

Executive summary

Communicable disease reporting

Oregon law specifies diseases of public health importance must be reported to local health authorities by diagnostic laboratories and health care providers. The 2015 annual report is the aggregation of these data on selected reportable diseases in Oregon with background on the epidemiology of the condition, trends, and descriptive epidemiological data. In some cases, we present case counts by year, aggregate counts by month to demonstrate seasonal trends, incidence by age and sex, incidence in Oregon compared to national incidence and incidence by county. *Salmonella*, *Shigella*, Shiga toxin-producing *E. coli*, *Cryptococcus*, *Legionella*, Lyme disease, tularemia, animal rabies and campylobacteriosis case counts increased in 2015. Acute hepatitis and pertussis counts were down.

That other *Mycobacterium*

Oregon surveillance for extrapulmonary disease caused by nontuberculous mycobacteria (NTM) commenced in January of 2014. Ninety-eight cases of extrapulmonary NTM were reported among Oregon residents in 2014 and 2015. The median case age was 55 (range, 1–92) years, 51 (52%) were female, and 37 (38%) were hospitalized at the time of specimen collection. Tissue and wound cultures accounted for 46 (47%) of the cases. *M. avium* complex (MAC) was the most frequently reported species with 42 cases (43%); 16 of those were from children 1–4 years of age. In Oregon, the highest rates of infection were reported among children <5 years of age.

Three NTM clusters were detected during 2014–2015. An *M. fortuitum* cluster comprised seven cases who had prosthetic joint replacement surgery. A two-case cluster of *M. fortuitum* infections was associated with abdominoplasty in an ambulatory surgery center. Two *M. haemophilum* cases followed art work at a common tattoo parlor.

Legionella lurking

Legionellosis became reportable in Oregon in 2001 and nationally in 2009. Rates of reported illness have increased each year, both in Oregon and nationally. The cause of the rise is unknown; however, increases in older persons and those with underlying diseases, along with increased case detection and reporting may have been playing a role.

In 2015, 50 cases of legionellosis were reported among Oregonians; 96% were hospitalized, and five died. Though no outbreaks occurred on Oregon soil, two large outbreaks occurred in the Bronx, bringing national attention to outdated and ill-maintained plumbing systems. None of the 50 Oregon cases reported travel to New York City during their exposure periods. However, due to multiple outbreaks in hospitals, health care settings, and apartment complexes, a new industry standard for prevention of *Legionella* growth and transmission in water systems in buildings was published in 2015.

Shigellosis swells in the city

Shigellosis is an acute bacterial infection characterized by (sometimes bloody) diarrhea, vomiting, abdominal cramps, and, often, fever. In Oregon, shigellosis is typically caused by *S. sonnei* or *S. flexneri*.

Since June 2015, an outbreak of *Shigella sonnei* infections has struck residents across 19 states. In total, 175 infections have been reported, with 102 occurring in Oregon, making it the largest outbreak of confirmed shigellosis in state history. The overwhelming majority of cases in this multistate outbreak have been among men, particularly among men who have sex with men (MSM). In Oregon, the outbreak spread among MSM and then among homeless persons in Portland.

Non-O157 STECs lead the pack in Oregon

With increasing deployment of diagnostic kits that identify not just *Escherichia coli* O157 but any Shiga toxin-producing *E. coli* (STEC) comes an appreciation of the significant role that other STEC play as human pathogens. In the U.S. (and in Oregon), O26, O45, O103, O111, O121 and O145 have been the most common “other” serogroups — i.e., the non-O157 serogroups that make up about half of reported STEC cases. Over the past 10 years, the number of O157 cases reported statewide has ranged between 57 and 106 annually. After being relatively steady during 2008–2011, the rate began to increase, and reached a peak of 2.7 cases per 100,000 persons in 2013. In 2015, the rate was 2.6 per 100,000.

Reported infections by non-O157 STEC serogroups have increased steadily from single digits in 2007 and 2008 to 109 confirmed cases in 2015. Of the 215

confirmed STECs serotyped in 2015, 106 (49%) were O157, and 109 (51%) were non-O157, including O26 (56), O103 (17), O121 (10) and 18 other serogroups. Fifty-six cases were hospitalized; two died. Eleven cases developed hemolytic uremic syndrome, all but one had STEC O157.

Incidence remains highest (21.5 per 100,000) in children aged <5 years.

Menacing meningococcus

After a decade of decline, meningococcal disease in Oregon reversed trajectory. In 2013, Oregon's rate of 0.3 per 100,000 was the lowest rate recorded and close to the national rate of 0.2 per 100,000. However, since 2013, however, Oregon's case counts have increased, with serogroup B in the lead. A seven-case outbreak of serogroup B disease, including one fatal case, struck the University of Oregon during January–May. All but one case were among students 18–20 years of age. Close contacts of each case received antibiotic prophylaxis in accordance with CDC recommendations. Mass vaccination clinics using a newly licensed 3-dose serogroup B vaccine were held in March 2015, after 4 of the 7 cases had come to light, with follow-up clinics in May and October.

Fungus among us

Infection by *Cryptococcus* became reportable in Oregon on August 19, 2011, though public health officials have tracked voluntarily reported cases since 2004. Seventy-six cases occurred among Oregon residents in 2015. Among culture-confirmed cases the most common infection was *C. neoformans* (18), followed by *C. gattii* (14). Cryptococcal infection is now frequently diagnosed by antigen detection rather than by culture. The antigen is not species-specific; it does not distinguish *C. neoformans* from *C. gattii*.

Forty-nine percent of interviewed cases had no history of travel outside of Oregon in the 13 months before illness onset, and so were apparently acquired in Oregon.