Chlamydia Investigative Guidelines
August 2024

CLINICIANS AND LABORATORIES MUST REPORT WITHIN ONE WORKING DAY

1. DISEASE REPORTING

1.1 Purpose of Reporting and Surveillance

1. To identify cases of chlamydia and prevent transmission.
2. To educate people about how to reduce their risk of infection.
3. To ensure adequate treatment for individuals with chlamydia and appropriate management, including screening and presumptive treatment, of sexual partners
4. To better characterize the epidemiology of chlamydia, including social, environmental, and behavioral contexts for transmission
5. To identify communities and populations at elevated risk for chlamydia to inform equity-centered prevention efforts

1.2 Laboratory and Clinician Reporting Requirements

1. Licensed laboratories must report all positive test results indicating chlamydia infection the Local Public Health Authority (LPHA) within one working day (OAR 333-018-0000; OAR 333-018-0015)
2. Clinicians must report lab-confirmed and clinically suspect case of chlamydia within one working day to the Local Public Health Authority (LPHA) (OAR 333-018-0000; OAR 333-018-0015)
3. Health care providers, health care facilities, and licensed laboratories shall cooperate with public health authorities in the investigation and control of chlamydia infections (OAR 333-019-0002)

1.3 Local Health Department Reporting and Follow-Up Responsibilities

1. LPHA must report all confirmed cases to the Public Health Division HIV/STD/TB (HST) Program through the Oregon Public Health Epidemiology User System (Orpheus) by the end of the calendar week of initial provider or laboratory report (OAR 333-018-0020)
2. LPHA is not required to investigate chlamydia cases. Health care providers should counsel patients to notify their partner(s) and

provide patients with information about testing and treatment for partners.

2. THE DISEASE AND ITS EPIDEMIOLOGY

2.1 Etiologic Agent

Chlamydia trachomatis bacterium

2.2 Description of Illness

1. Chlamydia can be transmitted during vaginal, anal, or oral sex.
    - About three quarters of persons assigned female at birth (AFAB) and about half of persons assigned male at birth (AMAB) with chlamydia have no symptoms.
    - If symptoms occur, they usually appear within 1-3 weeks after exposure.
    - Among persons AFAB with chlamydia:
        - Symptoms may include abnormal vaginal discharge, urethritis, lower abdominal pain, pain during intercourse, and bleeding between menstrual periods.
        - In up to 40% of untreated persons, infection can spread into the uterus or fallopian tubes and cause pelvic inflammatory disease.
        - Risk of acquiring HIV is up to five times more likely, if exposed.
    - Among persons AMAB with chlamydia:
        - Symptoms include penile discharge and urethritis.
        - Complications are rare. Infection sometimes spreads to the epididymis, causing pain, fever, and, rarely, sterility.
2. Lymphogranuloma venereum (LGV) is a specific type of chlamydia infection caused by serovars L1–L3 of *C. trachomatis*.
    - Symptomatic LGV has three stages:
        - Primary stage can include a small ulcer at the site of inoculation (i.e., genital, rectal, or oral/oropharyngeal sites)
        - Secondary stage can include:
            - A syndrome featuring neck, inguinal, or femoral lymphadenopathy that may rupture **OR**
            - An anorectal syndrome featuring proctocolitis (e.g., mucoid or hemorrhagic rectal discharge, anal pain, constipation, fever, and/or tenesmus [physical feeling of needing to have a bowel movement even though bowels are empty])

    - Late stage LGV typically involves sequelae, such as genital elephantiasis, lymph node scarring, chronic colorectal fistulas and strictures, perirectal abscesses, and/or anal fissures.
  - LGV may also be asymptomatic.
3. Perinatal chlamydia infections may result in ocular chlamydia infection (inclusion conjunctivitis) and pneumonia in newborns.

2.3 Reservoirs

Humans

2.4 Sources and Routes of Transmission

Sexual transmission: Contact with secretions from mucous membranes during vaginal, anal, and oral sex.

Perinatal transmission: Exposure to untreated cervical infection during vaginal delivery can cause neonatal infection.

2.5 Incubation Period

The incubation period for chlamydia is poorly defined, as most infections are asymptomatic. Among symptomatic persons, the incubation period is estimated to be 1-3 weeks.

