

Gonorrhea

Quick Facts for Healthcare Providers

Extragenital Screening

Extragenital screening for STDs is critically important, particularly among some high-risk populations: **77% of chlamydia and 95% of gonorrhea infections are missed** among men who have sex with men (MSM) if screening is only performed at urethral sites.¹ Under-screening of extragenital sites, including the rectum and oropharynx, contributes to the further spread of STDs. Some MSM are at high risk for viral and bacterial STDs because of the unique susceptibility of the rectal mucosa to certain STD pathogens and having multiple partners.² The following clinical actions are recommended:

- **Take a sexual history:** Taking a sexual history for all patients is vital to identifying all possible sites of infection, determining the screening interval, and discussing sexual health and risk behaviors.
- **Screen according to CDC Recommendations:** The CDC recommends annual screening and testing all sexually active MSM for STDs and HIV. Testing is recommended every 3 to 6 months for MSM who report risk behaviors such as receptive or insertive anal sex without a condom, having another STD, having sex with anonymous partners without a condom, or using methamphetamines or sexual performance enhancing drugs.²
- **Screen at exposed sites:** The majority of rectal and pharyngeal infections are asymptomatic, so screenings only for urethral infections can leave infections unidentified.³ Extragenital infections can serve as reservoirs of infection and increase the likelihood of further transmission.

DID YOU KNOW?

Urine screening tests for gonorrhea (including NAAT) will not detect infections at other anatomical sites. A negative urine test only indicates there is no infection at the urethral site; rectal or pharyngeal sites could still be infected.

STD TREATMENT

The [2015 STD Treatment Guidelines](#) are the most current recommendations for treating patients who have or are at risk for STDs. The guidelines are also available via a free app for [Apple devices](#) and [Android devices](#).

If you have difficulty securing the medications, or your patients are unable to afford them, contact your [local health department](#) to coordinate treatment.

Gonorrhea and HIV

Performing risk assessment and appropriate screening is critical to the sexual health of MSM and to HIV prevention as it may reduce an individual's ability to transmit HIV and likelihood of contracting HIV.³ MSM diagnosed with rectal gonorrhea or chlamydia infections in the past two years were over eight times more likely to seroconvert compared to MSM with no prior rectal gonorrhea or chlamydia infections.⁴ HIV-uninfected MSM with multiple rectal infections represent a population in need of innovative HIV-prevention interventions such as PrEP. Screening MSM for rectal infections can be a cost-effective intervention to reduce HIV infection.⁵

DATA REFERENCES

1. Marcus et al. Infections missed by urethral-only screening for chlamydia or gonorrhea detection among men who have sex with men. *STD* 2011; 38-922-4.
2. Center for Disease Control and Prevention. Sexually Transmitted Diseases Treatment Guidelines, 2014.
3. Kent CK, Chaw JK, Wong W, et al. Prevalence of rectal, urethral, and pharyngeal chlamydia and gonorrhea detected in 2 clinical settings among men who have sex with men: San Francisco, California, 2003. *Clin Infect Dis* 2005; 41:67-74.
4. Bernstein KT, Marcus JL, Nieri G, et al. Rectal gonorrhea and chlamydia reinfection is associated with increased risk of HIV seroconversion. *J Acquir Immune Defic Syndr* 2010; 53:537-543.
5. Chesson H, Berstein K, Gift T et al. The cost-effectiveness of screening men who have sex with men for rectal chlamydial and gonococcal infection to prevent HIV infection. *Sex Transm Dis*; 40(5), 366-371.

Antibiotic Resistance

The development of antibiotic resistant bacteria continues to be a major concern for public health. The [National Strategy for Combating Antibiotic-Resistant Bacteria](#) lists *Neisseria gonorrhoeae* as one of three URGENT Threat Level Pathogens in the US.

The recommended treatment regimen for uncomplicated urogenital, anorectal, and pharyngeal gonorrhea is: **Ceftriaxone** 250 mg IM in a single dose **PLUS Azithromycin** 1g orally in a single dose.

Patients' recent sex partners (i.e. all sex partners within the 60 days preceding diagnosis) should also be evaluated and treated with the recommended regimen. Be vigilant for treatment failure, particularly in situations where reinfection is unlikely. Refer to [CDC's Gonococcal Infections Guide](#) if you suspect ceftriaxone treatment failure.

