

# BCCDC Certified Practice Decision Support Tool: Gonorrhea (GC)

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This BCCDC decision support tool (DST) aims to provide more equitable, inclusive, and affirming care for all people, particularly for transgender, gender-diverse, sexually diverse, and Two-Spirit peoples. While anatomy and site-specific testing language are used throughout this document, nurses should always strive to foster safer conversations and gender-affirming care by using an individual's chosen terminology when providing STI assessment and management.

## Scope

Registered Nurses with **Reproductive Health – Sexually Transmitted Infections** Certified Practice designation (RN[C]) are authorized to manage, diagnose, and treat individuals with **urogenital**, **anogenital**, and **pharyngeal** gonorrhea.<sup>1</sup>

## Etiology

*Neisseria gonorrhoeae* (N. gonorrhoeae or GC) is a gram-negative intracellular diplococcus bacterium. It is often classified as Uncomplicated or Complicated. Uncomplicated infections are urogenital, anogenital, pharyngeal, and ocular gonococcal infections that are not associated with bacteremia or ascending spread of the pathogen to other organs. Complicated infections can be either local or disseminated. Local infections are those that extend beyond the primary site of infection, such as epididymitis and pelvic inflammatory disease. Disseminated infections are systemic complications which spread from one part of the body to another and may include arthritis-dermatitis syndrome and rarely endocarditis or meningitis.<sup>2, 3</sup>

## Epidemiology:

Gonorrhea is the second most reported sexually transmitted infection (STI) in Canada. Since 2012, the number of reported cases has been steadily increasing.<sup>2</sup>

For the most up-to-date data on reportable STIs within British Columbia, see the [BCCDC Clinical Prevention Services surveillance dashboard](#)

## Risk Factors

Sexual contact where there is transmission through the exchange of body fluids.<sup>2-5</sup>

## Clinical Presentation

### Physical Assessment <sup>2-5</sup>

GC infection can be asymptomatic in all sites; however, urethral GC infections are often symptomatic, while pharyngeal, vaginal and rectal infections are often asymptomatic.

- Inflammation of the tissues around the eye including acute redness, purulent discharge and crusting (symptoms of conjunctivitis); can be caused from gonococcal infection in the eye, consult with or refer to physician or nurse practitioner (NP) for symptoms of conjunctivitis
- Sore throat (throat infection is most often asymptomatic)
- Urethral symptoms such as, discharge (usually purulent, may be copious), itch or awareness
- Painful (dysuria) or difficult urination
- Inflammation of the rectum, rectal pain and anal discharge (symptoms of proctitis)

In those with penile anatomy:

- Urethral discharge (usually purulent, may be copious)
- Dysuria or difficult urination
- Urethral itch
- Testicular pain or symptoms of epididymitis

In those with vaginal/vulvar anatomy:

- Abnormal change in vaginal discharge
- Lower abdominal pain (symptoms of pelvic inflammatory disease)
- Abnormal vaginal bleeding
  - Vagina with or without cervix: after intercourse or between menstrual periods
  - Vagina after vaginoplasty: abnormal vaginal bleeding is not always STI-related as longer postoperative symptoms of bleeding could be indicative of hypergranulation; refer to the STI history and physical exam information in the [BCCDC Certified Practice Decision Support Tool Assessment and Diagnostic Guideline: STI](#) for more information, and especially for individuals experiencing pain, discharge, or bleeding in the first 3 to 4 month
- Dysuria
- Cervical discharge
- Bartholinitis
- Deep dyspareunia

## Diagnostic and Screening Tests <sup>6-9, 12</sup>

Full STI screening is recommended. See *BCCDC Certified Practice Decision Support Tool Assessment and Diagnostic Guideline: STI*

GC C&S is indicated for all individuals who are symptomatic and/or are a contact to gonorrhea.

### Throat:

- For individuals who are symptomatic and/or are a contact to GC, collect:
  - GC culture & sensitivity (C&S) swab
  - GC NAAT swab
- For asymptomatic individuals who require screening only, collect:
  - GC NAAT swab, if indicated in sexual health history

### Penile urethra (with or without phalloplasty or metoidioplasty with urethral lengthening):

- For individuals who are symptomatic with urethral discharge and/or are a contact to GC, collect specimen from visible discharge at the meatus – insertion into the urethra is not required:
  - GC C&S swab
  - GC NAAT urine: ideally the individual should not have voided in the previous 1-2 hours; collect first void 10-20ml

