3. Hand Hygiene

Effective hand hygiene is essential to limit the spread of *C. difficile*[18]:

a) Observe meticulous hand hygiene with either alcohol-based hand rub (ABHR) or soap and water;

b) Soap and water is theoretically more effective in removing spores than ABHR;

c) When a dedicated hand washing sink is immediately available, hands should be washed with soap and water after glove removal;

d) When a dedicated hand washing sink is not immediately available, hands should be cleaned using an ABHR, after glove removal;

e) Hand hygiene should not be carried out at a patient sink as this will re-contaminate the health care worker's hands;

f) Education should be provided to the client/patient/resident on the need and procedure to be used for hand hygiene; clients/patients/residents who are unable to perform hand hygiene independently should be assisted by the health care provider.

4. Environmental Cleaning

Effective cleaning of the environment around clients/patients/residents who have CDI is essential in limiting the acquisition and spread of *C. difficile*.[3, 4, 12]

- Refer to Section III.2.1.C in the Ministry of Health and Long-Term Care's '*Best Practices for Environmental Cleaning for Prevention and Control of Infections in All Health Care Settings*' for information and checklists on environmental cleaning for *C. difficile*, available at:

  http://www.health.gov.on.ca/english/providers/program/infectious/diseases/ic_enviro_clean.html.

In care areas where there are multiple cases of CDI or ongoing transmission of *C. difficile*, the use of a sporicidal agent for disinfection after the room has been cleaned should be considered, in consultation with Infection Prevention and Control and Occupational Health and Safety. The following sporicides have shown activity against *C. difficile* spores:

- sodium hypochlorite (1000 parts per million)[37-39];
- accelerated hydrogen peroxide (4.5%)[40];
- peracetic acid (1.6%)[41]; and
- acidified nitrite.[41]

5. Other Interventions to Limit CDI Transmission

The following interventions are also important in minimizing the transmission of *C. difficile*:

a) Patient/resident temperature should not be taken rectally; rectal thermometers have been linked with the spread of CDI[36];

b) Commodes and bedpans must be handled very carefully to reduce spread of contamination with *C. difficile* spores from the commode/bedpan to the environment:

   i) Commode chair is dedicated to the patient/resident;

   ii) Commode is cleaned and disinfected whenever the room/bathroom is cleaned;

   iii) When precautions are discontinued, commodes and bedpans are cleaned and disinfected before use with another patient/resident;

iv) If bedpans are used, it is strongly recommended they be disposable;

v) **Bedpan cleaning wands should not be used**.

c) Items used to clean the bathroom of a patient/resident with CDI must be dedicated to that bathroom and discarded once Contact Precautions are discontinued (e.g., toilet brush).[42]

6. Visitors

Visitors should receive instruction on the importance and proper technique for hand hygiene. Visitors who provide care for a client/patient/resident, or who have significant contact with the client/patient/resident's immediate environment, should follow the same precautions as health care providers. Visitors must not use the client/patient/resident's bathroom or go into other client/patient/resident rooms or bed spaces. Visitors should be discouraged from eating or drinking in the room or bed space.

7. Patient Transfer

Suspected or confirmed CDI does not preclude a client/patient/resident from being transferred within the health care system when medically appropriate, provided that the receiving unit/department/facility is able to comply with requirements for accommodation. Prior to transport, Transportation Services, the receiving department/unit or facility and Infection Prevention and Control must be notified that a client/patient/resident with CDI is being transferred.

8. Patient Discharge

After discharge, patients with CDI are not a concern for other family members, as person-to-person transmission within the home setting is rare. Good hand hygiene practices should always be exercised by the discharged patient and household members. Educational tools for patients and family regarding proper hand hygiene should be considered.

- Refer to Appendix for sample patient education fact sheets.

9. Discontinuation of Precautions for CDI

Precautions for CDI should only be discontinued under the direction of Infection Prevention and Control. The following criteria are used when discontinuing precautions for CDI:

a) **Patient with suspected CDI**:

i) Patients/residents on Contact Precautions for suspected CDI may, after consultation with Infection Prevention and Control, have the precautions discontinued when two negative EIA tests or one negative PCR test has been reported;

ii) If CDI is still suspected, the clinician should evaluate the patient/resident and consider other diagnostic modalities (e.g., colonoscopy/sigmoidoscopy); Contact Precautions should be maintained until such evaluation has taken place or until CDI is otherwise ruled out.

b) **Patient with confirmed CDI**:

i) Contact Precautions may be discontinued when the patient has had at least 48 hours without diarrhea (e.g., formed or normal stool for the individual);

ii) Contact Precautions should be discontinued only under the direction of Infection Prevention and Control;

iii) Re-testing for *C. difficile* cytotoxin is *not* necessary to determine when precautions may be discontinued;

iv) Contact Precautions should not be discontinued until the room/bed space has received terminal CDI cleaning.

