

Ontario Public Health Standards:
Requirements for Programs, Services and Accountability

Infectious Disease Protocol

Appendix 1: Case Definitions and Disease- Specific Information

**Disease: *Chlamydia trachomatis*
infections**

Effective: May 2022

***Chlamydia trachomatis* infections**

Communicable

Virulent

[Health Protection and Promotion Act \(HPPA\)](#)

[Ontario Regulation \(O. Reg.\) 135/18 \(Designation of Diseases\)](#)

Provincial Reporting Requirements

Confirmed case

Probable case

As per Requirement #3 of the "Reporting of Infectious Diseases" section of the *Infectious Diseases Protocol, 2018* (or as current), the minimum data elements to be reported for each case are specified in the following:

- [O. Reg. 569](#) (Reports) under the HPPA;⁵
- The iPHIS User Guides published by Public Health Ontario (PHO); and
- Bulletins and directives issued by PHO.

Type of Surveillance

Case-by-case

Case Definition

Confirmed Case

Chlamydia trachomatis (*C. trachomatis*) detected in an appropriate clinical specimen (e.g., urogenital tract, rectal, or pharyngeal specimen).

Probable Case

Clinically compatible signs and symptoms in a person with an epidemiologic link to a laboratory-confirmed case.

Outbreak Case Definition

The outbreak case definition varies with the outbreak under investigation. Please refer to the *Infectious Diseases Protocol, 2018* (or as current) for guidance in developing an outbreak case definition as needed.

The outbreak case definitions are established to reflect the disease and circumstances of the outbreak under investigation. The outbreak case definitions should be developed for each individual outbreak based on its characteristics, reviewed during the course of the outbreak, and modified if necessary, to ensure that the majority of cases are captured by the definition. The case definitions should be created in consideration of the outbreak definitions.

Outbreak cases may be classified by levels of probability (*i.e.*, confirmed and/or probable).

Clinical Information

Clinical Evidence

A clinical consultation is necessary in probable cases for verification of signs and symptoms.

Pharyngeal and rectal infections are mostly asymptomatic, but rectal chlamydia can be associated with rectal pain and discharge.

Symptomatic females may present with a mucopurulent endocervical discharge with edema, dysuria, dyspareunia, erythema and easily induced endocervical bleeding.

Symptomatic males may present with urethral discharge, dysuria and frequency, non-specific urethral symptoms such as redness, itching, and swelling.

Clinical Presentation

Chlamydia can be asymptomatic and may include pharyngeal and rectal infections. Individuals with rectal infections often experience rectal discharge and pain.¹

Males may present with urethral discharge, dysuria and frequency, non-specific urethral symptoms such as redness, itching, and swelling.^{1,3}

Females may present with cervical infection that includes the following signs and symptoms: a mucopurulent endocervical discharge with edema, dysuria, dyspareunia, erythema and easily induced endocervical bleeding.^{1,4}

Complications and sequelae include salpingitis pelvic inflammatory disease with subsequent risk of infertility. Salpingitis and pelvic inflammatory disease can also be symptoms of chlamydia requiring treatment.^{1,4}

Can present as chlamydial pneumonia and conjunctivitis (Ophthalmia neonatorum) in infants.^{1,4} For more information regarding chlamydial conjunctivitis in infants, please refer to the [Appendix 1: Case Definitions and Disease-Specific Information \(Ophthalmia neonatorum\)](#).

Laboratory Evidence

Laboratory Confirmation

Any of the following will constitute a confirmed case of *C. trachomatis* infection:

- Positive *C. trachomatis* culture
- Positive for *C. trachomatis* nucleic acid amplification test (NAAT)

Laboratory testing that constitutes a confirmed case of *C. trachomatis* infection but is not routinely offered in Ontario:

- Positive for *C. trachomatis* antigen
- Positive for *C. trachomatis* IgM antibodies (for diagnosis of *C. trachomatis* pneumonia in infants <three months of age only)

Approved/Validated Tests

- Consult with laboratory with regards to testing and appropriate specimens.

Indications and Limitations

- Commercially available approved/validated tests should only be used on

approved specimen types (e.g., cervical, urethral); results from non-approved specimen types would need validation.