2.6 Period of Communicability

Chlamydia is communicable from the time the infection is acquired until adequate treatment is received and symptoms resolve.

2.7 Treatment

1. Treatment recommendations for urogenital, rectal, and pharyngeal chlamydia infections:

Recommended Regimen for Chlamydia in Adolescents and Adults
Doxycycline 100 mg orally 2 times a day for 7 days

Alternative Regimens for Chlamydia in Adolescents and Adults
Azithromycin 1 g orally in a single dose **OR** Levofloxacin 500 mg orally once daily for 7 days

See the CDC STI Treatment Guidelines for complete information on current regimens for chlamydia and LGV infections:
https://www.cdc.gov/std/treatment-guidelines/default.htm

2. Rationale for doxycycline as recommended regimen:
    - Treatment failure among persons AMAB with urogenital chlamydia is higher for azithromycin than for doxycycline
    - Doxycycline is more efficacious for rectal chlamydia infection than azithromycin
    - Although azithromycin is highly effective for urogenital chlamydia in persons AFAB, there is concern regarding its effectiveness for concurrent rectal chlamydia infection, which can occur commonly among persons AFAB and cannot be predicted by reported sexual activity. Inadequately treated rectal infection in persons AFAB with urogenital chlamydia can increase the risk for transmission and place them at risk for repeat urogenital infection through autoinoculation from the anorectal site.
3. Strategies for improving adherence:
    - For multidose regimens, medication should be dispensed with all doses involved, on-site and in the clinic, and the first dose should be directly observed.
    - On-site, directly observed single-dose therapy with azithromycin should always be available for persons for whom adherence with multiday dosing is a considerable concern.
4. Effective clinical management of persons diagnosed with chlamydia requires treatment of sex partners to prevent reinfection and curb ongoing transmission.
    - Expedited partner therapy (EPT) is the clinical practice of treating the sex partners of persons with a sexually transmitted infection (STI) by providing prescriptions or medications to the patient to take to their partner without the health care provider first examining the partner.
    - In Oregon, EPT can be provided for the sex partners of persons diagnosed with chlamydia and/or gonorrhea. See Oregon's EPT page for current guidance, fact sheets, and patient handouts: https://www.oregon.gov/oha/ph/diseasesconditions/hivstdviralhepatitis/sexuallytransmitteddisease/pages/partnertherapy.aspx

3. CASE DEFINITIONS, DIAGNOSIS, AND LABORATORY SERVICES

3.1 Confirmed Case

A case that meets laboratory evidence:

- Demonstration of *C. trachomatis* in a clinical specimen by detection of antigen or nucleic acid, **OR**

- Detection of LGV-specific antigen or nucleic acid in a clinical specimen, **OR**
- Isolation of *C. trachomatis* by culture

3.2 Criteria to Distinguish a New Chlamydia Case from an Existing Case

For surveillance purposes, a new case of *C. trachomatis* infection meets the following criteria:

- There is no evidence of a prior *C. trachomatis* infection that has been reported as a case; **OR**
- There is evidence of a prior *C. trachomatis* infection that has been reported as a case, but the prior infection's specimen collection date or treatment date was >30 days before the current infection's specimen collection date; **OR**
- There is evidence of a prior *C. trachomatis* infection that has been reported as a case with a specimen collection date or treatment date ≤30 days from the current infection's specimen collection date, but there is evidence of re-infection.
    - Reinfection can occur from sexual contact with a new partner, with an untreated partner, or with a treated partner prior to eradication of partner's infection.
    - Evidence of reinfection requires examination of available resources (e.g., laboratory, treatment completion, and partner services data).

3.3 Classification of *C. trachomatis* Infection Cases to Identify LGV

Cases of lymphogranuloma venereum (LGV), *C. trachomatis* infection caused by serovars L1, L2, and L3, are reported to the CDC as chlamydia cases with one of the following LGV classifications:

- Verified: Detection of LGV-specific antigen or nucleic acid in a clinical specimen. This includes asymptomatic cases.
- Likely: Demonstration of *C. trachomatis* in a clinical specimen by detection of antigen or nucleic acid **OR** isolation of *C. trachomatis* by culture; **AND** who demonstrates clinical symptoms or signs consistent with LGV; **AND** has no negative test for LGV-specific antigen or nucleic acid in a clinical specimen.