10. Relapse of Symptoms

Relapse refers to the recurrence of the symptoms of CDI after a symptom-free period. With CDI, cases should be counted as a relapse if symptoms recur within two months of the last infection. Relapse of CDI is common and occurs in about 30% of cases. If diarrhea recurs:

a) place patient/resident on Contact Precautions immediately;

b) re-test for *C. difficile* cytotoxin; and

c) consider leaving the patient/resident in a single room even after resolution of symptoms.

11. Occupational Health

Health care providers, even when they are taking antibiotics, are not at risk of acquiring CDI occupationally. Health care providers must always follow Routine Practices, including hand hygiene, before and after contact with all clients/patients/residents, and use Contact Precautions when caring for patients with CDI. Additionally:

a) staff must not consume food or beverages in patient/resident care areas;

b) staff should remain off work when experiencing diarrhea, unless there is a known underlying non-infectious cause.[18]

IV. CDI TESTING AND SURVEILLANCE

1. Testing for C. difficile Cytotoxin

Cultures for *C. difficile* are not routinely done. Laboratory testing for CDI usually involves detection of the cytotoxin(s) (A and B) produced by *C. difficile*:

a) Stool sample collection should occur as soon as possible after the onset of diarrhea;

b) Rapid turnaround time for *C. difficile* cytotoxin testing and reporting is essential and should be pre-arranged with the microbiology laboratory serving the health care setting;

c) All positive *C. difficile* cytotoxin tests should be reported as soon as possible to Infection Prevention and Control at the facility where the test originated;

d) A single negative test by enzyme immunoassay (EIA) does not rule out *C. difficile;* if a single test is negative, a second specimen should be sent;

e) Testing by polymerase chain reaction (PCR) is more sensitive[43] and if the first test is negative, a second test is not necessary;

f) Re-testing as a test of cure is not indicated; toxin may persist in stool for weeks and therefore is not helpful in determining duration of treatment or the discontinuation of Additional Precautions;

g) Testing for *C. difficile* cytotoxin may be repeated if symptoms do not resolve despite treatment or to diagnose a relapse of CDI following a period of absence of symptoms;

h) Testing for *C. difficile* cytotoxin should not be carried out on formed stools;

i) Testing for *C. difficile* cytotoxin should not be done in children under the age of one year, as the presence of *C. difficile* in stool is normal in this age group.[36, 44]

2. Case Definition for Surveillance and Reporting

Case Definition of Clostridium difficile Infection (CDI):

a) Laboratory confirmation of a positive toxin assay for C. difficile together with diarrhea*

OR

b) Visualization of pseudomembranes on sigmoidoscopy or colonoscopy

OR

c) Histological/pathological diagnosis of pseudomembranous colitis

OR

d) Diagnosis of toxic megacolon

*Diarrhea is defined as:

- loose/watery stool (i.e., if the stool were to be poured into a container, it would conform to the shape of the container);

  AND

- the bowel movements are *unusual* or *different* for the client/patient/resident;

  AND

- there is no other recognized aetiology for the diarrhea (e.g., laxative use)

Each facility should establish a mechanism for counting and keeping track of the number of confirmed cases of CDI acquired within the facility and maintain a summary record. Infection Prevention and Control should review and analyze these data on an ongoing basis to identify any clusters. This record should be submitted as a report to the Infection Prevention and Control Committee and facility administration on a regular basis.

The following definitions should be used to determine whether a health care-acquired case of CDI is attributable to your facility (i.e., nosocomial):

a) **CDI Attributable to Your Facility:**

The symptoms of CDI were not present on admission (i.e., onset of symptoms > 72 hours after admission) or the infection is present at the time of admission but is related to a previous admission to your facility within the last four weeks.

b) **CDI Not Attributable to Your Facility:**

The symptoms of CDI were present on admission or < 72 hours after admission and there was no admission to your facility within the last four weeks.

