

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

Infectious Disease Protocol

# **Appendix 1:**

## **Case Definitions and Disease-Specific Information**

### **Disease: Gonorrhea**

Effective: May 2022

# Gonorrhoea

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;<sup>6</sup>
- 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

*Neisseria gonorrhoeae* (*N. gonorrhoeae*) detected in an appropriate clinical specimen (e.g., urogenital, rectal or pharyngeal swab)

### 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. Consideration should also be given to laboratory screening of asymptomatic persons who have risk factors for *N. gonorrhoeae*.

Symptomatic females may experience an unusual vaginal discharge or bleeding, painful urination, lower abdominal pain and pain and/or bleeding during vaginal intercourse.

Males may experience urethral discharge, itching and painful urination.

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

### Clinical Presentation

Many cases are asymptomatic.<sup>2</sup> If symptoms do occur, they usually appear two to seven days after infection.<sup>3</sup>

In males the most common presenting symptom is a painful purulent urethral

discharge; dysuria and frequency as well as redness, itching and swelling of urethra.<sup>1,2</sup>

Females present with initial urethritis or cervicitis, frequently mild which can go unnoticed; abnormal vaginal discharge and post-coital bleeding may occur and then the infection can progress to pelvic inflammatory disease.<sup>1,2</sup>

Pharyngeal and rectal infections can occur among those engaging in oral and anal sex respectively.<sup>1</sup> Most rectal and pharyngeal gonococcal infections are asymptomatic, however, if symptoms are present in rectal infections individuals often display rectal discharge and pain.<sup>1,2,4</sup>

Can present as conjunctivitis (Ophthalmia neonatorum) in infants.<sup>1</sup> For more information regarding gonococcal conjunctivitis in infants, please refer to the Appendix for Ophthalmia neonatorum.

## Laboratory Evidence

### Laboratory Confirmation

Any of the following will constitute a confirmed case of Gonorrhoea:

- Positive *N. gonorrhoeae* culture
- Positive for *N. gonorrhoeae* nucleic acid amplification test (NAAT)
- Positive Gram stain negative intracellular diplococci on urethral smear (in males only)

### Approved/Validated Tests

- Standard culture for *N. gonorrhoeae*
- NAAT for *N. gonorrhoeae*
- Gram-negative diplococci on a smear of urethral discharge (male only)

### Indications and Limitations

- Drug sensitivity testing can only be performed on positive cultures and is not available for NAAT specimens.

- Refer to [Ontario Gonorrhoea Testing and Treatment Guide, 2<sup>nd</sup> Edition](#) (2018, or as current) for testing recommendations.

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.

Boards of health can choose to consult the [PIDAC Sexually Transmitted Infections Case Management and Contact Tracing Best Practice Recommendations](#) (2009, or as current) for best practice guidance on case management.<sup>8</sup>

Treatment as per attending health care provider; refer to the Ontario Gonorrhoea Testing and Treatment Guide, 2<sup>nd</sup> Edition (2018, or as current) for treatment and follow up recommendations.<sup>4</sup>

Refer to [Sexual Health and Sexually Transmitted/Blood-Borne Infections Prevention and Control Protocol, 2018](#) (or as current), Ontario Gonorrhoea Testing and Treatment Guide, 2<sup>nd</sup> Edition (2018, or as current);<sup>7,4</sup>

Boards of health can choose to consult PIDAC Sexually Transmitted Infections Case Management and Contact Tracing Best Practice Recommendations (2009, or as current) for additional guidance on contact management and follow-up.<sup>8</sup>

For further information regarding multi-drug resistant gonorrhoea please refer to the Ontario Gonorrhoea Testing and Treatment Guide, 2<sup>nd</sup> Edition (2018, or as current).<sup>4</sup>

For information on alternative treatment guidance options in individuals with contraindications to first-line treatment (i.e., cephalosporins given in combination with azithromycin or doxycycline) refer to Public Health Agency of Canada's Treatment of *N. gonorrhoeae* in response to the discontinuation of spectinomycin:

Alternative treatment guidance statement (2017, or as current).<sup>5</sup>

## Contact Management

For contact management of cases, refer to the *Sexual Health and Sexually Transmitted/Blood-Borne Infections Prevention and Control Protocol, 2018* (or as current), *Guidelines for Testing and Treatment of Gonorrhoea in Ontario* (2013, or as current), and *PIDAC Sexually Transmitted Infections Case Management and Contact Tracing Best Practice Recommendations* (2009, or as current).<sup>7,4,8</sup>

## 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

Preventative measures include counselling and risk education strategies about safer sex practices including use of condoms and early detection of infection by screening those at risk.<sup>2</sup>

Refer to *Sexual Health and Sexually Transmitted/Blood-Borne Infections Prevention and Control Protocol, 2018* (or as current), and the *Canadian Guidelines on Sexually Transmitted Infections* (2018, or as current).<sup>2,7</sup>

For screening and testing recommendations please refer to the *Ontario Gonorrhoea Testing and Treatment Guide, 2<sup>nd</sup> Edition* (2018, or as current).<sup>4</sup>

### 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** - Causative agent is the *Neisseria gonorrhoeae* (*N. gonorrhoeae*), a gram-negative diplococcus, commonly known as gonococcus.<sup>1</sup>

**Modes of Transmission** - Sexual contact via oral, vaginal, cervical, urethral or anal routes; in children, consider the possibility of sexual abuse; newborns: during delivery from infected mother.<sup>1,2,4</sup>

Risk factors for transmission include:

- Sexually active youth under 25 years of age;
- Men who have sex with men;
- Those who have had contact with a person with proven gonorrhea infection or a compatible syndrome;
- Sex workers and their sexual partners;
- Street-involved youth; and
- Individuals with a history of gonorrhea or other STI infection.<sup>4</sup>

**Incubation Period** – In individuals who display symptoms, the incubation period is usually 1-14 days.<sup>1</sup>

**Period of Communicability** - May extend for months if untreated; effective treatment usually ends communicability within hours.<sup>1</sup>

**Reservoir** - Humans.<sup>1</sup>

**Host Susceptibility and Resistance** - General susceptibility.

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

- Appropriate treatment provided considering Ontario Gonorrhoea Testing and Treatment Guide, 2<sup>nd</sup> Edition (2018, or as current);<sup>4</sup>
- Treatment adherence;
- Necessary follow up completed (i.e., test of cure undertaken if

recommended);

- Avoidance of sexual exposure during treatment period and 7 days post treatment.

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

Please refer to [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 *N. gonorrhoeae* should be reported as ophthalmia neonatorum.
- Gonorrhea infections are asymptomatic in up to 50% of females and 10% of males.
- For screening and testing recommendations please refer to the Ontario Gonorrhea Testing and Treatment Guide, 2<sup>nd</sup> Edition (2018, or as current).
- When considering re-infection, primary treatment failure and inadequate treatment please consider the following factors:
  - Appropriate treatment provided considering Ontario Gonorrhea Testing and Treatment Guide, 2<sup>nd</sup> Edition (2018, or as current);
  - Treatment adherence;
  - Necessary follow up completed (i.e., test of cure undertaken if recommended); and
  - Avoidance of sexual exposure during treatment period and 7 days post treatment.
- For surveillance purposes, if the above factors are met health units may consider 28 days for re-infection.



## References

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## Case Definition Sources

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# Document History

<b>Revision Date</b>	<b>Document Section</b>	<b>Description of Revisions</b>
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.