

Gonorrhea

1. DISEASE REPORTING

1.1 Purpose of Reporting and Surveillance

1. To assess trends in disease patterns, understand the impact of gonorrhea and better target population-level disease prevention efforts.
2. To assure adequate treatment for infected individuals to curtail infectiousness, prevent infection sequelae (e.g., infertility), and address drug resistance risk.
3. To identify, contact, and refer to treatment recent sexual contacts of reported cases.

1.2 Legal Reporting Requirements

1. Physicians and other health care providers must report a case or suspected case of gonorrhea within one working day to the Local Public Health Authority (LPHA) (OAR 333-018-0015).
2. Laboratories must report all positive test results indicative of *Neisseria gonorrhoeae* infection to the local health department of the county where the individual resides within one working day from the time of positive result.

1.3 Local Health Jurisdiction Investigation Responsibilities

1. Begin follow-up case investigation within 2 working days after receiving the case report.
2. Report all presumptive and confirmed cases to the Public Health Division HIV/STD/TB (HST) Program by the end of the calendar week of initial physician or laboratory report by completing the case report directly in the Public Health Division's online integrated disease reporting system, Orpheus, by submitting a completed copy of the Gonorrhea case report form available from the HST website, or by submitting an electronic file in mutually acceptable format that includes all information indicated collected by the case entry layout in Orpheus.

2. THE DISEASE AND ITS EPIDEMIOLOGY

2.1 Etiologic Agent

Neisseria gonorrhoeae, a gram-negative, diplococoid bacterium.

2.2 Description of Illness

1. Infections caused by *N. gonorrhoeae* preferentially colonize columnar epithelial tissue. Potential sites of infections include the urethra, endocervix, rectum, pharynx, and occasionally the conjunctiva of the eye, especially as a result of mother to newborn transmission. Infections caused by drug-resistant types are clinically indistinguishable from those caused by drug-susceptible types. Both males and females might be asymptomatic. Symptomatic males with urethral infections usually have purulent (containing pus) urethral discharge, often accompanied by dysuria (painful urination). Males or females who have engaged in receptive oral or rectal sex may notice pharyngeal (throat) or rectal symptoms. Females may have abnormal vaginal discharge, abnormal menses, pelvic pain, or dysuria.
2. Serious complications of gonococcal infection include pelvic inflammatory disease (PID) and subsequent infertility or tubal pregnancy in females and epididymitis (inflamed sperm ducts around the testicles) and

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urethral stricture in males. Disseminated gonococcal infection (DGI) may occur in either sex. Untreated GC infection during pregnancy may result in premature delivery. Newborns of females with untreated GC infection are at risk for ophthalmia neonatorum (eye infection) and disseminated infections.

3. Clinically, gonorrhea can be difficult to distinguish from chlamydia. Combined gonococcal and chlamydial infections are not uncommon.

2.3 Reservoirs

Infected humans only.

2.4 Sources and Modes of Transmission

1. Sexual

The attack rate (proportion of exposed people who become infected) among exposed women is generally believed to be higher than the attack rate among exposed men. Non-sexual transmission among adults is unlikely. Anogenital or pharyngeal infection among infants and children should be investigated to rule out sexual abuse.

2. Mother to newborn child.

Neonatal infection results from exposure during birth to the mother's infected cervix. Eye infection in an infant should be investigated to assure evaluation and treatment of the mother and any recent sex partners of the mother.

2.5 Incubation Period

Incubation is typically 2–7 days but occasionally longer.

2.6 Period of Communicability

Gonorrhea is communicable from the time the infection is acquired until the patient is adequately treated. Effective treatment ends communicability within hours. Asymptomatic infected persons are generally considered to be equally infectious as symptomatic individuals.

2.7 Treatment

1. Uncomplicated infections of the pharynx, cervix, urethra, or rectum
Ceftriaxone 250 mg in a single intramuscular dose
PLUS
Azithromycin 1 g orally in a single dose or doxycycline 100 mg orally twice daily for 7 days
2. If ceftriaxone is unavailable or unfeasible
Cefixime 400 mg orally in a single dose
PLUS
Azithromycin 1 g orally in a single dose or doxycycline 100 mg orally twice daily for 7 days
PLUS
A follow-up laboratory test for gonorrhea in 1 week, also known as “test-of-cure.”
3. If the patient has a severe cephalosporin allergy
Azithromycin 2 g orally
PLUS
A follow-up laboratory test for gonorrhea in 1 week, also known as “test-of-cure.”

