GONORRHEA

Case definition

CONFIRMED CASE- GENITAL INFECTIONS

Laboratory confirmation of infection in genitourinary specimens:

- Detection of *Neisseria gonorrhoeae* by culture

OR

- Detection of *N. gonorrhoeae* nucleic acid

CONFIRMED CASE- EXTRA GENITAL INFECTIONS

Laboratory confirmation of infection from pharynx, rectum, joint, conjunctiva, blood and other extra-genital sites:

- Detection of *Neisseria gonorrhoeae* by culture

OR

- Detection of *N. gonorrhoeae* nucleic acid

CONFIRMED CASE- PERINATALLY ACQUIRED INFECTIONS

Laboratory confirmation of infection from a neonate in the first four weeks of life leading to the diagnosis of gonococcal conjunctivitis, scalp abscess, vaginitis, bacteremia, arthritis, meningitis or endocarditis:

- Detection of *Neisseria gonorrhoeae* by culture

OR

- Detection of *N. gonorrhoeae* nucleic acid

Causative agent

Neisseria gonorrhoeae, a Gram-negative diplococci.

Source

Exudate and secretions of infected mucosal surfaces

Incubation

2-7 days or longer

Transmission

Transmission occurs by direct sexual contact from one sexual partner, via oral, vaginal, urethral, rectal or cervical routes. The bacteria may also spread from

the primary sites, causing infection of the uterus (endometritis); the fallopian tubes (salpingitis); the abdominal cavity (peritonitis); the glands of the vulvar area (bartholinitis); and the testicles in men (epididymitis).

Occasionally the infection can be spread to infants if the mother is infected at the time of birth. Infection in the newborn usually involves the eye. If genital, rectal, or oral infections are diagnosed in prepubescent children, sexual abuse must be considered. For more information regarding sexual abuse, refer to the Sexual Abuse in Peripubertal and Prepubertal Children section of the *Canadian Guidelines on Sexually Transmitted Infections*: ***phac-aspc.gc.ca/std-mts/sti-its/cgsti-ldcits/section-6-5-eng.php***

Communicability

The infection may extend for months as long as the bacteria are present in the body, even if the individual is asymptomatic. Effective therapy ends communicability within hours.

Symptoms

- Infection is often asymptomatic in females and symptomatic in males. In both males and females, rectal and pharyngeal infections are more likely to be asymptomatic.
- For a list of neonate and infants, children, youth and adult gonococcal manifestations and major sequelae, see the latest edition of the ***Canadian Guidelines on Sexually Transmitted Infections***.

Females	Males
Vaginal discharge	Urethral discharge
Dysuria	Dysuria
Lower abdominal pain	Urethral itch
Abnormal vaginal bleeding	Testicular pain and/or swelling or symptoms of epididymitis
Deep dyspareunia	Rectal pain and discharge with proctitis
Rectal pain and discharge if proctitis	

Diagnostic testing (endorsed by Infectious Disease Expert Group, March/2014):

- In general, NAAT testing is recommended for general screening and diagnosis of gonorrhea in Nova Scotia.
- Routine test of cure is not necessary when a recommended treatment has been given and symptoms completely resolve. However, under the following circumstances, follow-up **cultures** for test of cure must be completed within 3-7 days after completion of therapy:
  - A previous treatment for gonorrhea has ***failed***
  - Gonococcal antimicrobial resistance has been documented in the case's isolate
  - Patient compliance with treatment is poor or uncertain
  - Pharyngeal or rectal gonorrhea is suspected or confirmed
  - There is re–exposure to an untreated partner
  - There is concern over a false-positive NAAT for gonorrhea
  - Infection occurs during pregnancy
  - PID or disseminated gonococcal infection is diagnosed
  - The case is a woman undergoing therapeutic abortion (TA) who has a positive test result for gonococcal infection, as they are at increased risk of developing pelvic inflammatory disease
  - The case is a child

If details around the collection, transport, and choice of specimens are required, refer to the Provincial Public Health Laboratory Network of Nova Scotia's (PPHLN) ***Microbiology Users Manual***.

