

Non-Gonococcal Urethritis

Revision Dates

Case Definition	January 2013
Reporting Requirements	January 2013
Remainder of the Guideline (i.e., Etiology to References sections inclusive)	January 2013

Case Definition

Confirmed Case

- Inflammation of the urethra with or without a mucoid, muco-purulent or purulent urethral discharge

AND/OR

- ≥ 5 polymorphonuclear leukocytes per oil immersion field (x1000) in ≥ 5 non adjacent, randomly selected fields in a smear of urethral secretions (if available)

AND

- Absent gram-negative intracellular diplococci on gram stain of urethral secretions (if available)

AND

- Negative tests for gonorrhea and chlamydia.

Superseded

Reporting Requirements

1. Physicians, Health Practitioners and others

- Physicians, nurses, nurse practitioners, midwives, persons in charge of an institution, or operators of a supportive living accommodation as listed in Section 22(3) and 22(4) of the *Public Health Act*, shall notify the Chief Medical Officer of Health (CMOH) (or designate) of all confirmed cases in the prescribed form by mail, fax or electronic transfer within 48 hours (two days). The completed Notification of Sexually Transmitted Infection (STI) form shall be forwarded to the CMOH (or designate) within two weeks of notification. The Notification of STI Form will include:
 - index patient information,
 - laboratory/clinical findings,
 - treatment details and
 - contact information and their treatment.
- For out-of-zone, out-of-province and out-of-country reports, the following information should be forwarded to the CMOH (or designate) by phone, fax or electronic transfer within 48 hours (two days) including:
 - name,
 - date of birth,
 - current health care number,
 - current address of residence and phone number,
 - attending physician (locally and out-of-province),
 - positive laboratory report (faxed) and
 - date of exposure.

2. Laboratories

- Section 23(b) of the *Public Health Act* (1) requires that all laboratories, including the Provincial Laboratory for Public Health (ProvLab), shall report all positive laboratory results by mail, fax or electronic transfer within 48 hours (two days) to the:
 - CMOH (or designate), and
 - Attending/ordering physician or health practitioner.

3. Alberta Health Services and First Nations and Inuit Health Branch

- The Medical Officer of Health (MOH) (or designate) is responsible for ensuring investigation, treatment and follow-up of all reported confirmed cases and contacts.

4. Additional Reporting Requirements for Physicians, Health Practitioners and Others

- In all cases, where a person under 18 is suspected or confirmed to have an STI, an assessment should be carried out by the clinician to determine if additional reporting is required.
 - **To Child and Family Services**
The clinician should determine whether there are reasonable and probable grounds to believe that they are in contact with “a child in need of intervention” [as per Section 1(2) of the [Child, Youth and Family Enhancement Act](#)] and shall report to a director pursuant to Section 4 of the CYFEA.(2)

Reporting is done by contacting the local Child and Family Services office or calling the CHILD ABUSE HOTLINE: 1-800-387-5437 (KIDS). For local office contact information see: www.child.alberta.ca/home/782.cfm

○ **To Law Enforcement Agency**

Consent is a key factor in determining whether any form of sexual activity is a criminal offence. Children under 12 do not have the legal capacity to consent to any form of sexual activity. The law identifies the exception for minors under age 16 years as having the ability to consent, in “close in age” or “peer group” situations. The law recognizes that the age of consent for sexual activity is 16.

Reporting is done by contacting your local City Police Detachment or RCMP Detachment <http://www.rcmp-grc.gc.ca/ab/det-eng.htm>.

For additional information see: Frequently Asked Questions:

- Age of Consent to Sexual Activity www.justice.gc.ca/eng/dept-min/clp/faq.html (3)
- The Canadian Criminal Code www.laws-lois.justice.gc.ca/eng/acts/C-46/ (4)

Superseded

Etiology

Non-gonococcal urethritis (NGU) is one of the most common STI reported in men. Yet, in many cases (20 – 50% of cases) (5) the cause of the infection is not identified. When causal agents are identified, they may include *Mycoplasma genitalium* (15 – 25% of cases), *Ureaplasma urealyticum* (<15% of cases), *Trichomonas vaginalis* (approximately 5 – 15% of cases) and more rarely, herpes simplex virus (2 – 4% of cases).(6)

Clinical Presentation

Symptoms of NGU are often mild. Infection generally presents with dysuria, urethral discharge (may range from clear to mucopurulent), or urethral itching/meatal erythema. Up to 25% of cases are asymptomatic. (7) Occasionally, the onset may be more acute manifesting with dysuria, frequency and copious purulent discharge. Proctitis and pharyngitis may develop after rectal and orogenital contact. (8) Epididymo-orchitis, prostatitis and sexually acquired reactive arthritis/Reiter's syndrome have also been reported (9) Without treatment, NGU caused by *Ureaplasma urealyticum* resolves in 1 – 6 months. (7)

Diagnosis

Diagnosed by examining urethral discharge. The diagnosis is usually based on failure to demonstrate *Neisseria gonorrhoeae* or *Chlamydia trachomatis* by smear or culture.