3. CASE DEFINITIONS, DIAGNOSIS AND LABORATORY SERVICES

3.1 Confirmed Case Definition (reportable to PHD)

Anyone from whom *N. gonorrhoeae* is isolated or identified by a laboratory test from a specimen collected from an anogenital, pharyngeal, or conjunctival site. Culture, direct immunofluorescence, enzyme-linked immunoassay [EIA], nucleic acid hybridization tests, and nucleic acid amplification tests [NAAT] all suffice for detection and confirmation of *N. gonorrhoeae*.

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3.2 Presumptive Case (reportable to PHD)

Observation of gram-negative intracellular diplococci by microscopy of a specimen collected from a person with signs or symptoms consistent with gonococcal infection,
OR

A diagnosis of gonorrhea submitted made by a physician or other licensed health care provider,

3.3 Suspect

Signs or symptoms of gonorrhea in a sexually active person or someone who has been sexually assaulted.

Sexual contact with a laboratory-confirmed case within 60 days preceding the treatment of the laboratory confirmed case.

(Exposed sexual contacts that can be located should be treated as “presumptive” cases with the same treatment that would be used for a confirmed case (§2.F.). Case reports needn’t be completed for suspect cases though information about sexual contacts to confirmed cases should be collected and recorded as described below (§4.C.). If laboratory evidence of *Neisseria gonorrhoeae* subsequently becomes available for a suspect case, a case report should be completed and the recorded as confirmed case.)

3.4 Services Available at the Oregon State Public Health Laboratory (OSPHL)

OSPHL performs evaluation and identification of *Neisseria gonorrhoeae* from swabs of the pharyngeal, rectal, urethral or cervical mucosa collected by a physician or other health care provider and from samples of urine using nucleic acid amplification testing. Upon request, OSPHL will attempt to culture *N. gonorrhoeae* from specimens collected from any of the above anatomic sites.

OSPHL does not routinely conduct susceptibility testing of *N. gonorrhoeae* isolates. Contact the STD Program (971-673-0153) to discuss arrangements for susceptibility testing if you suspect failure of treatment with one of the recommended treatment regimens.

For information about specimen collection, handling, and shipment, refer to the OSPHL “Guide to Services” or contact the lab at (503) 693-4100; fax (503) 693-5605.

4. ROUTINE CASE INVESTIGATION

4.1 Provider Interview

Contact the health care provider to verify treatment, complete missing, ambiguous, or erroneous elements of the initial case report and inform the provider if you plan to contact the case-patient directly for interview. A provider interview can be done by telephone, or paper case report forms can be faxed or delivered online for completion by the provider.

It is not uncommon for one local health authority to receive a laboratory report for someone who, it turns out, lives in another county. This can happen when a clinical laboratory doesn’t know the county of residence of the patient and supplies the county where the provider or laboratory is located instead. If local public health staff happen to make contact with a health care provider or facility, only to learn that the case doesn’t reside in his or her county, we encourage effort to collect the information necessary to complete any information from the provider necessary for the case report on behalf of colleagues. This saves time and aggravation for everyone involved. After completing the report, transfer the case in Orpheus to the county of residence of the case or make a courtesy call to colleagues in the county of residence of the case to advise them of the new case if the LHD doesn’t use Orpheus for reporting gonorrhea data.

4.2 Patient Interview

A confidential interview should be attempted for all confirmed cases. Client privacy should be carefully guarded and ensured, and confidentiality of information preserved throughout the interview and case investigation. Telephone and face-to-face approaches are acceptable. Electronic communication such as text and email might be acceptable alternatives if confidentiality, privacy and security can be reasonably assured. Check with a manager or local health authority administrator for guidance about permissibility of these alternative electronic communication methods for interviewing gonorrhea cases.

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In cases where the client is aged <13 years, speak with the parent or legal guardian first. Exercise professional judgment about the need to interview the child separately or in the presence of the parent or guardian.

4.3 Managing Sexual Partners

All sex partners within 60 days prior to the client's positive laboratory test should be examined and tested for gonorrhea if possible, and treated. If a client has not had sex in the 60 days preceding his or her positive laboratory test, the most recent sex partner should be examined and tested, if possible, and treated.