Treatment

The recommended treatment for gonorrhea has been updated in response to increasing antimicrobial resistance. Combination gonorrhea infection therapy is recommended and includes effective treatment for chlamydia due to high rates of co-infections.

The recommended treatment of uncomplicated anogenital and pharyngeal infection in adults and youth ≥ 9 years of age* is:

- ceftriaxone IM plus azithromycin PO

  OR

- cefixime PO plus azithromycin PO.

*See the most recent version of the *Canadian Guidelines on Sexually Transmitted Infections* for extensive information about treatment of gonococcal infections (including specific treatment recommendations for men who have sex with men (MSM), children < 9 years of age, neonates, pregnant and nursing mothers, and recommended management of primary cephalosporin treatment failures).

PUBLIC HEALTH MANAGEMENT & RESPONSE

Case Management

CASE FOLLOW UP

Determine if follow-up culture for test of cure is required and encourage client to seek testing if appropriate (see diagnostic testing section).

Re-screening six months post treatment is recommended to rule out a re-infection.

Education

At the time of diagnosis, reviewing and providing education on prevention practices should include discussion of:

- The risk of re-infection,
- The need for the index case and his/her contact(s) to abstain from unprotected sex until at least 3 days after completion of treatment and the case/contact(s) are asymptomatic (i.e., signs and symptoms have resolved),
- Strategies for effective prevention practices (refer to the Primary Care and Sexually Transmitted Infections chapter of the *Canadian Guidelines on Sexually Transmitted Infections*: ***phac-aspc.gc.ca/std-mts/sti-its/cgsti-ldcits/section-2-eng.php***), **AND**
- Prevention of reproductive sequelae.

Individuals with concerns about STIs and/or pregnancy prevention should be provided with information to encourage consistent safe sexual practices.

Contact Tracing

All partners who have had sexual contact with the client within at least 60 days before the onset of symptoms or date of specimen collection (if the index case is asymptomatic) should be notified, tested and treated with the same regimen as the client (regardless of clinical findings and without waiting for test results).

The length of time for the trace-back period should be extended in the following three circumstances:

- To include additional time between the date of testing and date of treatment,
- If the index case states that there were no partners during the recommended trace-back period, the most recent partner should be notified, and
- If all partners traced (according to recommended trace-back period) test negative, the last partner prior to the trace-back period should be notified.

When a neonate is confirmed to have gonorrhea, the mother and her most recent sexual partner plus any other partners within 60 days of delivery should be notified/contacted, clinically evaluated and empirically treated regardless of clinical findings and without waiting for test results.

All individuals named as contacts in suspected sexual abuse cases should be notified/contacted and clinically evaluated; prophylactic treatment may or may not be offered and the decision to treat should be based on history, clinical findings and test results.

Surveillance forms

Reporting forms for gonorrhea can be located at this link: ***novascotia.ca/dhw/populationhealth/surveillanceguidelines***

General Information Sheet

REFERENCES:

Baker, C.J., Kimberlin, D.W., Long, S.S., & Pickering, L.K. (2012). Red Book 2012 Report of the Committee on Infectious Diseases. Illinois: American Academy of Pediatrics, 336-344

Centers for Disease Control, Morbidity and Mortality Weekly Report; Recommendations and Reports. U.S. Department of Health and Human Services, Public Health Services, Vol.38, No. S-8, September 1989.

Heymann, D.L. (2008). Control of Communicable Diseases Manual. Washington: American Public Health Association, 261-265.

Public Health Agency of Canada. (2010). Canadian Guidelines on Sexually Transmitted Infections. Retrieved from ***phac-aspc.gc.ca/std-mts/sti-its/cgsti-ldcits/index-eng.php***

Principles and Practice of Infectious Diseases, Third Edition, 1990. Mandell, G., Douglas, Gordon Jr. and John Bennett. Churchill Livingstone, New York.

Provincial Microbiology Users Manual

Working Guide: Notifiable Disease Reporting System in Nova Scotia. 1998. Nova Scotia Department of Health.