Gonorrhea Trends in Virginia

TEMPORAL AND GEOGRAPHIC TRENDS

Based on data reported to the Virginia Department of Health, there were 12,137 cases of gonorrhea diagnosed in Virginia in 2017. This is equivalent to a rate of 143.3 cases per 100,000 population, which is below the national average of 171.9 in 2017 (the most recent national data available). Similar to trends at the national level, the number and rate of gonorrhea diagnoses in Virginia has increased slightly over the past 5 years, up from a rate of 86.0 per 100,000 in 2013 (Figure 1).

The Central and Eastern regions of Virginia consistently experience a greater burden of disease. Specifically, the highest rates of gonorrhea diagnoses tend to be found in Virginia's larger cities, with Hampton, Norfolk, Portsmouth, and Richmond City, experiencing the highest rates of infection in 2017 (ranging from 426.2 to 544.9 cases per 100,000 persons).

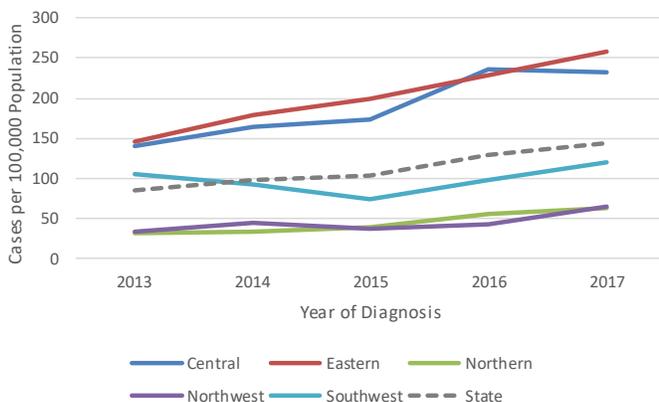
DEMOGRAPHIC TRENDS

The gonorrhea incidence among males is higher than females in Virginia (157.3 and 127.8 per 100,000, respectively in 2017). Overall, 73% (n=8,817) of all gonorrhea cases were among persons aged 15-29 years (Figure 2). The highest rates of gonorrhea were observed among persons aged 20-24 years (653.4 per 100,000), followed by the 25-29 (462.8 per 100,000) and 15-19 (412.8 per 100,000) age groups.

The rate of gonorrhea infection among non-Hispanic blacks in Virginia is significantly higher than that among individuals of other races and ethnicities (Figure 3). Fifty-five percent (n=6,694) of gonorrhea cases diagnosed in Virginia in 2017 were among non-Hispanic blacks, and the gonorrhea rate in this population was 12 times that observed in non-Hispanic whites (396.1 vs. 32.5 per 100,000 respectively).

Approximately 4.5% of all gonorrhea cases diagnosed in Virginia in 2017 were co-infected with HIV (i.e. either previous or new HIV positive patients).

Figure 1. Gonorrhea Rates by Health Region in Virginia, 2013-2017



DATA NOTES: Data reported to the Virginia Department of Health as of September 25, 2018. Rates for annual cases counts less than 12 are considered unstable and should be interpreted with caution.

The full annual data report for Virginia, which includes demographic breakdowns by health region, may be found on the Division of Disease Prevention's data and reports [website](#). Information on national gonorrhea trends are available on the CDC's [website](#).

QUICK STATS

The ability of gonorrhea to develop resistance to antibiotics commonly used for treatment is an ongoing concern. The Virginia Department of Health participated in the Gonococcal Isolate Surveillance Project (GISP) from 2007-2013. Of the 263 gonorrhea specimens collected from patients in central Virginia during this time, 24% showed evidence of reduced susceptibility to at least one type of antibiotic. For example:

- 4.2% of gonorrhea isolates were resistant to penicillin;
- 6.5% of gonorrhea isolates were resistant to tetracycline; and
- 17.5% of gonorrhea isolates were resistant to ciprofloxacin.

Additional information on GISP can be found on the [CDC's website](#).

Figure 2. Gonorrhea Rates by Age Group in Virginia, 2017

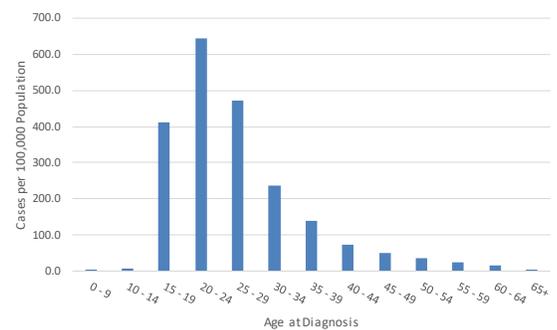


Figure 3. Gonorrhea Cases by Race and Ethnicity in Virginia, 2017

