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## Gonococcal Infection Update — Alaska, 2016

### Background

Nearly 400,000 cases of gonococcal (GC) infection were reported to the Centers of Disease Control and Prevention (CDC) in 2015. This represents a case rate of 123.9 cases per 100,000 population and was a contributing factor in the unprecedented high number of reported sexually transmitted infections nationally.<sup>1</sup> Alaska's GC incidence rates have been well above the national average over the past several years; preliminary data indicate that Alaska will rank third in the nation in 2016 for GC incidence.

Untreated GC can result in pelvic inflammatory disease (PID), pre-term labor, ectopic pregnancy, and infertility in women; epididymitis and infertility in men; and conjunctivitis in neonates. GC also facilitates the transmission and acquisition of human immunodeficiency virus (HIV). The purpose of this *Bulletin* is to summarize recent GC trends and to highlight key factors in the prevention of GC infection and transmission.

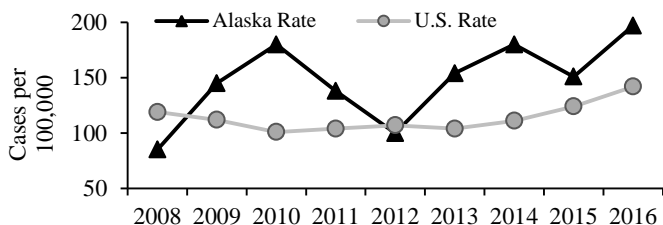
### Methods

Case data were obtained from the Section of Epidemiology's (SOE) Patient Reporting Investigation Surveillance Manager (PRISM). Population data were obtained from the Alaska Department of Labor and Workforce Development.

### Results

In 2016, 1,454 GC cases were reported to SOE; the incidence rate was 197 cases per 100,000 persons, representing a 31% increase compared to 2015 (Figure 1).

**Figure 1. Gonococcal Infection Rates, by Year — Alaska and the United States, 2008–2016\***



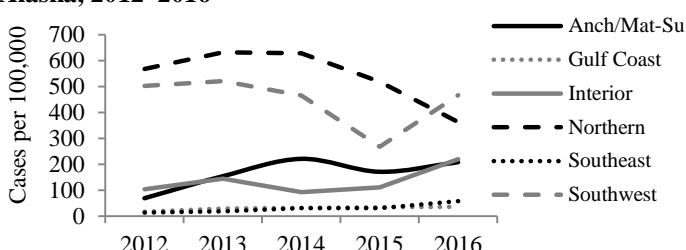
\*Note: the 2016 U.S. rate is preliminary.

Of the 1,454 GC cases reported in 2016, 819 (56%) were in persons aged  $\leq 29$  years; 738 (51%) were in females, 26 (3.5%) of whom were diagnosed with PID. The proportion of cases treated with the recommended effective dual therapy (an expanded spectrum cephalosporin plus azithromycin) rose from 38% (429/1,115) in 2015 to 74% (1,080/1,454) in 2016.

Rates were highest in American Indian/Alaska Native persons, followed by Blacks, Native Hawaiian/Pacific Islanders, Hispanics (all races), Asians, and Whites (721, 672, 366, 142, 72, and 68 cases per 100,000, respectively).

Rates increased in all regions of the state except the Northern Region and the Gulf Coast; rates were highest in the Southwest and Northern regions (468 and 363 cases per 100,000, respectively; Figure 2).

**Figure 2. Gonococcal Infection Rates, by Region — Alaska, 2012–2016**



### Discussion

In 2016, the incidence of GC increased in most regions of the state, resulting in a 31% increase statewide. Reasons for the increase may include a combination of factors, such as changing testing patterns, decreased partner services activities, and a true increase in disease transmission. Nationally, the incidence of GC has been increasing steadily since 2013.

Extragenital testing for GC and chlamydia infections has been shown to be effective in detecting infection that would otherwise have been missed (and left untreated) with urogenital screening alone.<sup>4</sup> In 2016, 321 GC-positive tests were found in patients who had specimens submitted concurrently to the State Public Health Laboratory (SPHL) from more than one anatomic site; a 57% increase in extragenital testing compared to 2014 (n=204). This may also account for part of the rise in GC cases last year.

Two encouraging improvements have recently occurred in Alaska regarding GC control. First, after a recent comprehensive provider outreach campaign to emphasize the updated GC treatment recommendations among providers, instances of effective dual therapy (with ceftriaxone 250 mg IM AND azithromycin 1 g PO)<sup>2</sup> rose statewide from 38% (429/1,114) in 2015 to 74% (1,080/1,454) in 2016. Second, starting in 2011, the Yukon-Kuskokwim (YK) Health Corporation began dedicated efforts to control GC by reducing their test-to-treatment time and implementing expedited partner therapy. The GC incidence in the YK Region went from a high of 846 cases per 100,000 in 2010 to a low of 268 cases per 100,000 population in 2015 (a 68% drop); however, the rate rose back up considerably in 2016 (Figure 2).<sup>3</sup>

### Recommendations

1. Promptly treat GC-infected patients and their sex partner(s) with ceftriaxone 250 mg IM **AND** azithromycin 1 g PO, each in a single dose.<sup>2</sup>
2. When ceftriaxone is unavailable, GC-infected patients and their sex partner(s) who are not at risk for pharyngeal infection may be treated with cefixime 400 mg PO **AND** azithromycin 1 g PO, each in a single dose.<sup>2</sup>
3. Treat patients with established allergy to cephalosporins with gentamicin 240 mg IM **AND** azithromycin 2 g PO each in a single dose.<sup>2</sup>
4. Elicit a thorough sexual history from all STD patients to include same-sex and oral/anal activities (resources in taking a sexual history are available at: <http://dhss.alaska.gov/dph/Epi/hivstd/Pages/history.aspx>); Obtain rectal or pharyngeal specimens, as appropriate.<sup>4</sup>
5. Test all persons at risk for GC for other sexually transmitted diseases, including chlamydia, HIV and HCV.
6. Encourage patients with GC infection to participate in partner services activities, including the confidential and timely notification of all sex partners.
7. Report GC cases and treatment to SOE within 5 working days by fax to 561-4239. Report forms are available at: <http://dhss.alaska.gov/dph/Epi/Documents/pubs/conditions/frmSTD.pdf>

### References

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4. SOE Epidemiology *Bulletin*. Extragenital Testing for Sexually Transmitted Diseases. No. 19, August 26, 2015. Available at: [http://www.epi.alaska.gov/bulletins/docs/b2015\\_19.pdf](http://www.epi.alaska.gov/bulletins/docs/b2015_19.pdf)