Rates of CDI are best expressed as:

a) the number of cases per 1000 patient days; and/or
b) the number of new cases per 1000 patient admissions.

Clusters of cases in one unit or area should be investigated.

V. CDI OUTBREAKS

Outbreak Management

Cases of CDI occurring at a rate exceeding the normally expected baseline rate for the health care setting (or unit, floor, ward) during a specified period of time should be considered as an outbreak. The definition of an outbreak of CDI will depend on the endemic (or baseline) rate for the health care setting. Health care facilities need to consider their endemic or baseline rate as compared to their peer hospitals and other hospitals in their region.

Since September 1, 2008 all hospitals in Ontario have been required to report CDI outbreaks and outbreak-associated cases to the local medical officer of health under the *Health Protection and Promotion Act* (HPPA):

a) O. Reg. 558/91, includes outbreaks of CDI in hospitals on the list of communicable diseases in Ontario;
b) O. Reg. 559/91, includes outbreaks of CDI in hospitals on the list of reportable diseases in Ontario; and
c) O. Reg. 569, includes the specific data elements for outbreaks of CDI which hospitals must provide to their local medical officers of health.

The principles of CDI outbreak management also apply to other facilities, such as long-term care and retirement homes. CDI outbreaks are also reportable by long-term care homes as institutional outbreaks of gastroenteritis.

- Refer to the Ministry of Health and Long-Term Care's '*Control of Clostridium difficile Infection (CDI) Outbreaks in Hospitals*'[45] for a guide to management of CDI outbreaks. Available at: http://www.health.gov.on.ca/patient_safety/pro/cdad/pro_resource/guide_cdi_infect_control.pdf.

APPENDIX: PATIENT EDUCATION INFORMATION SAMPLES

The patient education tools on the following pages are used with permission of The Ottawa Hospital and are provided to assist the health care setting in developing their own patient education information.

SAMPLE PATIENT INFORMATION:
ANTIBIOTIC - ASSOCIATED DIARRHEA

If you have received antibiotics while in hospital, or have been prescribed antibiotics that you are to take following discharge from hospital, please review this information sheet on antibiotic-associated diarrhea. If you have any questions, ask your nurse, doctor, or pharmacist.

Taking an antibiotic causes diarrhea in up to one third of people who need them. Most often, the diarrhea is mild. Sometimes, a more serious type of diarrhea associated with taking antibiotics is caused by the *Clostridium difficile* bacterium.

Why can diarrhea occur with antibiotics?

Bacteria are normally present in your bowel. Diarrhea can occur because antibiotics kill some of the bacteria that usually live in your bowel. This upsets the normal balance. Harmful bacteria such as *Clostridium difficile,* if present in your bowel, can overgrow leading to diarrhea and other symptoms. The risk of *Clostridium difficile* is higher if you have been in the hospital.

What are the symptoms?

Diarrhea from antibiotics is usually mild, consisting of loose and/or frequent bowel movements.

Symptoms of *Clostridium difficile* may be more severe and may include:

- Watery diarrhea that may contain mucus and/or blood
- Abdominal pain or tenderness
- Loss of appetite
- Nausea
- Fever

What should you do if you get diarrhea?

If you are taking an antibiotic and have mild diarrhea, and it is not bothersome, continue to take the antibiotic as prescribed. The diarrhea should go away after the antibiotic is finished.

***CALL YOUR DOCTOR IF* you have *any* of the following symptoms:**

- **Diarrhea which is bothersome or severe, or which is bloody**
- **Abdominal pain**
- **Fever**
- **Diarrhea which continues after the antibiotic is finished**
- **Diarrhea which starts after you have finished taking the antibiotic(s).**

Remind your doctor that you have recently been on antibiotics.

DO NOT take anti-diarrhea medications that you can buy without a prescription (e.g., Imodium, Kaopectate) without first checking with your doctor. These may cause a more serious health condition.

How can you take care of yourself?

- Follow your doctor's advice regarding rest, activity, medication and diet.
- Wash your hands frequently, especially after using the washroom.
- If your doctor prescribes a new antibiotic for your diarrhea, take all of the medicine as prescribed.
- Be sure that you drink plenty of fluids to keep hydrated.

SAMPLE PATIENT INFORMATION: CLOSTRIDIUM DIFFICILE

WHAT IS *CLOSTRIDIUM DIFFICILE (*C. DIFF*)*?