During the confidential interview, ask the patient for the names and contact information of everyone with whom the case has had sexual contact within the 60 days (~two months) preceding the date of diagnosis or first positive laboratory test for gonorrhea. If the case denies any sex partners within the previous 60 days, record the name and contact information for the most recent sex partner regardless of the interval since most recent sexual contact. Remember to collect from the case if known, the partner's nicknames, address, telephone numbers including cell phones, email addresses, race, sex, age, primary language spoken and earliest and most recent dates of sexual contact, for each sex partner recorded.

Using available information, named sexual contacts should be contacted within 2 working days of the initial case interview by telephone, field (in-person) visit, or other method, and referred to their local health department or another health care provider for evaluation, testing, and treatment. Generally, LHD staff should try to contact the sex partner 3 times before determining that the partner cannot be located. Attempts should be made to contact the partner on alternate days and times of day. When possible, alternate contact method should also be tried. For example, if telephone calls have not been successful, an in-person (field) visit should be considered. If the client prefers to refer the partner, health department staff should determine how they will verify that the partner has been examined or treated. If the contact's treatment cannot be verified within a reasonable time frame (2–5 days), health department staff should attempt to notify and refer the partner for examination and treatment. If locating information is not available for the sex partner, health department staff should call the client for additional information.

When a partner is reached, all outstanding personal information indicated by the "Contacts" tab of the Orpheus case entry form or on the contacts section of the paper form not previously provided by the health care provider should be collected and any that the health care provider reported should be confirmed. The date and outcome of each attempt to interview each partner should be recorded along with the dates and results of any laboratory tests conducted and the dates and details of any presumptive treatment or treatment of laboratory-confirmed infection. When the attempt to notify and treat the partner have been completed the date and outcome (disposition) of the efforts (e.g., "infected, brought to treatment," "unable to locate," "refused preventive treatment," etc.) should be recorded and any additional useful information collected retained.

If the health care practitioner judges that one or more sex partners of the diagnosed patient are unlikely to seek or successfully obtain timely medical evaluation and treatment, they may give additional medicine or a prescription for gonorrhea treatment to heterosexual patients to deliver to their partner(s). This practice is known as patient delivered partner therapy, expedited partner therapy, or "EPT." Except for cases among men who have sex with men, EPT should be strongly encouraged whenever a provider determines that sex partners of the case are unlikely to seek out or successfully obtain timely medical evaluation and treatment.

Because of the high prevalence of undetected HIV and other sexually transmitted infections among male partners of men who have sex with men, there is a competing urgency to test partners of men who have sex with men for HIV, chlamydia and syphilis. For these reasons, EPT should not be used for men who have sex with men. Instead partners of men diagnosed with gonorrhea who have sex with men should be strongly encouraged to be examined directly, tested for chlamydia, gonorrhea, syphilis and HIV and treated presumptively for gonorrhea.

Information about expedited partner therapy in Oregon, including partner education materials in English and Spanish for distribution to patients, is available at the HST website (<http://oregon.gov/DHS/ph/std/partnertherapy.shtml>). Oregon's Board of Pharmacy (<http://www.pharmacy.state.or.us/>)

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has additional information about EPT for pharmacists.

With EPT, the recommended treatment for gonorrhea consists of:

Cefixime 400 mg orally in a single dose

PLUS

Azithromycin 1g orally in a single dose

Patients with gonorrhea and their partners who are seen *in-person* should be treated with the first line recommended treatment: ceftriaxone (250 mg intramuscularly) in addition to azithromycin (1g orally). The second line treatment, Cefixime, is recommended for EPT because it is taken orally.

If possible and practical, telephone contact should be made with the sexual partner(s) to whom EPT has been directed to explain the reason for providing EPT, to ask about other symptoms of STDs or complications that would indicate a need for medical evaluation, and to answer questions. Of course, direct medical examination of sex partners, including testing for gonorrhea and for other sexually transmitted diseases, followed by treatment for all presumed infections remains the preferred approach to assuring treatment of exposed partners.

EPT should be used for first-generation partners only (direct sexual contacts with the case). Other partners of a case's partner should be encouraged to seek medical evaluation, especially if they are experiencing symptoms of a sexually transmitted infection. More information about the rationale for this recommendation is available at the HST website.

