

Gonorrhea

1. DISEASE REPORTING

A. Purposes of Reporting and Surveillance

1. To assess trends in epidemic patterns, understand the impact of the burden of disease on populations, the health care infrastructure, and to better target population-level disease prevention efforts;
2. To assure the adequate treatment of infected individuals in order to reduce the duration of infectiousness and prevent sequelae of infection (e.g., PID, ectopic pregnancy, infertility);
3. To identify cases in a timely fashion in order to interrupt the chain of infection through patient-level interventions such as management of sexual contacts and behavioral risk reduction counseling.

B. Legal Reporting Requirements

1. Health care providers: notifiable to local health jurisdiction within three (3) work days. Cases should be reported using the Sexually Transmitted Disease (STD) Morbidity Report Form. See: <http://www.doh.wa.gov/cfh/STD/casereports/default.htm>
2. Hospitals: notifiable to local health jurisdiction within three (3) work days. Cases should be reported using the STD Morbidity Report Form. See: <http://www.doh.wa.gov/cfh/STD/casereports/default.htm>
3. Laboratories: notifiable to local health jurisdiction within two (2) work days.
4. Local health jurisdictions: notify the Washington State Department of Health (DOH), STD Services Section within seven (7) days of case investigation completion; summary information required within 21 days for all reported cases. Enter case report information into the Public Health Issue Management System – Sexually Transmitted Disease (PHIMS-STD).

C. Local Health Jurisdiction Investigation Responsibilities

1. Gonorrhea cases should be reported to DOH using the PHIMS-STD system to enter investigation information including provider case report, laboratory, interview, and partner management data.
2. At a minimum, local health jurisdiction staff should initiate an investigation of the index patient within 3 working days of receiving a request for partner management from a reporting health care provider. Other cases should be investigated based on local priorities.
3. Local health jurisdiction staff should inform health care providers of the importance of instructing patients to refer sex partners for evaluation and treatment.

2. THE DISEASE AND ITS EPIDEMIOLOGY

A. Etiologic Agent

Neisseria gonorrhoeae bacterium.

B. Description of Illness

Most infections in men produce symptoms of urethritis; the majority of women have no symptoms until complications have occurred. The complications of gonorrhea include epididymitis, proctitis, cervicitis, bartholinitis, pelvic inflammatory disease, pharyngitis of adults, vulvovaginitis of children, conjunctivitis of the newborn, arthritis-dermatitis, endocarditis, or meningitis.

C. Gonorrhea in Washington State

In recent years, DOH received between 2,000 and 3,000 reports of gonorrhea per year. To view the most recent morbidity information on reported gonorrhea cases, see: <http://www.doh.wa.gov/cfh/STD/data/morbidity.htm>

D. Reservoir

Humans.

E. Mode of Transmission

Contact with exudates from mucous membranes of infected people, almost always as a result of sexual activity.

F. Incubation Period

Usually 2-7 days; longer when symptoms occur.

G. Period of Communicability

May extend for months in untreated individuals.

H. Treatment

Treatment options include ceftriaxone and cefixime. Due to concerns about the possible emergence of cephalosporin resistant gonorrhea, all uncomplicated gonorrhea must now be treated with dual therapy: ceftriaxone along with azithromycin or doxycycline. If ceftriaxone is not an option, cefixime along with azithromycin or doxycycline may be used; however, cefixime may only be used if the patient reports no oral sexual exposure. Because of diminished susceptibility, cefpodoxime is no longer recommended as a treatment for gonorrhea. Fluoroquinolones (levofloxacin, ciprofloxacin, etc.) are no longer recommended for the treatment of gonorrhea due to increased prevalence of quinolone-resistant *N. gonorrhoeae* (QRNG). See full CDC treatment guidelines at: <http://www.cdc.gov/std/treatment/2010/STD-Treatment-2010-RR5912.pdf>

3. CASE DEFINITIONS

A. Clinical Criteria for Diagnosis

Infection with *Neisseria gonorrhoeae* is commonly manifested by urethritis, cervicitis, or salpingitis. However, the infection is often asymptomatic, particularly in women.

B. Laboratory Criteria for Diagnosis

1. Isolation of typical gram-negative, oxidase-positive diplococci (presumptive *N. gonorrhoeae*) from a clinical specimen, or

2. Demonstration of *N. gonorrhoeae* in a clinical specimen by detection of antigen or nucleic acid or
3. Observation of gram-negative intracellular diplococci in a urethral smear obtained from a male.

C. Case Definition

1. Probable:
 - a. Demonstration of gram-negative intracellular diplococci in an endocervical smear obtained from a female, or
 - b. A written morbidity report of gonorrhea submitted by a physician.
2. Confirmed: a case that is laboratory confirmed.