C. diff is one of the many germs (bacteria) that can be found in stool (a bowel movement).

WHAT IS C. DIFF DISEASE?

C. diff disease occurs when antibiotics kill your good bowel bacteria and allow the C. diff to grow. When C. diff grows, it produces substances (toxins). These toxins can damage the bowel and may cause diarrhea. C. diff disease is usually mild but sometimes can be severe. In severe cases, surgery may be needed and in extreme cases C. diff may cause death. C. diff is the most common cause of infectious diarrhea in hospital.

The main symptoms of C. diff disease are:

- Watery diarrhea
- Fever
- Abdominal pain or tenderness

WHO GETS C. DIFF?

C. diff disease usually occurs during or after the use of antibiotics. Old age, presence of other serious illnesses and poor overall health may increase the risk of severe disease.

HOW WILL YOUR DOCTOR KNOW THAT YOU HAVE C. DIFF?

If you have symptoms of C. diff, your doctor will ask for a sample of your watery stool. The laboratory will test the stool to see if C. diff toxins are present.

HOW IS C. DIFF TREATED?

Treatment depends on how sick you are with the disease. People with mild symptoms may not need treatment. For more severe disease, an antibiotic is given.

HOW DOES C. DIFF SPREAD?

When a person has C. diff disease the germs in the stool can soil surfaces such as toilets, handles, bedpans, or commode chairs. When touching these items our hands can become soiled. If we then touch our mouth we can swallow the germ. Our soiled hands also can spread the germ to other surfaces.

HOW TO PREVENT SPREAD IN THE HOSPITAL?

If you have C. diff diarrhea you will be moved to a private room until you are free from diarrhea for at least 2 days. Your activities outside the room will be restricted. Everyone who enters your room wears gloves and may wear a gown. Everyone **MUST** clean their hands when leaving your room.

Always wash your hands after using the bathroom. Cleaning hands is the most important way for everyone to prevent the spread of this germ. As well, a thorough cleaning of your room and equipment will be done to remove any germs.

WHAT SHOULD I DO AT HOME?

Healthy people like your family and friends who are not taking antibiotics are at very low risk of getting C. diff disease.

Hand care

Wash your hands for 15 seconds:

- After using the toilet
- After touching dirty surfaces
- Before eating
- Before preparing meals.

Cleaning the house

Use either a household cleaner diluted according to the instructions or diluted household bleach:

- Wet the surface well and clean using good friction
- Allow the surface to air dry
- Pay special attention to areas that may be soiled with stool such as the toilet and sink. If you see stool remove first and then clean as described above.

Cleaning clothes/other fabric

Wash clothes/fabric separately if they are heavily soiled with stool:

- Rinse stool off,
- Clean in a hot water cycle with soap
- Dry items in the dryer if possible.

Cleaning dishes:

- Regular cleaning, you can use the dishwasher or clean by hand with soap and water.

It is very important that you take all your medication as prescribed by your doctor. You should not use any drugs from the drugstore that will stop your diarrhea (e.g., Imodium). **If diarrhea persists or comes back, contact your doctor.**

For more information on diarrhea, you can read the patient guide: *Antibiotic-Associated Diarrhea.*

If you want to know more about *Clostridium difficile* disease:

- Health Canada: http://www.phac-aspc.gc.ca/c-difficile/index.html
- Centers for Disease Control and Prevention: http://www.cdc.gov/ncidod/dhqp/id_CdiffFAQ_general.html

CLOSTRIDIUM DIFFICILE (C. difficile)

QU'EST-CE QUE LE *CLOSTRIDIUM DIFFICILE*?

Clostridium difficile (*C. difficile*) est l'un des nombreux microbes (bactéries) qui se trouve dans les selles.

QU'EST-CE QUE L'INFECTION PAR *C. DIFFICILE*?

C'est lorsque des antibiotiques tuent les bonnes bactéries qui vivent dans vos intestins et permettent à la *C. difficile* de se multiplier. En se multipliant, *C. difficile* produit des toxines qui peuvent irriter vos intestins et causer de la diarrhée. L'infection par *C. difficile* est en général bénigne, mais elle peut parfois être grave. Dans les cas graves, il peut être nécessaire de faire une chirurgie. Les infections extrêmement graves peuvent causer la mort. *C. difficile* est la cause la plus courante de la diarrhée infectieuse dans les hôpitaux.