Epidemiology

Reservoir

The only known reservoir is humans. (10)

Transmission

Direct sexual contact. (10)

Incubation Period

The incubation period is 1 – 5 weeks (usually 2 – 3 weeks) after sexual contact. (7)

Period of Communicability

Unknown. (6)

Host Susceptibility

Susceptibility is universal. Recurrences are common. (6)

Occurrence

General

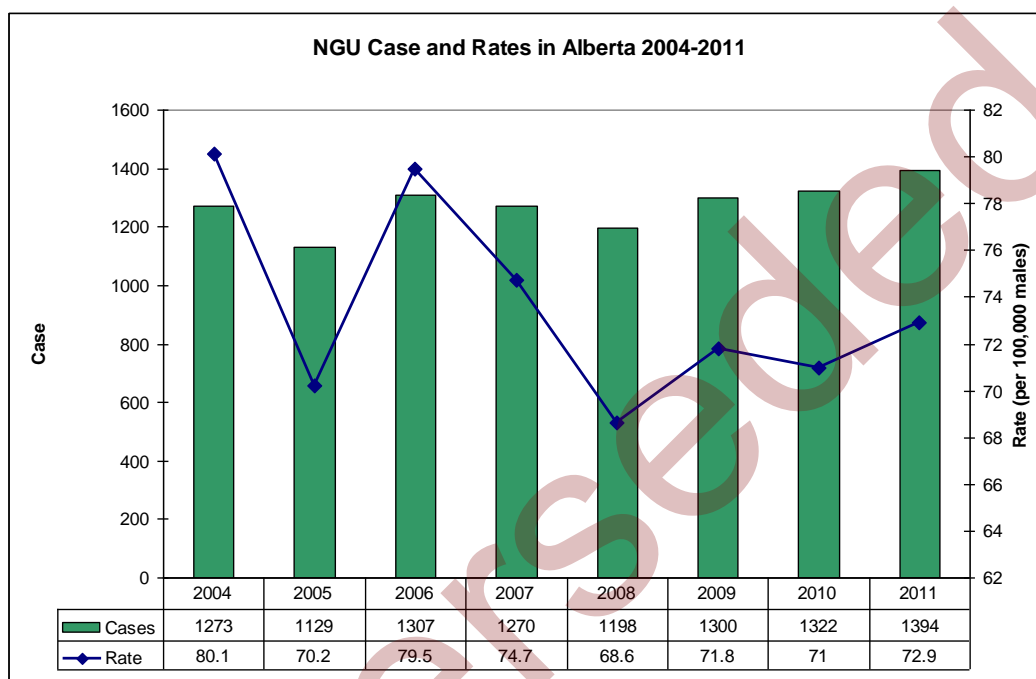
NGU is one of the most common STI. It occurs worldwide. In the United States and most of the developed world NGU is more common than gonorrhoea. There is an increase in incidence in the summer months presumably because of a seasonal increase in sexual activity. Most of the cases are seen among college students. (11)

Canada

NGU is not nationally reportable. (7)

Alberta

In 2011 in Alberta, NGU is the third most frequently reported STI, after chlamydia and gonorrhoea. (12) Since 2004, case numbers have ranged from 1,200 – 1,400 annually. The annual rate fluctuates from 69 – 80 cases per 100,000 males. Males aged 20 – 24 years have the highest rates (267.8/100,000 males) of reported NGU, followed by males aged 25 – 29 years (240/100,000 males).



Key Investigation

Single Case

The diagnosis and treatment is performed by community physicians (in the majority of cases) and STI Clinics (Edmonton, Calgary, Fort McMurray).

- Determine the presence or absence of symptoms.
- Determine if risk factors for NGU are present:
 - sexual contact with person(s) with known infection or compatible syndrome,
 - new sexual partner or more than two sexual partners in preceding year,
 - previous STI,
 - vulnerable populations (e.g., sexually active under 25 years of age, use of non-barrier contraception, injection drug use or other substance abuse, incarcerated individuals, sex workers and their clients, street involved/homeless, Aboriginal ethnicity, anonymous sexual partnering, victims of sexual assault, men who have sex with men (MSM)).
- Offer testing for HIV and other STI.
- Counsel and identify partners, including locating information.