### Vagina:

- **With cervix:**
  - Asymptomatic: GC NAAT vaginal (preferred) or cervical swab
  - Symptomatic or contact to GC: a full pelvic examination is recommended to collect GC C&S cervical (preferred) or vaginal swab (when unable to perform pelvic exam) *and* GC NAAT vaginal (preferred) or cervical swab
- **After total hysterectomy (no cervix):**
  - Asymptomatic: GC NAAT urine (preferred) or vaginal swab
  - Symptomatic or contact to GC: GC C&S vaginal swab **and** GC NAAT urine specimen (preferred) or vaginal swab
- **After vaginoplasty:**
  - GC NAAT urine: ideally the individual should not have voided in the previous 1-2 hours; collect first void 10-20ml
  - Asymptomatic/symptomatic-GC NAAT urine

## Rectum

- For individuals who are symptomatic and/or are a contact to GC, collect:
  - GC C&S swab
  - GC NAAT swab
- For asymptomatic individuals who require screening only, collect:
  - GC NAAT swab, if indicated in sexual health history

## Notes

- 1) If urethral swabs are indicated (e.g., for symptomatic individuals), the urine specimen is collected after the urethral swab.
- 2) GC NAAT urine specimens may be collected as the only diagnostic test in agencies or circumstances where:
  - GC C&S is unavailable, and the individual is symptomatic
  - Individual is asymptomatic
  - If individual declines recommended testing of cervical or vaginal sites
- 3) In general, self-collected vaginal swabs are indicated when a full or partial pelvic examination is not required or appropriate. Clinician-collected vaginal swabs are generally done when a partial or full pelvic examination is required or requested by the individual.
- 4) Recent data show that NAAT vaginal swabs for *C. trachomatis* and *N. gonorrhoeae* identify as many or more infections over cervical, urethral, or urine specimens.

## Management

### Diagnosis & Clinical Evaluation <sup>2-5, 11, 12</sup>

- Treat all individuals with confirmed gonorrhea by positive laboratory result
- Collect culture for ALL positive sites
- If providing treatment for an individual with confirmed positive cervical, vaginal or urine laboratory test for GC, assess for signs of pelvic inflammatory disease (PID) through symptoms inquiry and/or physical assessment (bimanual exam), if indicated.

### Consultation and Referral

Consult with or refer to a physician or NP in the following situations:

- Individual is pregnant and/or breast-/chest feeding
- Assessment indicates PID

- Ocular gonorrhea is suspected
- Disseminated (complicated) gonorrhea is suspected

## Indeterminate Results

Indeterminate or inconclusive results may be occasionally received. An invalid result (e.g. damaged in transport, insufficient volume) indicates testing was not completed. Repeat testing is recommended for invalid specimens. Testing recommendations and treatment for indeterminate results are below:

Results	Testing Recommendations	Treatment
Indeterminate Gonorrhea NAAT  Negative culture	Repeat NAAT testing is not recommended as results often remain indeterminate.  Consider as a potential case.	Offer as per Treatment section below.  For individuals declining treatment, encourage routine screening and recommend strategies to prevent transmission of possible infection
Indeterminate Gonorrhea NAAT  No culture done at time of testing	Offer testing with a gonorrhea culture.  Repeat NAAT testing is not recommended as the results often remain indeterminate.	Offer as per Treatment section below.  For individuals declining treatment, encourage routine screening and recommend strategies to prevent transmission of possible infection
Results	Testing Recommendations	Treatment
Indeterminate Gonorrhea NAAT  Positive culture	No repeat testing recommended.  Consider a positive case.	As per Treatment section below.