Voici les principaux symptômes:

- diarrhée liquide;
- fièvre;
- mal de ventre ou sensibilité.

QUI PEUT ÊTRE INFECTÉ PAR *C. DIFFICILE*?

L'infection par *C. difficile* survient en général pendant ou après la prise d'antibiotiques. Les personnes âgées, qui souffrent d'autres maladies graves ou qui sont en mauvaise santé sont plus susceptibles d'avoir une infection grave.

COMMENT MON MÉDECIN SAIT-IL QUE JE SUIS INFECTÉ PAR *C. DIFFICILE*?

Si vous présentez les symptômes de l'infection, votre médecin demandera un échantillon de vos selles liquides. Le laboratoire analysera ensuite vos selles pour voir si elles contiennent des toxines libérées par *C. difficile*.

COMMENT TRAITE-T-ON L'INFECTION?

Le traitement varie selon la gravité de l'infection. Les personnes qui ont des symptômes légers n'auront peut-être pas besoin de traitement. Si l'infection est plus grave, il faut prendre des antibiotiques.

COMMENT SE TRANSMET L'INFECTION?

Les microbes présents dans les selles peuvent contaminer des surfaces comme les toilettes, les poignées, les bassins de lit ou les chaises percées. En touchant ces objets, nos mains peuvent être contaminées. Si nous touchons ensuite notre bouche, nous pouvons avaler les microbes. Nous pouvons aussi contaminer d'autres surfaces avec nos mains.

COMMENT PEUT-ON PRÉVENIR LA PROPAGATION DE L'INFECTION DANS L'HÔPITAL?

Si vous avez une diarrhée causée par *C. difficile*, nous vous transférerons dans une chambre privée. Vous resterez dans cette chambre jusqu'à ce que vous n'ayez plus de symptômes pendant au moins deux jours. Nous limiterons vos activités à l'extérieur de la chambre. Toutes les personnes qui entreront dans votre chambre devront porter des gants et peuvent porter une blouse d'hôpital. Elles **DEVRONT** toutes se laver les mains à leur sortie. Il faut toujours se laver les mains après avoir été à la toilette. Le lavage des mains est la meilleure façon de prévenir la propagation du microbe. Nous nettoierons également votre chambre et l'équipement en profondeur pour éliminer tous les microbes.

QUE DEVRAIS-JE FAIRE À LA MAISON?

Il y a peu de risque que les personnes en santé, comme les membres de votre famille et vos amis qui ne prennent pas d'antibiotiques, soient infectées par la bactérie *C. difficile*.

Lavage des mains

Lavez vos mains pendant au moins 15 secondes :

- après avoir été à la toilette;
- après avoir touché des surfaces sales;
- avant de manger;
- avant de préparer les repas.

Nettoyage de la maison

À l'aide d'un produit nettoyant dilué selon les instructions ou d'eau de Javel diluée :

- lavez les surfaces en frottant bien fort;
- laissez les surfaces sécher à l'air;
- faites très attention aux endroits qui pourraient être souillés par des selles, comme la toilette et le lavabo. Si vous voyez des selles, enlevez-les d'abord avant de nettoyer la surface de la façon mentionnée.

Nettoyage des vêtements et d'autres tissus

Lavez les vêtements et autres tissus séparément s'ils ont été en contact avec des selles.

- Rincez le vêtement ou le tissu avec de l'eau pour enlever les selles.
- Lavez-le à l'eau chaude avec du savon.
- Faites-le sécher dans la sécheuse si possible.

Lavage de la vaisselle

- Utilisez le lave-vaisselle ou lavez-la à la main avec du savon et de l'eau.

Il est très important que vous preniez tous vos médicaments de la façon prescrite par votre médecin. Vous ne devez pas utiliser de médicaments contre la diarrhée vendus en pharmacie (par exemple Imodium). **Si la diarrhée continue ou recommence, communiquez avec votre médecin.**

Pour plus de renseignements sur la diarrhée, vous pouvez lire le guide destiné aux patients intitulé *Diarrhée associée à la prise d'antibiotiques*.

Consultez les sites suivants si vous voulez en savoir davantage sur l'infection par *C. difficile* :

- Santé Canada : www.phac-aspc.gc.ca/c-difficile/index_f.html
- Centers for Disease Control and Prevention (en anglais seulement):
  www.cdc.gov/ncidod/dhqp/id_CdiffFAQ_general.html

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