4. DIAGNOSIS AND LABORATORY SERVICES

A. Diagnosis

Specimens for gonorrhea testing should be collected from the site suspected to be infected. Culture and non-culture tests (e.g., nucleic acid amplification tests (NAATs), nucleic acid hybridization tests, enzyme immunoassay (EIA), direct fluorescent antibody (DFA)) can both reliably detect *N. gonorrhoeae*. However, culture relies on viable organisms for detection, and *N. gonorrhoeae* requires maintenance of a carbon dioxide-enriched, warm environment from the time of specimen collection until the time (48 hours after specimen collection) the specimen is transported to the lab. Because of the stringent incubation requirements of *N. gonorrhoeae* culture, non-culture tests are generally used for screening.

B. Tests Available at PHL

Clinical specimens are analyzed for the presence of *N. gonorrhoeae* using the nucleic acid amplification test (NAAT) Aptima Combo II. This method allows for the detection of both *Chlamydia trachomatis* and *N. gonorrhoeae* from a single specimen.

C. Criteria for Testing at PHL

Specimens submitted for routine diagnostic purposes are generally from local health jurisdictions, STD clinics, family planning clinics, Planned Parenthood clinics and other clinics participating in Washington State's Infertility Prevention Project.

D. Specimen Transport

See the Washington State laboratory web page for information on specimen mailing instructions at: <http://www.doh.wa.gov/EHSPHL/PHL/packaging.htm>

5. ROUTINE CASE INVESTIGATION

A. Evaluate the Diagnosis

All cases should be confirmed by a laboratory positive test (culture or nonculture tests such as nucleic acid amplification).

B. Identify Source of Infection

Case investigation should be initiated within three (3) days for all cases of gonorrhea.

However, interviewing priorities may vary depending on the resources of the local health jurisdiction (LHJ). At a minimum, gonorrhea cases referred to public health follow-up by providers and cases selected for interview for evaluation purposes should be initiated. Local health jurisdictions may also establish priorities for public health follow-up such as pregnant females, residents at juvenile detention facilities or other populations based on local priorities. The following case investigation method is recommended to be used by local health jurisdictions:

1. Providers will indicate on the initial case report whether public health follow-up for partner management is needed or desired for their individual patients. Physicians and other diagnosing clinicians are expected to provide medication or prescriptions for medication, and partner management directions to their patients whenever possible. Exceptions are cases where the index case is unwilling to contact one or more exposed partners, where the patient is a man who has sex with men (MSM), or in cases where the clinician's best judgment is that the patient is not able or willing to follow through with partner contact.
2. For all gonorrhea cases initiated for interview, a standard confidential partner management interview should be attempted. Patient confidentiality must be preserved throughout the follow-up process. Telephone contact and interview is an acceptable methodology. Letters can be mailed or text messages sent to notify the patient that the LHJ is attempting to interview them. These letters/texts should not have any information on the disease diagnosis to prevent breach of confidentiality if they are opened by someone other than the intended recipient. Partner management interviews will adhere to established protocols, use the Integrated Partner Services Interview Record and Partner Management Record forms, and all information collected will be entered into the PHIMS-STD data system. Case reports, laboratory results and patient interview and partner management information should be entered into the PHIMS-STD data system as soon as these data become available to LHJ staff members. Local health jurisdiction staff may contact Washington State's STD Surveillance Coordinator (360-236-3441) for information on accessing and using the PHIMS-STD system.
3. The goal of partner elicitation is to obtain sufficient information to confidentially locate, notify, and refer the partners or suspects for necessary examination, treatment (if appropriate), and risk reduction counseling. Through standard interviews with the patient, individuals who have had sexual contact with the case within sixty (60) days prior to treatment should be identified. This should include both potential sources for the infection and other persons who the patient may have exposed. Local health jurisdiction staff should determine if the patient is willing and able to contact their partners and deliver partner treatment. If the patient is unwilling or unable to contact their partners, interviewers should obtain complete locating and identifying information on each contact, including nicknames and first and last dates of exposure. In addition to collecting all information on the Partner Management Record, each partner named should be reviewed with the patient during the interview to establish a follow-up method. To prevent reinfection, patients should be instructed not to have sex until all sex partners are treated. The patient should also be encouraged to return to their provider to be re-screened for infection in approximately three (3) months.

C. Managing Potentially Exposed Persons

All sex partners within 60 days before the onset of symptoms or diagnosis of infection in the patient should be evaluated, tested (if possible) and treated. If a case has not had sex in the 60 days preceding their diagnosis, the most recent sex partner should be treated.