3.4 Services Available at the Oregon State Public Health Laboratories

The following specimen types can be tested for chlamydia at OSPHL:

- Urine
- Urethral (clinician-collected only)
- Endocervical (clinician-collected only)

- Vaginal (clinician-collected or patient-collected)
- Rectal (clinician-collected or patient-collected)
- Pharyngeal (clinician-collected only)

Patient-collected specimens must be collected in a medical facility; they cannot be collected at the patient's home. Gonorrhea testing is performed concurrently with chlamydia testing. Instructions for ordering, collecting, storing, and transporting specimens for gonorrhea and chlamydia testing can be found on the OSPHL Lab Test Menu at www.healthoregon.org/labtests.

4. ROUTINE CASE INVESTIGATION

4.1 Interviews

Interviews are not required or expected for chlamydia cases. The minimum information necessary for recording a new case is first and last name, date of birth, sex, race, ethnicity, specimen source, collection date, county, and zip code for the person diagnosed with the infection. If additional relevant information is reported by the laboratory or provider (e.g., patient or provider address or phone number), this data should also be recorded in Orpheus.

OHA does not require LPHAs to contact the laboratory, provider, or person diagnosed with the infection to collect any information beyond the minimum data listed above.

4.2 Optional Case Investigation

LPHAs that opt to investigate chlamydia cases may interview persons diagnosed with chlamydia and providers or attempt to identify and treat sex partners of reported cases. However, these activities are not required.

There is limited public health benefit from case-level public health intervention of chlamydia infections. Many chlamydia infections are asymptomatic and not diagnosed or reported. LPHAs may choose to pursue case investigations for special subsets of chlamydia cases, such as gay, bisexual, and other men who have sex with men diagnosed with rectal chlamydia; pregnant persons with chlamydia (see §6.1); persons AFAB under age 18 with two or more chlamydia infections in one year; or persons AFAB under age 15 with chlamydia.

4.3 Managing Sexual Partners

Contact investigation and partner notification are not required or expected. LPHAs may provide these services at their discretion. Where resources allow, LPHAs may choose to test and treat partners (contacts) of confirmed cases. Ideally, all partners in the 60 days prior to the positive laboratory test should be examined, tested, and treated. If a person diagnosed with chlamydia has

not had sex in the 60 days preceding the positive laboratory test, the most recent partner should be examined, tested, and treated.

In Oregon, expedited partner therapy (EPT) can be provided for the sex partners of patients with chlamydia and/or gonorrhea (see §2.7).

A medical provider may request assistance from the LPHA with partner services for any case. The LPHA may assist as circumstances and resources permit.

4.4 Out-of-Jurisdiction Cases/Contacts

Jurisdiction for a case belongs to the LPHA for the county of residence. If the LPHA that received the initial report discovers that the person with chlamydia resides in a different Oregon jurisdiction, the LPHA may transfer the case by updating the home address in the case record and marking it for transfer when prompted by Orpheus. If a contact lives outside of the case's local health jurisdiction, the contact may be transferred to the appropriate Oregon jurisdiction by entering the contact's address and marking it for transfer when prompted by Orpheus.

For individuals residing out of state, LPHA staff should notify appropriate OHA staff via Orpheus to request the transfer of case and/or contact records to the appropriate jurisdiction.

5. CONTROLLING FURTHER SPREAD

5.1 Education

Persons diagnosed with chlamydia and their partners should be advised to:

- Take all medications as directed
- Avoid sex for 7 days after single-dose treatment or until completion of a 7-day regimen, and until symptoms resolve (if present)
- Use condoms to reduce the risk of acquiring STIs

Persons diagnosed with chlamydia should be tested for HIV, gonorrhea, and syphilis, and other STIs as appropriate.

