WASHOE COUNTY HEALTH DISTRICT
ENHANCING QUALITY OF LIFE

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EPI-NEWS

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IN THIS ISSUE: UPDATED GONORRHEA TREATMENT RECOMMENDATION

CDC Updates Gonorrhea Treatment Recommendation

Introduction

Sexually transmitted infections continue to have a great burden on individual and community health. The Centers for Disease Control and Prevention (CDC) estimates an annual incidence of over 20 million new infections occur each year with direct medical costs of over $16 billion (in 2010 dollars). The prevalence of disease is estimated at 110 million total infections (new and existing) annually. Of the reported sexually transmitted diseases (STD), chlamydia infections are estimated at almost 2 million cases reported annually, followed by gonorrhea and syphilis.

As the second most reported sexually transmitted infection, gonorrhea, could lead to more pervasive illness including pelvic inflammatory disease, ectopic pregnancy, infertility, and can help facilitate transmission of human immunodeficiency virus (HIV)[2]. In addition to clinical sequela, sexually transmitted infections are largely stigmatized, making testing, treatment, and the identification of sexual partners more difficult. The complexity of STD treatment and control continues to bear a great burden on the health of our community.

In addition to the concerns of sequelae, gonorrhea has a long history of acquiring antimicrobial resistance. Since the 1930s, gonorrhea has acquired resistance to sulfonamides, penicillins, tetracycline, and ciprofloxacin[3]. Drug-resistant gonorrhea remains an urgent public health threat; with half of all gonorrhea infections are resistant to at least one antibiotic[3]. To address concerns of disease control and treatment resistance, the CDC convened a panel of staff and subject matter experts to review clinical research and surveillance data. Following a robust review, the CDC has updated its recommendation for the treatment of uncomplicated gonorrhea in adults.

Epidemiology

Nationally, the incidence of gonorrhea cases has increased by 63% since 2014, with an estimated 583,405 cases reported in 2018[4]. The data for Washoe County is similar, with a 60% increase in cases from 2015-2019. In 2018, Washoe County reported an incidence rate of 200 cases per 100,000 population, which is the highest rate over the past two decades[1]. A decrease occurred in 2019, that may be attributed to a disease investigations being prioritized to address syphilis in Washoe County. Preliminary data for 2020 (January – November 30, 2020) indicates that gonorrhea cases are being reported at increasingly high numbers, with the case count of 1,042 through November 30, 2020.

Figure 1. Rates of Reported Cases of Gonorrhea, Washoe County, 2010–2019

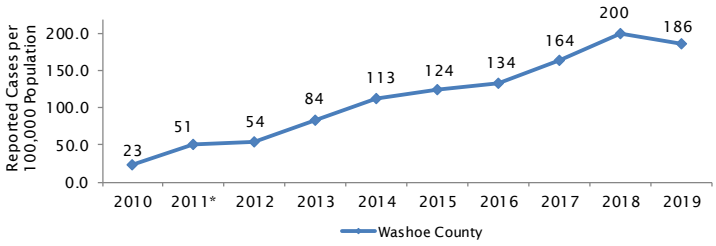
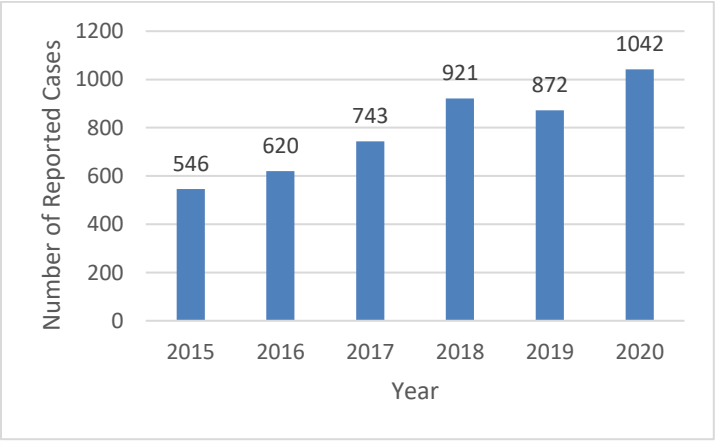
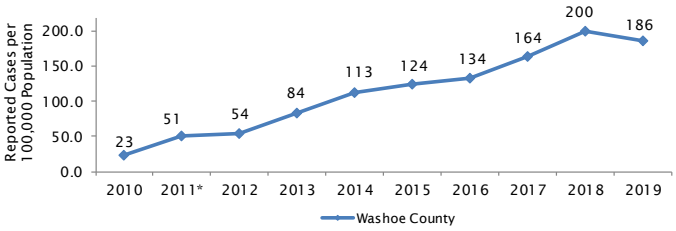


Figure 2. Reported Gonorrhea Cases by Year, Washoe County, 2015- November 30, 2020



Preliminary data for 2020 (January – November 30, 2020) indicates that gonorrhea cases are being reported at increasingly high numbers. The gonorrhea case counts have exceeded surveillance average thresholds since August 2020, indicating disease activity at least two standard deviations above the average number of cases.

