State of Alaska Epidemiology **Bulletin**

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# Chlamydia Infection Update — Alaska, 2014

## Background

*Chlamydia trachomatis* (CT) is the most commonly reported sexually transmitted bacterium in the U.S., and during 2010–2013, Alaska had the highest CT infection rate in the nation.[1]

Untreated CT infection can cause miscarriage, pre-term labor, low birth weight;[2] and conjunctivitis and pneumonia in neonates; pelvic inflammatory disease (PID), ectopic pregnancy, chronic pelvic pain, and infertility in women; and epididymitis and Reiter's syndrome in men. Moreover, CT can facilitate the transmission and acquisition of human immunodeficiency virus (HIV).

## Methods

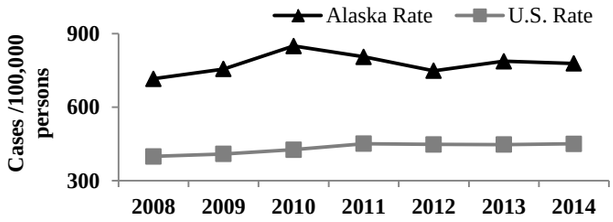
Case data were obtained from the Section of Epidemiology (SOE) reportable conditions database and the Sexually Transmitted Disease-Management Information System. Population data were obtained from the Alaska Department of Labor and Workforce Development.

## Results

In 2014,

- 5,726 CT cases were reported to SOE, yielding an annual incidence rate of 778 cases per 100,000 persons, which represents a 1% decrease compared to 2013 (Table);
- Alaska's CT infection rate was 73% higher than the U.S. rate of 450 cases per 100,000 persons (Figure 1); and
- Alaska was preliminarily ranked third in the nation for CT incidence.

**Figure 1. Chlamydia Rates, by Year — Alaska and the United States, 2008–2014***

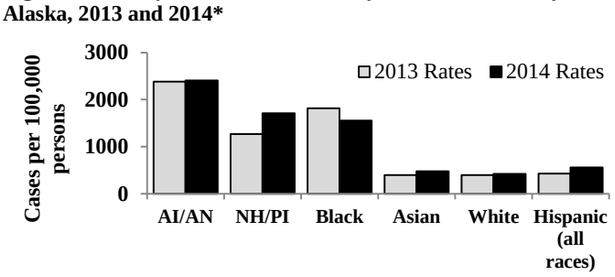



**The 2014 U.S. case rate is preliminary.*

Of the 5,726 CT cases reported in 2014,

- 3,902 (68%) were in females, of whom 41 (1%) developed PID;
- except for two CT infections in young children, the ages of CT-infected persons ranged from 13–70 years, of whom, 4,648 (81%) were in persons ≤29 years;
- rates were highest in persons aged 20–24 years at 3,923 cases per 100,000 persons; and
- CT rates were highest in non-Hispanic American Indian/ Alaska Native people (AI/AN), Native Hawaiian/Pacific Islanders (NH/PI), and Blacks (Figure 2).

**Figure 2. Chlamydia Infection Rates, by Race and Ethnicity — Alaska, 2013 and 2014***




**Note: 240 cases in 2013 and 229 cases in 2014 were of unknown or multiple races and are not included in this chart.*

The Northern and Southwest regions had the highest CT rates in 2014, while the greatest rate increase from 2013 was in the Interior region (18%). Five-year trend data show rate decreases in all areas except the Gulf Coast; Southwest rates initially decreased and then returned to 2010 levels (Table).

**Table. Chlamydia Rates per 100,000 population with 1- and 5-year Rate Changes, by Region — Alaska, 2010–2014**

| Region | 2010 | 2011 | 2012 | 2013 | 2014 | 1 Year | 5 Year |
|---|---|---|---|---|---|---|---|
| Anch/MatSu | 810 | 771 | 727 | 786 | 725 | -8% | -11% |
| Gulf Coast | 355 | 365 | 414 | 329 | 370 | +12% | +4% |
| Interior | 811 | 799 | 597 | 645 | 759 | +18% | -6% |
| Northern | 2250 | 2060 | 2278 | 2216 | 1975 | -11% | -12% |
| Southeast | 604 | 460 | 487 | 513 | 512 | 0% | -15% |
| Southwest | 1801 | 1753 | 1501 | 1598 | 1798 | +13% | 0% |
| **Statewide** | **849** | **803** | **750** | **787** | **778** | **-1%** | **-8%** |

## Discussion

Proportionally, the distribution of CT cases in Alaska mirrors that of the nation, with females, persons aged 15–24 years, and racial and ethnic minorities bearing the greatest burden of disease.[1] Alaska has experienced recent reductions in CT incidence; however, it is unknown if Alaska's decrease in reported CT incidence is the result of a true decline in disease transmission or a decline in case detection (or both). In Alaska, incidence rates are highest in the Northern and Southwest regions. Concerningly, the Interior region has seen a substantial increase in CT incidence during 2012–2014.

## Recommendations

1. Promptly treat CT-infected patients and their sex partner(s) with azithromycin 1 g PO in a single dose, OR doxycycline 100 mg PO twice daily for 7 days.[3]
2. Test all persons who are infected with CT for other sexually transmitted diseases, including HIV.
3. A thorough sexual history should be elicited from all STD patients to include same-sex and oral/anal sexual activities; obtain rectal and/or pharyngeal specimens,[4] as appropriate, for CT and GC detection.
4. Develop a partner management plan with CT-infected patients that include timely notification of all sex partners. Consider expedited partner therapy for sexual partners who are unlikely to present for clinical evaluation.[5]
5. Screen pregnant women for STDs at the first prenatal visit; repeat testing in the third trimester for those at high risk.
6. Annually screen all sexually active females aged ≤25 years and women aged >25 years with new or multiple partners.
7. Counsel patients at risk for STDs on risk-reduction strategies, including correct and consistent condom use.
8. Report confirmed CT cases and treatment to SOE within 5 working days by fax to 561-4239, or call 561-4234 (800-478-1700). Report forms are available at: www.epi.alaska.gov/pubs/conditions/frmSTD.pdf

## References

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2. Andrews WW, et al. The Preterm Prediction Study: association of second-trimester genitourinary CT infection with subsequent spontaneous preterm birth. *Am J Obst Gynecol* 2000;183(3):662-8.
3. CDC. Sexually Transmitted Diseases (STD). 2010 STD Treatment Guidelines, 2010. Available at: http://www.cdc.gov/std/treatment/2010; Phone app available at: http://www.cdc.gov/std/STD-Tx-app.htm
4. SOE Epidemiology *Bulletin.* "Chlamydia Infection – Alaska, 2012." No. 15, June 11, 2013. Available at: http://www.epi.alaska.gov/bulletins/docs/b2013_15.pdf
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