Transgender women and gay, bisexual, and other men who have sex with men, on diagnosis of chlamydia, should be offered doxycycline postexposure prophylaxis for bacterial sexually transmitted infections (doxyPEP). Providers should use their clinical judgement and shared decision-making to inform use of doxyPEP with populations that are not part of CDC recommendations. See the CDC doxyPEP page: https://www.cdc.gov/sti/hcp/doxy-pep/index.html

Persons diagnosed with chlamydia who are not living with HIV may benefit from HIV pre-exposure prophylaxis (PrEP). See the CDC HIV PrEP site: https://www.cdc.gov/hiv/prevention/prep.html

5.2 Case Follow-up

Repeat testing is recommended three months post-treatment for all patients with chlamydia.

Test of cure to detect treatment failure is not advised for nonpregnant persons treated with the CDC recommended or alternative regimens, unless treatment adherence is in doubt, symptoms persist, or reinfection is suspected. *Using NAATs at <4 weeks after treatment completion is not recommended because the continued presence of nonviable organisms can lead to false-positive results.*

Most posttreatment chlamydia infections do not result from treatment failure but rather from reinfection caused by untreated sex partners or initiation of sexual activity with a new partner with chlamydia. In Oregon, expedited partner therapy (EPT) can be provided for the sex partners of patients with chlamydia and/or gonorrhea (see §2.7).

6. MANAGING SPECIAL SITUATIONS

6.1 Pregnancy

Recommended Regimen for Chlamydia in Pregnancy
Azithromycin 1 g orally in a single dose

Alternative Regimen for Chlamydia in Pregnancy
Amoxicillin 500 mg orally 3 times a day for 7 days

Azithromycin is safe and effective during pregnancy. Doxycycline is contraindicated during the second and third trimesters of pregnancy because of risk for tooth discoloration in children.

Persons diagnosed with chlamydia at any point in pregnancy should also be offered syphilis screening, even if routine prenatal syphilis screening was already performed. Syphilis in newborns (congenital syphilis) occurs when pregnant persons with syphilis do not receive timely testing and treatment and can result in miscarriage, stillbirth, and serious health complications in infants.

Test of cure to document cure, preferably by NAAT, at approximately 4 weeks after treatment completion in pregnancy is recommended because severe complications can occur among birthing persons and infants if the infection persists.

See the current CDC STI Treatment Guidelines for further information on management of chlamydia in pregnancy and chlamydia among infants/children: https://www.cdc.gov/std/treatment-guidelines/default.htm

6.2 HIV Infection

Persons who have chlamydia and HIV infection should receive the same treatment regimen as those who do not have HIV.

GLOSSARY

AFAB—assigned female at birth; refers to the sex that is assigned to an infant, most often based on the infant's anatomical and other biological characteristics
AMAB—assigned male at birth; refers to the sex that is assigned to an infant, most often based on the infant's anatomical and other biological characteristics
LGV—Lymphogranuloma venereum; LGV is a specific type of chlamydia infection caused by serovars L1–L3 of *C. trachomatis*
LPHA—local public health authority
NAAT—nucleic acid amplification testing; NAATs detect microbial DNA or RNA
OSPHL—Oregon State Public Health Laboratory

REFERENCES

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2. CSTE Chlamydia Trachomatis Infection 2022 Case Definition. https://ndc.services.cdc.gov/case-definitions/chlamydia-trachomatis-infection-2022/#:~:text=Chlamydia%20is%20a%20common%20sexually,1%E2%80%933%20weeks%20after%20exposure

3. CDC Deduplication Standards for Chlamydia and Gonorrhea Case Reports Based on Laboratory Test Results January 2023. https://www.cdc.gov/std/laboratory/deduplication-standards-for-chlamydia-and-gonorrhea-case-reports.pdf

UPDATE LOG

Drafted. (Schafer)

06/2014 – Revised based on CLHO feedback. (Schafer)

08/2014 – Revised based on CLHO feedback: revised list of information items that must be reported by laboratories; added information about repeat testing during pregnancy. (Schafer)

10/2019 – Extensive formatting and language revisions. Updated in accordance with 2015 CDC STD Treatment Guidelines, Orpheus changes, and recent research findings. (Garai)

07/2024 – Updated per CDC 2021 STI Treatment Guidelines and CSTE *Chlamydia Trachomatis* Infection 2022 Case Definition. Added information on providing education about PrEP and doxy PEP. Added recommendation to offer syphilis screening to persons diagnosed with chlamydia at any point in pregnancy. Language and formatting revisions. (Garai)