Control

Management of a Case

- Cases should be interviewed for history of exposure, risk assessment, and sexual partner(s) identification.
- All cases should be instructed about infection transmission. Patients should be counseled about the importance of abstaining from unprotected intercourse until 7 days after completion of treatment of both case and partner(s). (7)
- Sexual assault in adults should be managed in conjunction with local Sexual Assault Services and other appropriate community support services.
- All cases should be provided with individualized STI prevention education, targeted at developing knowledge, skills, attitudes and behaviors to reduce the risk and prevent recurrences of STI.
- Immunization against hepatitis A may be recommended. Refer to Alberta Immunization Policy for immunization eligibility. (13)
- Immunization against hepatitis B is recommended if not already given. Refer to Alberta Immunization Policy for immunization eligibility. (13)
- Provincially funded medication for treatment is provided to physicians and STI clinics treating STI by STI Services.
- All patients with a notifiable STI qualify for provincially funded medications.
- STI Services will send replacement medication upon receipt of a Notification of STI Form when the physician mailing address is indicated on the form.
- Physicians and STI clinics may order additional quantities of medication by contacting STI Services.

Recalcitrant Patients

- The *Public Health Act* (sections 39 through 52) (1) authorizes detention of recalcitrant patients for medical examination, treatment and/or counseling.
- The CMOH [or designate (section 13(3) of the *Public Health Act*)] or MOH may issue a certificate to detain an individual who is believed to be infected and refuses or neglects to comply with treatment.
- There must be proof of infection or contact with an infected person and documentation of failure to comply with prescribed treatment and medical examination or non-compliance for testing and/or treatment.

Treatment of a Case

- All patients should be tested for gonorrhoea and chlamydia.
- If NGU is diagnosed clinically, immediate treatment is recommended. **Treat presumptively for gonorrhoea and chlamydia pending laboratory results** (see treatment for chlamydia and gonorrhoea).
- If the patient is already known to be negative for gonorrhoea, treat only for chlamydia.
- If symptoms persist or recur after completed therapy (1 week after initiation of therapy), the patient should be re-evaluated.
- Patients who remain persistently symptomatic 3 – 4 weeks after treatment for gonorrhoea and chlamydia and in whom a diagnosis of NGU has been made and persistent or repeat infection with gonorrhoea has been ruled out should be treated with doxycycline 100 mg po BID x 7 days.
- Note that a case is classified as NGU for surveillance purposes if the case meets clinical criteria for urethritis and tests are negative for gonorrhoea and chlamydia OR if no tests for gonorrhoea or chlamydia are done.

Indications	Empiric treatment for NGU (no tests done or specimens collected but test results not available)		Empiric treatment for NGU (negative tests for gonorrhea and chlamydia)
Preferred	Heterosexual	MSM	Azithromycin 1 g po as a single dose
	Cefixime 800 mg po as a single dose PLUS Azithromycin 1 g po as a single dose.	Ceftriaxone 250 mg IM as a single dose PLUS Azithromycin 1 g po as a single dose.	
Alternate	Heterosexual	MSM	Doxycycline 100 mg po BID for 7 days
	Spectinomycin 2 g IM as a single dose PLUS Azithromycin 1 g po as a single dose OR Azithromycin 2 g* po as a single dose.	Cefixime 800 mg po as a single dose PLUS Azithromycin 1 g po as a single dose OR Azithromycin 2 g* po as a single dose.	

* Since azithromycin resistance has been reported, this agent should only be used as monotherapy if there is a strong contra-indication to the use of cephalosporins (e.g., history of anaphylactic reaction to penicillin or allergy to cephalosporin).

Considerations:

- If symptoms persist or recur after completed therapy (1 week after initiation of therapy), the patient should be re-evaluated.
- Patients who remain persistently symptomatic 3-4 weeks after treatment for gonorrhea and chlamydia and in whom a diagnosis of NGU has been made and persistent or repeat infection with gonorrhea has been ruled out should be treated with doxycycline 100 mg po BID x 7 days.