## Treatment <sup>10-13</sup>

Treatment	Notes
<b>First Choice</b> Ceftriaxone 500 mg IM as a single dose (monotherapy)	<b>General:</b> <ol style="list-style-type: none"> <li>1. The move toward monotherapy is driven by antibiotic stewardship and increasing rates of azithromycin resistance. If chlamydia test is negative at time of diagnosis, concurrent treatment for chlamydia is not recommended.</li> <li>2. Future GC Treatment regimens will continue to reflect national recommendations in association with local GC antimicrobial resistance (AMR) trends.</li> <li>3. Consult a physician or NP if individual is unable to use cefixime, ceftriaxone, or azithromycin.</li> <li>4. See BCCDC <a href="#">STI Medication Handouts</a> for further medication reconciliation and individual information.</li> <li>5. See <i>Monitoring and Follow-up</i> section for test-of-cure (TOC) requirements.</li> </ol> <b>Allergy and Administration</b> <ol style="list-style-type: none"> <li>1. DO NOT USE ceftriaxone or cefixime if history of allergy or anaphylaxis to cephalosporins.</li> <li>2. DO NOT USE azithromycin if history of allergy to macrolides.</li> <li>3. DO NOT USE doxycycline if pregnant and/or allergic to doxycycline or other tetracyclines.</li> <li>4. If history of penicillin reaction, refer to <a href="#">Beta-Lactam Cross Reactivity Chart</a>, consult physician or NP if needed.</li> <li>5. If an azithromycin or doxycycline allergy or contraindication exists, consult with/refer to a physician or NP for alternate treatment.</li> <li>6. Azithromycin and doxycycline are sometimes associated with gastrointestinal adverse effects. Taking medication with food and plenty of water may minimize adverse effects.</li> <li>7. The preferred diluent for ceftriaxone IM is 3.3 ml lidocaine 1%.</li> <li>8. DO NOT USE lidocaine if history of allergy to lidocaine or other local anesthetics. Use cefixime PO as alternate treatment.</li> </ol>
<b>Alternate</b> Cefixime 800 mg orally in a single dose AND Doxycycline 100 mg orally twice per day for 7 days OR Azithromycin 1 g orally in a single dose	

Treatment	Notes
	<p>9. For IM injections of ceftriaxone the <a href="#">ventrogluteal site</a> is preferred .</p> <p>10. Advise the individual to remain in the clinic for at least 15 minutes- post IM injection in case of anaphylactic reaction to treatment. Provide anaphylaxis treatment as required, using BCCDC <a href="#">CDC Manual- Chapter 2: Immunization – Part 3: Management of Anaphylaxis in a Non-Hospital Setting</a>, November 2016.</p> <p>11. If serious allergic reaction develops including difficulty breathing and/or severe itchiness, have the individual inform clinic staff immediately. If symptoms develop after leaving the clinic, advise the individual to seek immediate emergency care.</p> <p>12. Advise individual they may experience pain redness and swelling at the injection site. If any of these effects persist or worsen advise to contact health care provider.</p> <p>13. Recent data has emerged regarding azithromycin and QT prolongation. Although rare, it is more significant in older populations, those with preexisting heart conditions, arrhythmias, or electrolyte disturbances.</p> <p>It is unclear how significant these findings are in young to mid-age healthy adults consuming a one-time dose of azithromycin; however, please use the following precautions:</p> <p>Consult with or refer to an NP or physician if the individual:</p> <ul style="list-style-type: none"> <li>• Has a history of congenital or documented QT prolongation.</li> <li>• Has a history of electrolyte disturbance in particular hypokalemia, hypomagnesaemia.</li> <li>• Has clinically relevant bradycardia, cardiac arrhythmia, or cardiac insufficiency.</li> <li>• Is on any of the following medications: <ul style="list-style-type: none"> <li>○ Antipsychotics: pimozide (Orap<sup>®</sup>), ziprasidone (Zeldox<sup>®</sup>)</li> <li>○ Cardiac: dronedarone (Multaq<sup>®</sup>)</li> <li>○ Migraine: dihydroergotamine (Migranal<sup>®</sup>), ergotamine (Cafergot<sup>®</sup>)</li> </ul> </li> </ul>

## Monitoring & Follow-Up<sup>11,12</sup>

Repeat testing at 6 months is recommended due to potential high risk of re-infection.

Test of cure (TOC) using gonorrhea NAAT at least 4 weeks after treatment is recommended in the following situations:

- Pregnancy
- Pharyngeal infection
- If second choice treatment was used
- If person has persistent symptoms or treatment failure is suspected

TOC using gonorrhea culture is only useful when a positive baseline culture was completed.

## Partner Notification

- **Reportable:** Yes.
- **Trace-back period:** Previous 60 days. If no sexual partner in trace-back period, complete follow up for the last sexual contact.
- **Recommended partner follow-up:** empirically test and treat all contacts. See [\*BCCDC Certified Practice Decision Support Tool Treatment of STI Contacts.\*](#)

## Potential Complications<sup>2-5</sup>

- Epididymitis
- Infertility
- Sexually-acquired reactive arthritis
- Disseminated gonococcal infection (DGI)
- Pelvic inflammatory disease (PID)
- Ectopic pregnancy
- Chronic pelvic pain

## Additional Education

- Abstaining from sexual activity during the 7-day course of treatment or for 7 days post-single-dose therapy for individuals and their contacts.



- Informing last sexual contact AND any sexual contacts within the last 60 days that they require testing and treatment.
- [Sexually Transmitted & Blood-Borne Infections: Standard Education](#)
- [Antibiotic Resistance in Gonorrhea](#)

## References

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