

DELAWARE HEALTH ALERT #498: Gonorrhea Strains Identified with Drug-Reduced Susceptibility

The Delaware Division of Public Health is issuing this Health Advisory about gonorrhea infections with reduced drug susceptibility.

Summary

On January 19, 2023, the Massachusetts Department of Public Health (MDPH) identified two cases of multidrug-non-susceptible *Neisseria gonorrhoeae*. Identification of these strains in Massachusetts is a warning that *N. gonorrhoeae* is becoming less responsive to a limited arsenal of antibiotics.

On January 19, 2023, a novel strain of multidrug-non-susceptible *Neisseria gonorrhoeae* with reduced susceptibility to numerous antibiotics was identified in a Massachusetts resident. After further surveillance by MDPH, an additional case was identified. While gonorrhea with reduced drug susceptibility has not yet been detected in Delaware, the Delaware Division of Public Health is urging Delawareans to get tested regularly and recommending that providers continue using Centers for Disease Control and Prevention (CDC)-recommended treatment: 500mg of Ceftriaxone intramuscular (IM) as a single dose for persons weighing <150 kg.

Background

In January 2023, CDC was notified of two cases of multidrug-non-susceptible gonorrhea from Massachusetts by MDPH. The novel strain of multidrug-non-susceptible *Neisseria gonorrhoeae* had reduced susceptibility to ceftriaxone, cefixime, and azithromycin, and resistance to ciprofloxacin, penicillin, and tetracycline. Ceftriaxone 500 mg IM was used to treat the individual, however; this is the first isolate identified in the United States to demonstrate resistance or reduced susceptibility to all treatment regimens. Based on genomic sequencing, the second case likely has reduced susceptibility to ceftriaxone and cefixime.

Gonorrhea is the second-most-reported sexually transmitted infection (STI) in the United States. *Neisseria gonorrhoeae*, the bacterium causing gonorrhea, has progressively developed resistance to the antibiotics prescribed to treat it. Following the spread of gonococcal fluoroquinolone resistance, the cephalosporin antibiotics have been the foundation of recommended treatment for gonorrhea. Health care providers should stay up to date on CDC treatment guidelines. The current CDC-recommended treatment for gonorrhea is 500 mg of ceftriaxone as a single IM dose for patients <150 kg. Following the recommended treatment guidelines and providing safe sex/prevention education to high-risk patients may help slow the emergence of antimicrobial resistance. Identification of *N. gonorrhoeae* infections with reduced ceftriaxone susceptibility can be a sign of emerging resistance.

Recommendations for Health Care Providers

Screen for gonorrhea using nucleic acid amplification tests (NAATs):

- Screening should be performed at all anatomic sites of sexual exposure **regardless of condom use**, using pharyngeal swabs, rectal swabs, and either urethral/endocervical/ vaginal swabs or urine specimens.
- **Women:** annually in sexually active women <25 years old and women ≥25 if at increased risk for STIs (e.g., a new sex partner, multiple sex partners, a sex partner with concurrent partners, a sex partner with an STI, any STI during pregnancy, and exchange of sex for money or drugs). Pharyngeal and rectal gonorrhea screening can be considered in women based on reported sexual behaviors and exposure, through shared clinical decision making.
- **Men who have sex with men (MSM):** annually in all sexually active MSM and every three to six months in those with increased risk. Screening recommendations for transgender and gender diverse people should be adapted based on anatomy and reported sexual behaviors and exposure.
- **Persons living with HIV:** at initial HIV care visit and at least annually. More frequent screening might be appropriate depending on individual risk behaviors and local epidemiology.
- **Pregnant people:** all pregnant people <25 years old and pregnant people ≥25 if at increased risk for STIs (i.e., a new partner, multiple partners, a sex partner with concurrent partners, a sex partner with an STD, any STD during pregnancy, and exchange of sex for food or housing):
 - If infected, treat immediately and retest within three months.
 - Retest during the third trimester if <25 years old or if at risk.
- **Rescreen all individuals** (i.e., women, MSM, MSW, transgender and gender diverse people) **with gonorrhea three months after treatment.**
- **Conduct a test of cure for all cases of pharyngeal gonorrhea** seven to 14 days after initial treatment by using either culture or NAAT.
- Treat gonorrhea (urethritis, cervicitis, and extra-genital gonorrhea) with: **ceftriaxone 500 mg IM once** (for persons weighing <150 kg) whenever possible. Evaluate and treat the patient's sex partner(s) during the previous 60 days.
- If chlamydial infection has not been excluded, treat for chlamydia with doxycycline 100 mg orally two times/day for seven days.
- Provide routine discussions about safer sexual practices and prevention education into every office visit. Provider-initiated conversations about sexual behavior at every visit, with every patient, is important in reducing transmission and positive behavior changes.
- Remain vigilant for patients not responding to Centers for Disease Control and Prevention (CDC)-recommended treatment.
- All persons who are diagnosed with gonorrhea should be screened for other STDs, including chlamydia, syphilis, and HIV. CDC STD screening recommendations can be found at [STI Screening Recommendations \(cdc.gov\)](https://www.cdc.gov/std/screening-recommendations).

Reporting

- All Delaware physicians, laboratories and other health care providers are required by regulations to report patients with the following conditions, either based on clinical diagnosis or laboratory confirmation, to the Delaware Division of Public Health Sexually Transmitted Disease Program as listed at [Sexually Transmitted Disease Reporting - Delaware Health and Social Services - State of Delaware](https://www.doh.de.gov/info/sexually-transmitted-disease-reporting).
- Suspected or confirmed cases of drug-resistant gonorrhea may be reported by phone (302-744-1025) or by completing a Sexually Transmitted Disease Report PDF Form and mail the form as directed, fax the form at 302-857-5086, or email to reportdisease@delaware.gov. Alternatively, you can contact the Delaware Office of Infectious Disease Epidemiology's (OIDE) 24/7 line 888-295-5156. Reporting enables

appropriate public health follow-up for your patients, helps identify outbreaks, and provides a better understanding of disease trends in Delaware.

- Symptoms that persist after treatment should be evaluated by culture for *N. gonorrhoeae* (with or without simultaneous NAAT), and any gonococci isolated should undergo culture-based antimicrobial susceptibility testing.

Resources

- Delaware Sexually Transmitted Disease Program: [DPH Disease Information: Sexually Transmitted Diseases \(STDs\) - Delaware Health and Social Services - State of Delaware](#)
- 2021 CDC STI Treatment Guidelines <https://www.cdc.gov/std/treatment-guidelines/screening-recommendations.htm>
 - The 2015 STD Treatment (Tx) Guide mobile app is now retired. The new 2021 STI Treatment (Tx) Guide mobile app is under construction. Please visit the Provider Resources page (<https://www.cdc.gov/std/treatment-guidelines/provider-resources.htm>) to view instructions on how to remove the 2015 app from your device and to access an interim mobile site until the new app is ready.
- CDC Drug-Resistance Gonorrhea page <https://www.cdc.gov/std/gonorrhea/arg/default.htm>
- National STD Curriculum <https://www.std.uw.edu/>
- NNPTC Clinical Consult <https://www.stdccn.org/>