- Culture has been the preferred method for medico-legal purposes. NAAT may be suitable, provided that positive results are confirmed by a different set of primers.

For further information about human diagnostic testing, contact the [Public Health Ontario Laboratories](#).

Case Management

In addition to the requirements set out in the Requirement #2 of the “Management of Infectious Diseases – Sporadic Cases” and “Investigation and Management of Infectious Diseases Outbreaks” sections of the *Infectious Diseases Protocol, 2018* (or as current), the board of health shall investigate cases to determine the source of infection. Refer to Provincial Reporting Requirements above for relevant data to be collected during case investigation.

Case management should also consider the [PIDAC Sexually Transmitted Infections Case Management and Contact Tracing Best Practice Recommendations \(2009, or as current\)](#).⁷

Treatment determined as per attending health care provider; refer to the [Sexual Health and Sexually Transmitted/Blood-Borne Infections Prevention and Control Protocol, 2018](#) (or as current) for a list of publicly funded STI medications, and the [Canadian Guidelines on Sexually Transmitted Infections](#) (2018, or as current), for treatment recommendations.^{6,4}

Contact Management

To help prevent (re)infection, partners need to be assessed, tested, treated, and counselled appropriately. Cases and contacts should abstain from unprotected sex until treatment of both partners is complete (i.e., after completion of a multiple-dose treatment or for seven days after single-dose therapy).⁴

For contact management of cases refer to the *Sexual Health and Sexually Transmitted/Blood-Borne Infections Prevention and Control Protocol, 2018* (or as current).⁶ For additional guidance on contact management refer to PIDAC Sexually Transmitted Infections Case Management and Contact Tracing Best Practice Recommendations (2009, or as current) and the Canadian Guidelines on Sexually Transmitted Infections (2018, or as current).^{7,4}

Outbreak Management

Please see the *Infectious Diseases Protocol, 2018* (or as current) for the public health management of outbreaks or clusters in order to identify the source of illness, manage the outbreak and limit secondary spread.

Prevention and Control Measures

Personal Prevention Measures

A non-judgmental and culturally sensitive risk assessment should be part of a comprehensive approach to the prevention and early detection of STIs. Issues to explore include the following:

- The range and frequency of various sexual practices (i.e. unprotected sex), taking ethnocultural and sexual minority status, and gender identity into account;
- History of STIs, including HIV, with awareness of the stigma and discrimination that come with these infections;
- History of injection drug use;
- Suboptimal screening in pregnant women.

Preventive measures include education about safer sex practices including use of condoms and early detection of infection by screening those at risk.⁴

Screening should be offered to those at-risk as per *the Sexual Health and Sexually Transmitted/Blood-Borne Infections Prevention and Control Protocol, 2018* (or as

current).⁶

Infection Prevention and Control Strategies

Refer to [PHO's website](#) to search for the most up-to-date information on Infection Prevention and Control (IPAC).

Disease Characteristics

Aetiologic Agent - *Chlamydia trachomatis* is an obligate intracellular bacterium causing genital infections and other forms of infections including chlamydial conjunctivitis and pneumonia.^{1,2}

Modes of Transmission - Sexual contact via oral, vaginal, cervical, urethral or anal routes; in children, exposure to infected genitals (consider the possibility of sexual abuse in these cases); newborns: during delivery from infected mother.^{1,4}

Risk factors for transmission include:⁴

- Sexual contact with a chlamydia-infected person.
- A new sexual partner or multiple partners in the past year.
- Previous STIs.
- Vulnerable populations (e.g., people who use injection drugs, incarcerated individuals, sex trade workers, street-involved youth etc.)

Incubation Period – From time of exposure to onset of symptoms is two to three weeks, but can be as long as six weeks.⁴

Period of Communicability - Unknown; may extend for months or longer if untreated, especially in asymptomatic persons; re-infections are common; effective treatment limits infectivity.¹ Individuals should abstain from unprotected sexual activity until treatment is complete (i.e., after completion of a multiple-dose treatment or for seven days after single-dose therapy).⁴

Re-infection is common (e.g., after 28 days). For surveillance purposes, if the four factors noted in the Provincial Case Definition for Chlamydia are met, health units may consider 28 days for re-infection.

