5. Gonorrhea

Gonorrhea is caused by *Neisseria gonorrhoeae*, a bacterium that can grow and multiply in the warm, moist areas of the reproductive tract, including the cervix (opening to the womb), uterus (womb), and fallopian tubes (egg canals) in women, and in the urethra (urine canal) in women and men. The bacterium can also grow in the mouth, throat, eyes, and anus.

**Symptoms and Screening:**
In the United States, an estimated 700,000 new *N. gonorrhoeae* infections occur each year. Most infections among men produce symptoms that prompt them to seek curative treatment soon enough to prevent serious repercussions, but this may not be soon enough to prevent transmission to others. Among women, many infections do not produce recognizable symptoms until complications (e.g., PID) have already occurred. Both symptomatic and asymptomatic cases of PID can result in tubal scarring that can lead to infertility or ectopic pregnancy. Because gonococcal infections among women often are asymptomatic, an important component of gonorrhea control in the United States continues to be the screening of women at high risk for STDs.

**Dual Therapy:**
Patients infected with gonorrhoea often are coinfected with chlamydia. Because of this finding, it is now recommended that patients treated for gonorrhea also be treated for uncomplicated genital *C. trachomatis* infection. Routine dual therapy without testing for chlamydia can be cost-effective for populations in which chlamydial infection accompanies 10%-30% of gonococcal infections, because the cost of therapy (e.g., $0.50--$1.50 for doxycycline) is less than the cost of testing. Some specialists believe that the routine use of dual therapy has resulted in substantial decreases in the prevalence of chlamydial infection.
This photomicrograph reveals the histopathology of an acute case of gonococcal urethritis.
If left untreated, gonorrhea can cause infertility in men and women.

Because most gonococci in the United States are susceptible to doxycycline and azithromycin, routine co-treatment may hinder the development of antimicrobial-resistant *N. gonorrhoeae*.

**Gonorrhea Facts:**

- Gonorrhea is a very common infectious disease. CDC estimates that more than 700,000 people in the U.S. get new gonorrheal infections each year. Only about half of these infections are reported to CDC.

- In women, gonorrhea is a common cause of pelvic inflammatory disease (PID). About one million women each year in the United States develop PID. Women with PID do not necessarily have symptoms. When symptoms are present, they can be very severe and may include abdominal pain and fever. PID can lead to internal abscesses and long lasting, chronic pelvic pain, and can damage the fallopian tubes enough to cause infertility or ectopic pregnancy. Gonorrhea can also be passed from mother to child during delivery.

- In men, gonorrhea can cause epididymitis, a painful condition of the testicles that can lead to infertility if left untreated.
National Gonorrhea Trends – All Races:

The total number of gonorrhea cases for the U.S. population has decreased a dramatic 64% since 1981 (from 929,256 cases in 1981 to 335,104 cases in 2003). The total gonorrhea rate thus decreased from 405 cases per 100,000 in 1981 to 115 cases per 100,000 in 2003.

While the gonorrhea burden of disease has improved considerably in the last decade, these rates still remain well above the Healthy People 2010 goal of 19 cases per 100,000.

Looking specifically at gonorrhea rates in the Pacific Northwest, the total gonorrhea rate in Idaho, Oregon, and Washington is lower than the total U.S. rate, and has decreased from nearly 308 cases per 100,000 in 1981 to under 35 cases per 100,000 in 2003.

AI/AN gonorrhea rates are lower in the Northwest than in the United States as a whole.

While national gonorrhea rates among AI/ANs are slightly lower than rates reported for “All Races” combined, this favorable trend is not present in the Northwest, where AI/AN gonorrhea rates have been higher than total population rates since 1981.
National Gonorrhea Trends – By Race:

*When comparing rates by ethnicity, American Indians have the second highest Gonorrhea rate in the US.*

In the United States, gonorrhea rates separated by race and ethnicity follow a similar pattern as rates observed for chlamydia.

Non-Hispanic blacks have by far the highest rates, which have gradually decreased since 1999.

Gonorrhea rates among American Indians and Alaskan Natives were the second highest, gradually increasing from 1999 to 2003.