1. Using available information, the sexual partners of reported cases should be contacted within two (2) working days of initial interview by telephone, field visit, or other method, and referred to their provider for evaluation, testing and treatment. If the contact's treatment cannot be verified within a reasonable time frame, additional attempts should be made to assure treatment.
2. Sexual partners should be treated presumptively for other common bacterial STDs (*C. trachomatis*), counseled, and evaluated for potential risk for HIV, syphilis and viral STDs such as HPV or genital herpes. If testing is unavailable, expedited partner therapy (EPT) methods should be used to treat the partner. EPT should not be used for MSM partners. The disposition (treatment outcome) of each partner must be recorded in PHIMS-STD as soon as this information is available to the LHJ.
3. If the patient identifies a partner who lives outside of the local health jurisdiction, the contact information may be transferred to the appropriate jurisdiction within PHIMS – STD by sharing the case in the system and providing the receiving LHJ with the partner number. For partners residing out of state, LHJ staff should provide the state STD Services Section (360 236-3460) with the relevant information to arrange for necessary follow-up.
4. Newborns delivered of women with gonorrhea (excluding those delivered by Caesarean section) should be medically evaluated and treated as necessary.

D. Environmental Evaluation

None applicable.

6. CONTROLLING FURTHER SPREAD

A. Infection Control Recommendations

1. Health care setting:

Standard Precautions are a set of protocols designed to reduce the risk of (or prevent) transmission of pathogens. Standard precautions synthesize the major features of Universal (Blood and Body Fluid) Precautions (designed to reduce the risk of transmission of bloodborne pathogens) and Body Substance Isolation (designed to reduce the risk of transmission of pathogens from moist body substances). Under standard precautions blood, all body fluids, and all body substances of patients are considered potentially infectious (CDC, 1997).

For more information, see CDC Program Guidelines:

<http://www.cdc.gov/std/program/med&lab.pdf>

2. General

When used consistently and correctly, male latex condoms are effective in preventing the sexual transmission of STDs.

B. Case Management

See routine case investigation in Section 5 above.

C. Contact Management

See routine case investigation in Section 5 above.

D. Environmental Measures

None applicable.

7. MANAGING SPECIAL SITUATIONS

Call the Department of Health STD Services for special situations. (360-236-3460)

8. ROUTINE PREVENTION**A. Vaccine Recommendations**

No vaccine currently exists for gonorrhea.

B. Prevention Recommendations

Key individual STD prevention messages include:

Abstinence

Abstain from sex (do not have oral, anal, or vaginal sex) until you are in a relationship with only one person, are having sex with only each other, and each of you knows the other's STD, including HIV, status.

If you have, or plan to have, more than one sex partner:

- Use a latex condom and lubricant every time you have sex.
- Get tested for asymptomatic STDs including HIV.
- If you are a man who has had sex with other men, get tested at least once a year.
- If you are a woman who is planning to get pregnant or who is pregnant, get tested for syphilis and HIV as soon as possible, before you have your baby. Ask your health care provider about being tested for other STDs.
- Talk about STDs, including HIV, with each partner before you have sex.
- Learn as much as you can about each partner's past behavior (sex and drug use).
- Ask your partners if they have recently been treated for an STD or have been tested for HIV; encourage those who have not been tested to do so.

Key STD prevention strategies include:

STD prevention counseling, testing, and referral services – Individuals at risk for STD should be offered counseling regarding methods to eliminate or reduce their risk and testing so that they can be aware of their status and take steps to protect their own health and that of their partners.

Partner Services (or Partner Notification) with strong linkages to prevention and treatment/care services – Sexual partners of STD-infected persons have been exposed to an STD and are at-risk of being infected. Partner services locate these individuals

based on information provided by the patient and provide counseling and education about the exposure as well as services to prevent infection or, if infected, linkages to care.

Prevention for high-risk populations – Prevention interventions for high-risk populations at high-risk for STDs, including HIV-infected persons, are critical to reducing the spread of STDs and HIV and ensure that those at highest risk of acquiring or transmitting these diseases are given the tools necessary to protect themselves and others from HIV infection. Prevention includes targeted health education and risk reduction, health communication programs, and public information programs for at-risk populations and the general public.

School-based STD Prevention – Schools have a critical role to play in promoting the health and safety of young people and helping them establish lifelong healthy behavior patterns. Washington State requires schools to teach medically accurate comprehensive sex education if such is provided by the school district.

ACKNOWLEDGEMENTS

We would like to acknowledge the Oregon Department of Human Services for developing the format and select content of this document.