Pediatric Cases

- If the case is <14 years of age a referral to a pediatrician should be made.
- **Because of the high risk of sexual abuse, it is recommended that all children <14 years of age be managed in consultation with a referral centre in either:**
 - Edmonton:
Child and Adolescent Protection Centre
Stollery Children's Hospital, 1C4.24 Mackenzie Health Sciences Centre
8440-112 Street
Edmonton, Alberta T6G 2B7
Tel: 780-407-1240
 - OR
 - Calgary:
Child Abuse Service
Child Development Centre
Suite 200, 3820-24 Ave NW
Calgary, Alberta. T2N 1N4
Tel: 403-955-5959

Management of Contacts

Partner Notification

- Partner notification will identify those at risk, reduce disease transmission/re-infection and ultimately prevent disease sequelae.
- **It is mandated under the *Communicable Disease Regulations* that every attempt is made to identify, locate, examine and treat partners/contacts of all cases. (1)**
- Physician/case manager are required to provide partner names and locating information on the Notification of STI Form and forward to STI Services.
- If testing and/or treatment of partners is not confirmed on the Notification of STI Form, STI Services will initiate follow up by a Partner Notification Nurse.
- Partner Notification Nurses (PNN) are specially trained to conduct notification of partners and contacts in a confidential manner that protects the identity of the index case.
- The phone number for your designated PNN is available by calling STI Services at: 780-735-1466 or 1-888-535-1466.
- All sexual partners of the index case from 60 days prior to symptom onset or date of diagnosis (if asymptomatic) should be tested and empirically treated regardless of clinical findings and without waiting for test results. If there was no partner during this period, then the last partner should be tested and treated.
- All contacts should be screened for HIV and other STI.
- All contacts should be instructed about infection transmission.
- All contacts should be provided with individualized STI prevention education, targeted at developing knowledge, skills, attitudes and behaviors to reduce the risk and prevent recurrences of STI.
- STI Services initiates follow-up on all out of province/country referrals of cases and partner(s).

Preventive Measures (14)

- Ensure appropriate treatment of cases.
- Interview case and identify and ensure appropriate testing/treatment of sexual partner(s).
- Include information about risk for STI during pre-travel health counseling.
- Ensure STI services are culturally appropriate, and readily accessible and acceptable.
- Educate the case, sexual partner(s) and the public on methods of personal protective measures, in particular the correct and consistent use of condoms and discuss safer sex options including:
 - abstinence,
 - delaying onset of sexual activity,
 - developing mutually monogamous relationships,
 - reducing the numbers of sexual partners,
 - discouraging anonymous or casual sexual activity,
 - sound decision making,
 - transmission and prevention of infection.
- Screen all sexually active persons under 25 years of age, at least annually.

References

- (1) Government of Alberta. Public Health Act. Edmonton: Alberta Queen's Printer; 2010.
- (2) Government of Alberta. Child Youth and Family Enhancement Act Policy Manual. Edmonton: Government of Alberta; 2010.
- (3) Government of Canada. Age of Consent to Sexual Activity. 2011 May 12. Available from: <http://www.justice.gc.ca/eng/dept-min/clp/faq.html>
- (4) Government of Canada. Criminal Code of Canada. Ottawa: Government of Canada; 2011.
- (5) Bradshaw CS, Tabrizi SN, Read TRH, Garland SM, Hopkins CA, Moss LM, et al. Etiologies of Nongonococcal Urethritis: Bacteria, Viruses, and the Association with Orogenital Exposure. *The Journal of Infectious Diseases* 2006;(193):336-45.
- (6) Martin D. Urethritis in Males. In: Holmes KK, Sparling PF, Stamm WE, Poit P, Wasserheit JN, Corey L, et al., editors. *Sexually Transmitted Diseases*. 4 ed. New York: McGraw Hill Medical; 2008. p. 1107-26.
- (7) Public Health Agency of Canada. Canadian Guidelines on Sexually Transmitted Infections. Ottawa: Public Health Agency of Canada; 2008.
- (8) The Merck Manual Online. Chlamydial, Mycoplasmal, and Ureaplasma Infections. 2011.
- (9) Galadari I, Galadari H. Nonspecific Urethritis and Reactive Arthritis. *Clinics in Dermatology* 2004;22:469-75.
- (10) American Academy of Pediatrics. *Ureaplasma urealyticum* Infections. In: Pickering LK, Baker CJ, Kimberlin DW, Long SS, editors. *Red Book: 2009 Report of the Committee on Infectious Diseases*. 28 ed. Grove Village, IL.: American Academy of Pediatrics; 2009. p. 712-4.
- (11) McCormack WM. Urethritis. In: Mandell GL, Bennett JE, Dolin R, editors. *Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases*. 7th ed. Philadelphia, PA: Churchill Livingstone Elsevier; 2010. p. 1453-89.
- (12) Government of Alberta. Notifiable Sexually Transmitted Infections 2011 Annual Report. Edmonton: Government of Alberta; 2012.
- (13) Government of Alberta. Alberta Immunization Policy. Edmonton: Government of Alberta; 2011.
- (14) Government of Alberta. Alberta Treatment Guidelines for Sexually Transmitted Infections in Adolescents and Adults. Edmonton: Government of Alberta; 2008.