Non-Hispanic whites and Asian/Pacific Islanders had the lowest rates.
Nationally, AI/ANs make up approximately 1.5% of the total population and account for less than 1.3% of all gonorrhea cases reported. This percentage is higher in the Northwest states (ID, OR, WA), where the percentage of AI/AN cases is typically between 2% and 3% of the area’s total. Disparities in infection rates are particularly evident in Washington, where AI/ANs are nearly twice as likely to be diagnosed with gonorrhea than the total population. Oregon’s AI/AN gonorrhea rates, on the other hand, are generally slightly lower than rates observed for Oregon’s total population. Natives in Washington have had a higher burden of disease than Natives in Oregon, except in 1994 and 1996, when 18%-19% of Oregon’s gonorrhea cases were among AI/ANs. In an unusual shift, the number of gonorrhea cases reported among AI/ANs was very low in 2003, with Idaho reporting zero gonorrhea cases, Oregon only 7 cases, and Washington State reporting 85. More research is needed on tribal testing and reporting practices to verify if this change is due to a true decrease in AI/AN infection rates, or whether this irregularity reflects insufficient reporting, screening, or treatment services.
National Gonorrhea Trends - By Gender:

In the United States, male gonorrhea cases and rates decreased between 1981 and 2003, from 497 to 112 cases per 100,000. Female gonorrhea rates decreased from 1981-1996, from 318 to 118 cases per 100,000, and then leveled off.

_Gonorrhea rates for both males and females in the NW are lower than the national average._

In the Northwest states (ID, OR, WA), male gonorrhea rates decreased from 349 to 29 cases per 100,000 from 1981 to 1997, then increased to 45 cases per 100,000 in 2001. Among females in this region, gonorrhea rates decreased from 267 cases per 100,000 in 1981 to 26 cases per 100,000 in 1998, and have slightly risen in recent years (up to 33 cases per 100,000 in 2001).

In 1981, the U.S. male-to-female gonorrhea rate ratio was 1.6 to 1. The difference between rates decreased until 2001 when female rates exceeded male rates. In the Northwest states (ID, OR, WA), male rates have remained slightly higher than female rates, though the difference has been fairly small (1.3:1).
**Trends Among Male AI/ANs:**

In Idaho, Oregon, and Washington, gonorrhea rates for American Indian males are typically lower than rates found for the total male population.

Nationally, approximately 0.5% of all male gonorrhea cases are among AI/ANs. In the Northwest states (ID, OR, WA) the percentage ranged from 0.5% up to 9% between the years 1989 and 2003. In most years, AI/AN men made up about 1.5% of the total caseload.

Nationally from 1985-2003, gonorrhea rates among AI/AN men were nearly half those found among “all men,” with a caseload ranging from 59 to 372 cases per 100,000. Similarly, since 1987, rates for AI/AN men have typically been lower than rates reported for all men in the Pacific Northwest (ID, OR, WA).
Trends Among Female AI/ANs:

Nationally, gonorrhea rates among AI/AN females have been higher than rates found among "all females," except between 1988 and 1995, when AI/AN rates were reported to be lower.

AI/AN women typically accounted for less than 1.0% of all gonorrhea cases among U.S. women. In Idaho, Oregon, and Washington, however, AI/AN women typically account for 2.0% to 6.3% of the region’s total.

Since 1990, Northwest AI/AN females have had gonorrhea rates lower than the national average. Compared to the total population in the NW however, AI/AN women have had disproportionally high rates since 1981.

In Idaho, Oregon, and Washington, gonorrhea rates for American Indian females significantly exceed rates found for the total female population.
Total Gonorrhea Rates among AI/AN Males
1981-2003
United States and NW States (ID, OR, WA)

Cases per 100,000 population

Report Year

Total Gonorrhea Rates among AI/AN Females
1981-2003
United States and NW States (ID, OR, WA)

Cases per 100,000 population

Report Year
Gonorrhea Trends – AI/AN, By Age:

In 2003, gonorrhea rates showed a similar age distribution for both “All Races” and “AI/ANs” in the Pacific Northwest, with the highest rates occurring among 20-24 year olds. While the general age distribution pattern is similar in both groups, gonorrhea rates among AI/AN teens and young adults clearly exceed rates observed among all races.

In 2003, Northwest AI/AN and Washington AI/AN rates followed the same general distribution pattern, with the highest rates occurring among teens and young adults, age 15-29.

In comparison, Oregon's AI/ANs had much lower gonorrhea rates, and cases were distributed fairly evenly between those aged 20-34.

Idaho reported 0 cases per 100,000 in 2003.