

Executive summary

Reportable diseases in Oregon, 2016

Every day, diagnostic laboratories and health care professionals report specific conditions to local health authorities who investigate, attempt to stop their spread and relay the data to the Oregon Health Authority's Public Health Division. Oregon-specific data, descriptive epidemiology for selected diseases and best practices for minimizing disease transmission are summarized in this report. With some diseases, laboratories are also required to forward bacterial isolates to the Oregon State Public Health Laboratory for subtyping, which may identify common source outbreaks. These epidemiologic and laboratory efforts constitute Oregon's communicable disease surveillance system. Following are highlights of disease reporting in Oregon for 2016.

What was up in 2016

Compared to 2015, case counts for campylobacteriosis, carbapenem-resistant *Enterobacteriaceae*, cryptosporidiosis, shigellosis and yersinosis were elevated in Oregon in 2016.

- Campylobacteriosis: 994 cases were reported in 2016, compared to 891 in 2015. Cases diagnosed by culture are considered “confirmed,” while those diagnosed by molecular methods are “presumptive.” The apparent increase in 2016 could largely reflect clinical laboratories' increasing employment of molecular diagnostic methods; although overall case counts rose, the number of cases confirmed by culture fell from 856 to 622, while “presumptive” cases rose from 35 to 372.
- Carbapenem-resistant *Enterobacteriaceae* (CRE) infections have been rising in Oregon since they became reportable in December 2011. Infection by these highly resistant bacteria jumped from 101 cases in 2015 to 171 in 2016. Of the 2016 cases, 91 (53%) were *Enterobacter* spp. Fourteen (8%) of the 171 cases contained carbapenemase genes, which can be transmitted to other bacteria.
- Cryptosporidiosis: Case counts increased from 217 in 2015 to 327 in 2016. Most of the increase is explained by 94 cases resulting from two swimming-associated outbreaks that affected primarily residents of Clackamas and Multnomah counties.

- Lyme disease: 54 cases were reported during 2016, up from 35 during the previous year. Although we don't always know where the disease was acquired, all but four of the cases were among residents of western Oregon counties — consistent with the known distribution of the vector *Ixodes pacificus* ticks.
- Mumps erupted in Oregon during 2016 after nine years of ≤ 6 cases per year. Twenty-seven cases were reported during 2016 — 20 of them from Marion and Washington counties. Clusters occurred among Pacific Islanders and among middle- and high-school wrestlers. Among 16 cases less than 19 years of age, 13 were up-to-date on vaccination. The driving forces for the outbreaks in 2016 seem to have been waning vaccine-induced immunity and the intensity of exposure. Outbreaks were reported nationally, and they continued into 2017.
- Shigellosis case counts jumped from 50 in 2014 to 112 in 2015, driven mainly by an outbreak of *Shigella sonnei* infections among men who have sex with men and homeless persons in the Portland area. The outbreak continued into February 2016 and then receded, leaving a final case count of 101 for the year.
- Yersiniosis: No cases of plague (*Yersinia pestis*) infection were reported during 2016, but infections by other *Yersinia* species rose from 23 in 2015 to 34 during 2016 — the largest number in 29 years. Twenty-two cases (65%) resided in the Portland Metro tri-county area. A two-case household cluster was reported, and two cases were part of an unsolved cluster of *Y. pseudotuberculosis* infection. Twenty-five (74%) of the cases were *Yersinia enterocolitica*.
- Zika virus infected 54 Oregonians during 2016; all of them or their sexual partners reported foreign travel to Zika-affected areas (Mexico, Central America, South America or Caribbean islands) where the *Aedes aegypti* and *Aedes albopictus* mosquito vectors are prevalent. One case was apparently acquired after sexual contact with a traveler; and one case of congenital Zika infection was reported. Forty-nine of the cases had typical symptoms of Zika virus infection; five were asymptomatic women tested because they were pregnant and had been exposed to the virus.

What was down in 2016

- Acute hepatitis B: Only 21 were reported cases in 2016 — the lowest tally since we started keeping track in 1967. With the requirement of hepatitis B vaccination for school attendance having been phased in starting with kindergarten in the 1998–1999 school year and 7th grade during the 2000–2001 school year, the vast majority of Oregon school graduates

<29 years of age will have been vaccinated. Not surprisingly, most cases reported during 2016 were among older patients: 17 (81%) were in their 30s and 40s.

- Pertussis cases fell from 593 in 2015 to 191 in 2016 — our lowest case count since 2008. The 17 cases reported among infants is the lowest tally among those vulnerable patients since 1997 — perhaps a benefit of immunization of mothers during pregnancy and with transfer of protective antibody across the placenta.
- Salmonellosis cases declined 15% — from 528 in 2015 to 448 in 2016; one reason is fewer large outbreaks. In 2016 11 outbreaks of *Salmonella* occurred, accounting for 46 cases. In 2015, 13 outbreaks were investigated accounting for 139 cases. Decrements were seen in several major serotypes: Enteritidis, Typhimurium, I 4,5,[12]:i:- and Montevideo.
- Shiga-toxin-producing *E. coli* infections also declined — from 231 in 2015 to 191 in 2016. The decline is attributable to a drop in *E. coli* O157 cases — from 107 to 67.