Reservoir - Humans.¹

Host Susceptibility and Resistance - General susceptibility.¹

Please refer to the [PHO's Reportable Disease Trends in Ontario reporting tool](#) for the most up-to-date information on infectious disease trends in Ontario.

For additional national and international epidemiological information, please refer to the Public Health Agency of Canada and the World Health Organization.

Comments

Conjunctivitis in infants less than or equal to 28 days caused by *C. trachomatis* should be reported as ophthalmia neonatorum.

When considering re-infection, primary treatment failure and inadequate treatment please consider the following factors:

- Appropriate treatment provided considering Canadian Guidelines on Sexually Transmitted Infections;
- Treatment adherence;
- Necessary follow up completed (i.e. Test of cure undertaken if recommended);
- Avoidance of sexual activity during treatment period and seven days post treatment.

For surveillance purposes, if the above factors are met health units may consider 28 days for re-infection.

References

1. Heymann DL, editor. Control of Communicable Diseases Manual. 20 ed. Washington, D.C: American Public Health Association; 2015.
2. Committee on Infectious Diseases, American Academy of Pediatrics. Section 3: Summaries of Infectious Diseases: Chlamydial Infections. In: Kimberlin DW, Brady MT, Jackson MA, Long SS, editors. Red Book: 2018 Report of the

- Committee on Infectious Diseases. 31 ed. Itasca, IL: American Academy of Pediatrics; 2018.
3. Canadian AIDS Society. HIV Transmission: Guidelines for Assessing Risk, 5 ed. Ottawa, ON: Canadian AIDS Society; 2004. Available from: <http://www.cdnaids.ca/hiv-transmission-guidelines-for-assessing-risk/>
 4. Public Health Agency of Canada. Canadian Guidelines on Sexually Transmitted Infections [Internet]. Ottawa, ON: Her Majesty the Queen in Right of Canada; 2018 [cited May 15, 2018]. Available from: <https://www.canada.ca/en/public-health/services/infectious-diseases/sexual-health-sexually-transmitted-infections/canadian-guidelines/sexually-transmitted-infections.html>
 5. Health Protection and Promotion Act, R.S.O. 1990, Reg. 569, Reports, (2018). Available from: <https://www.ontario.ca/laws/regulation/900569>
 6. Ontario, Ministry of Health and Long-Term Care. Sexual Health and Sexually Transmitted/ Blood-Borne Infections Prevention and Control Protocol, 2018. Toronto, ON: Queen's Printer for Ontario; 2018. Available from: http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/protocolsguidelines.aspx
 7. Ontario, Ministry of Health and Long-Term Care, Provincial Infectious Diseases Advisory Committee. Sexually Transmitted Infections Case Management and Contact Tracing Best Practice Recommendations. Toronto, ON: Queen's Printer for Ontario; 2009. Available from: https://www.publichealthontario.ca/-/media/Documents/S/2009/sti-case-management-contact-tracing.pdf?sc_lang=en

Case Definition Sources

Centers for Disease Control and Prevention. National Notifiable Disease Surveillance System: Chlamydia Trachomatis, Genital Infections - 1996 Case Definition [Internet]. Atlanta, GA: U.S. Department of Health & Human Services; 1996 [cited May 2, 2014].

Available from: [Chlamydia Trachomatis, Genital Infections 1996 Case Definition | CDC](#)

Public Health Agency of Canada. Chlamydia (Chlamydia trachomatis Infection). In: Case Definitions for Communicable Diseases under National Surveillance. Canada Communicable Disease Report. 2009;35S2.

Public Health Agency of Canada. Canadian Guidelines on Sexually Transmitted Infections [Internet]. Ottawa, ON: Her Majesty the Queen in Right of Canada; 2018 [cited May 15, 2018]. Available from: <https://www.canada.ca/en/public-health/services/infectious-diseases/sexual-health-sexually-transmitted-infections/canadian-guidelines/sexually-transmitted-infections.html>

Document History

Revision Date	Document Section	Description of Revisions
April 2022	Entire Document	New template. Appendix A and B merged. No material content changes.
April 2022	Epidemiology: Occurrence section	Removed.
April 2022	ICD Codes	Removed.