Health care providers should document all EPT-related actions, including the number of partners who are being provided with EPT, the medication(s) and dosage prescribed or provided, whether or not the partners are known to be allergic to any medications, and the information sent along for the partner(s).

Sexual partners being tested and treated for *N. gonorrhoeae* should be offered testing for Human Immunodeficiency Virus (HIV), and syphilis. In addition, consider testing for hepatitis B and genital herpes if indicated.

4.4 Documentation

Information collected by case interview should be reported to the Sexually Transmitted Disease Program via the online integrated disease reporting system, Orpheus, or by submitting a completed copy of the paper case investigation and interview record form. Local health authorities that wish to use an independent, locally-developed and maintained database to collect and manage gonorrhea-related case data must make arrangements with the STD Program to securely submit electronic files containing case report data in mutually agreeable format. After the case report information has been entered into Orpheus, any paper forms can be destroyed. If it is necessary to contact multiple facilities where treatment was rendered, make a note of this in the area reserved for notes in the Orpheus case report.

If using Orpheus:

Enter information collected from the client into the appropriate areas of the Orpheus case report interface — Basic, Risk and Clinical and Follow-up tabs. If the client provides personal (non-clinical) information such as demographic or sexual exposure history that contradicts information collected from health care provider/s, overwrite the provider response with the client response and make a note of the change in the notes section of the Orpheus case report.

Record information about contacts directly into the “Contacts” and related sub-tabs of the case entry interface. Use the “+ Contact” button on the “Contacts” tab of the Orpheus case report to add each new contact. Alternatively, you can record the contact information on the paper case report form for later transfer into Orpheus, or into your local database. This list should include all partners within the 60-day exposure period including those from whom the client might have acquired infection and others whom the client might have exposed.

Enter partner information in the “Demographics” sub-tab of the “Contacts” tab. Be sure that the name of the partner about whom you wish to enter information has been highlighted in the right side of the “Contacts” tab before entering data in any of the sub-tabs. Record the date of the first sexual encounter between this partner and the client and the date of the most recent encounter in the “Exposure” sub-tab of the “Contacts” tab. Record the date and outcome of each attempt

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to interview each partner and record this information in the “Notes” sub-tab of the “Contacts” tab of the Orpheus case entry interface. Record the outcome of efforts to contact the partner in the exposure sub-tab of the contacts tab of the Orpheus case entry form. Record the dates and results of any laboratory tests conducted and the dates and details of any presumptive treatment or treatment of laboratory-confirmed infection in the “Labs & Treatment” sub-tab. Record the date and final outcome (disposition) of your efforts (e.g., “infected, brought to treatment,” “unable to locate,” “refused preventive treatment,” etc.) in the “Contacts” tab of the case entry form. Retain any useful information in the “Notes” sub-tab of the “Contacts” tab of the Orpheus case entry form.

5. CONTROLLING FURTHER SPREAD

5.1 Education

During the interview, clients should be counseled to take all prescribed medications as directed, abstain from sex for at least seven days after completion of treatment, and until seven days after partners have been treated, to discontinue sex with any untreated sex partners, and to use condoms to reduce the risk of acquiring sexually transmitted infections in the future. Counseling should be personalized to the client by taking a “client-centered” approach. In general, sexually transmitted disease interviews involve a single encounter with the client, so the focus of the interview, by necessity, must be fairly narrow. Give attention to those behaviors that the client seems willing or able to change.

5.2 Case Follow-up

Every individual with a reported case of gonorrhea should be advised to seek medical attention for persistent symptoms and to seek additional testing for gonorrhea 10 weeks after treatment for purposes of identifying persistent infections and repeat infections.

5.3 Managing Special Situations

Call the Public Health Division Sexually Transmitted Disease Program for assistance with special situations at (971) 673-0153.

Suspected treatment failure. If you encounter or become aware of a case in which symptoms fail to resolve completely within 1–3 days of treatment with one of the recommended treatment regimens, this might represent treatment failure resulting from a resistant strain of *N. gonorrhoeae*. Please contact the STD Program within 24 hours for advice about additional investigation of possible emergence of new strains of resistant *N. gonorrhoeae*.

6. APPLICABLE RULES

6.1 Reporting

OAR 333-018-0000 through 333-018-0020

6.2 Investigation

OAR 333-019-0000 and 333-019-0002

UPDATE LOG

January 2014	Created. (Schafer)
December 2014	Revised to include information on EPT. (Schafer)