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Increased Incidence of *Neisseria gonorrhoeae* Infection in Southwestern Alaska

Background

Neisseria gonorrhoeae (GC) infection is transmitted during unprotected sexual activity. It is a major cause of pelvic inflammatory disease (PID), ectopic pregnancy, and infertility in women, and of conjunctivitis in neonates. Furthermore, GC infection increases a person's susceptibility to human immunodeficiency virus (HIV) infection.¹ We describe here an increase in the incidence rate of GC infection in the Southwest Region of Alaska, due to an increase in cases in the Bethel and Wade Hampton census areas.

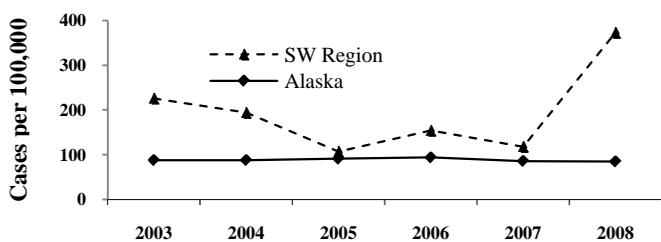
Methods

Case data were obtained from the Section of Epidemiology's reportable conditions database; annual population data were obtained from the Alaska Department of Labor & Workforce Development. Annual rates were calculated using corresponding annual Alaska population estimates.

Results

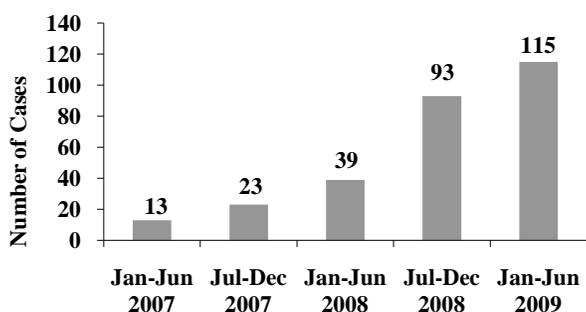
The statewide GC infection rate in Alaska remained stable between 2007 and 2008 (86 cases per 100,000 persons vs. 85 cases per 100,000 persons, respectively); however, in the Southwest Region, the GC infection rate more than tripled between 2007 and 2008 (118 cases per 100,000 persons vs. 373 cases per 100,000 persons, respectively; Figure 1).

Figure 1. Annual Gonorrhea Infection Rates — Southwest Region and Statewide, 2003–2008



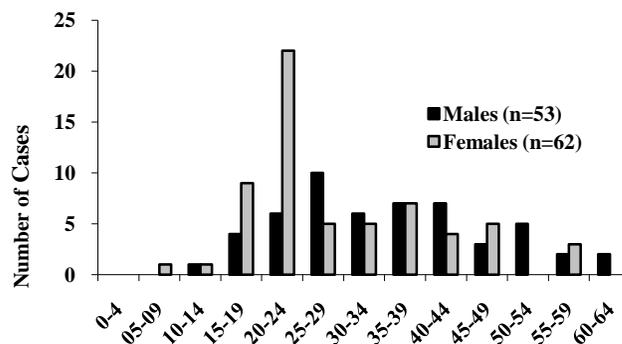
At the time of diagnosis, 25% of GC cases reported in 2008 and 29% of GC cases reported during the first half of 2009 were in persons who resided in the Southwest Region, which accounts for 6% of the Alaska population. Within the Southwest Region, case counts only increased in the Bethel and Wade Hampton census areas. Case counts increased five-fold in the Bethel and Wade Hampton census areas between the second half of 2007 and the first half of 2009 (Figure 2).

Figure 2. Gonorrhea Cases — Bethel and Wade Hampton Census Areas, 2007–2009 (N=283)



Compared with 2007, the number of GC cases reported in 2008 and the first half of 2009 increased among individuals in every age group. During the first half of 2009, case counts were highest among females aged 20–24 years (Figure 3).

Figure 3. Gonorrhea Cases by Age and Gender — Bethel and Wade Hampton Census Areas, January–June 2009 (N=115)



Discussion

We describe an increase in the incidence of GC infection in the Southwest Region of Alaska in 2008. Case counts have only risen in the Bethel and Wade Hampton census areas of the Southwest Region during 2008 and the first half of 2009, and are highest in females aged 20–24 years.

Working jointly with Southwest Region health care providers, public health staff, community members, the Alaska Native Tribal Health Consortium, and the Centers for Disease Control and Prevention, the Section of Epidemiology will continue to investigate this rise in reported GC cases in the Bethel and Wade Hampton census areas to better understand the epidemiology of this occurrence.

Recommendations

- All persons with uncomplicated GC infection should be treated promptly with the following:
 - Ceftriaxone 125 mg IM in a single dose, OR
 - Cefixime 400 mg orally in a single dose.²
 - Providers should not use quinolones or tetracyclines to treat GC infection due to drug resistance issues.³
- All GC-infected patients should be interviewed to identify sexual partners.
- All sexual partners of persons with confirmed GC infection, and other individuals identified as high-risk, should receive prompt and confidential notification of their exposure, be tested, and be treated empirically for GC and chlamydia infection.
- Patients with GC infection should be counseled on behavioral risk reduction, including reducing the number of sex partners and using condoms correctly and consistently.
- Providers should promptly report all confirmed or suspected cases of GC infection and treatment to the Alaska Section of Epidemiology via fax (561-4239) or telephone (907-561-4234 or 800-478-1700).

References

- Rottingen JA, Cameron DW, Garnett GP. A systematic review of the epidemiologic interactions between classic sexually transmitted disease and HIV: How much really is known? *Sexually Transmitted Diseases* 2001; 28:579-597.
- CDC's Updated STD Treatment Guidelines, 2006. *Epi Bulletin* RnR. Available at: http://www.epi.hss.state.ak.us/bulletins/docs/rr2007_03.pdf
- Centers for Disease Control and Prevention. Update to CDC's *Sexually Transmitted Diseases Treatment Guidelines, 2006*: Fluoroquinolones no longer recommended for treatment of Gonococcal infections. *MMWR Morbidity Mortality Weekly Report* 2007/56(14); 332-336.