Figure 3. Monthly Gonorrhea Case Counts, January-November 2020, Washoe County



Disease investigations and contact tracing for prioritized populations have resumed for gonorrhea cases in Washoe County. These populations include reported cases who are:

- Pregnant individuals
- Individuals 18 years of age and younger
- Disseminated gonorrhea
- Individuals who report >2 sexually transmitted infections in the previous 6 months

Treatment Update

CDC's expert panel reviewed Gonococcal Isolate Surveillance Project (GISP) data and current clinical research to determine the best course in changing the recommended treatment for gonorrhea. Changes from dual therapy to monotherapy were prompted by three items:

1. Antimicrobial stewardship and the need to minimize antibiotic exposure unless the benefit clearly outweighs the risk, an important consideration for all infections and not just STIs;
2. Further evidence and understanding of ceftriaxone's pharmacokinetics (how drugs move in the body) and pharmacodynamics (biochemical and physiologic effects of drugs) in relation to identifying the optimal dose to treat gonorrhea; and,
3. Signs that azithromycin resistance is increasing.

Their findings and subsequent questions were further evaluated utilizing the U.S. Preventive Services Task Force modified rating system. The new recommendation supersedes gonorrhea treatment recommendations included in the 2015 STD Treatment Recommendations.

Figure 4. CDC's Updated Gonorrhea Treatment Recommendation

Regimen for uncomplicated gonococcal infections of the cervix, urethra, or rectum:

Ceftriaxone 500 mg IM as a single dose for persons weighing <150 kg (300 lb).

- For persons weighing ≥150 kg (300 lb), 1 g of IM ceftriaxone should be administered.
- If chlamydial infection has not been excluded, providers should treat for chlamydia with doxycycline 100 mg orally twice daily for 7 days. During pregnancy, azithromycin 1 g as a single dose is recommended to treat chlamydia.

Alternative regimens for uncomplicated gonococcal infections of the cervix, urethra, or rectum if ceftriaxone is not available:

Gentamicin 240 mg IM as a single dose plus azithromycin 2 g orally as a single dose OR

Cefixime 800 mg orally as a single dose. If treating with cefixime, and chlamydial infection has not been excluded, providers should treat for chlamydia with doxycycline 100 mg orally twice daily for 7 days. During pregnancy, azithromycin 1 g as a single dose is recommended to treat chlamydia.

Recommended regimen for uncomplicated gonococcal infections of the pharynx:

Ceftriaxone 500 mg IM as a single dose for persons weighing <150 kg (300 lb).

- For persons weighing ≥150 kg (300 lb), 1 g of IM ceftriaxone should be administered.
- If chlamydia coinfection is identified when pharyngeal gonorrhea testing is performed, providers should treat for chlamydia with doxycycline 100 mg orally twice a day for 7 days. During pregnancy, azithromycin 1 g as a single dose is recommended to treat chlamydia.
- No reliable alternative treatments are available for pharyngeal gonorrhea. For persons with a history of a beta-lactam allergy, a thorough assessment of the reaction is recommended.*
- For persons with an anaphylactic or other severe reaction (e.g., Stevens Johnson syndrome) to ceftriaxone, consult an infectious disease specialist for an alternative treatment recommendation.

Abbreviation: IM = intramuscular.

*CDC. Sexually transmitted diseases treatment guidelines. MMWR Recomm Rep 2015;64(No. RR-3). https://www.cdc.gov/mmwr/preview/mmwrhtml/rr6403a1.htm.

A test-of-cure is unnecessary for persons with uncomplicated urogenital or rectal gonorrhea who are treated with any of the recommended or alternative regimens; however, for persons with

pharyngeal gonorrhea, a test-of-cure is recommended, using culture or nucleic acid amplification tests 7–14 days after initial treatment, regardless of the treatment regimen. Reinfection within 12 months ranges from 7% to 12% among persons previously treated for gonorrhea, therefore persons who have been treated for gonorrhea should be retested 3 months after treatment, regardless of whether they believe their sex partners were treated. If retesting at 3 months is not possible, clinicians should retest within 12 months after initial treatment[2].

Effective treatment can prevent complications and transmission, but gonorrhea's ability to acquire antimicrobial resistance influences treatment recommendations and complicates control. Continued support of gonorrhea prevention and control efforts remains fundamental and preventing antibiotic resistance is crucial.

Summary of CDC's New Gonorrhea Treatment Recommendation

1. Treat gonorrhea infections with a **single 500 mg injection of ceftriaxone**.
2. A test-of-cure is not needed for people who receive a diagnosis of uncomplicated urogenital or rectal gonorrhea unless symptoms persist.
3. A test-of-cure is recommended in people with pharyngeal gonorrhea 7-14 days after the initial treatment, regardless of the regimen.
4. Patients who have been treated for gonorrhea should be retested three months after treatment to ensure there is no reinfection.
5. As always, facilitate partner testing and treatment.

Technical Assistance & Reporting

Washoe County Health District will be following the recommendation to report adequate treatment per CDC requirements. Disease investigators are available to provide guidance with the new recommendation as well as the CDC's current STD Treatment Guidelines. Contact information is available on the STD Confidential Case Report Form available at **http://tinyurl.com/WashoeDiseaseReporting** or call 775-328-2447. To report a communicable disease, please fax your report to the WCHD at 775-328-3764.

Acknowledgement

Thank you to all health care providers and infection control practitioners for their reporting and collaboration with disease investigation.

References

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