

Meningococcal disease

Reported cases of invasive meningococcal infections, including sepsis and meningitis, have declined from the hyperendemic levels seen in 1993–1997 attributable to a clonal strain of serogroup B *Neisseria meningitidis*. Respiratory secretions and droplets continue to be shared among Oregonians and predispose us to secondary cases.

In 2014, there were 18 reported cases and two deaths from meningococcal disease in Oregon. From the early 1990s through 2011, serogroup B predominated in Oregon, but in 2011 and again in 2013–2014, other serogroups have been more prominent. In 2014, serogroup C accounted for 44% (8) of the serogrouped cases, whereas 22% (4) of cases were serogroup B.

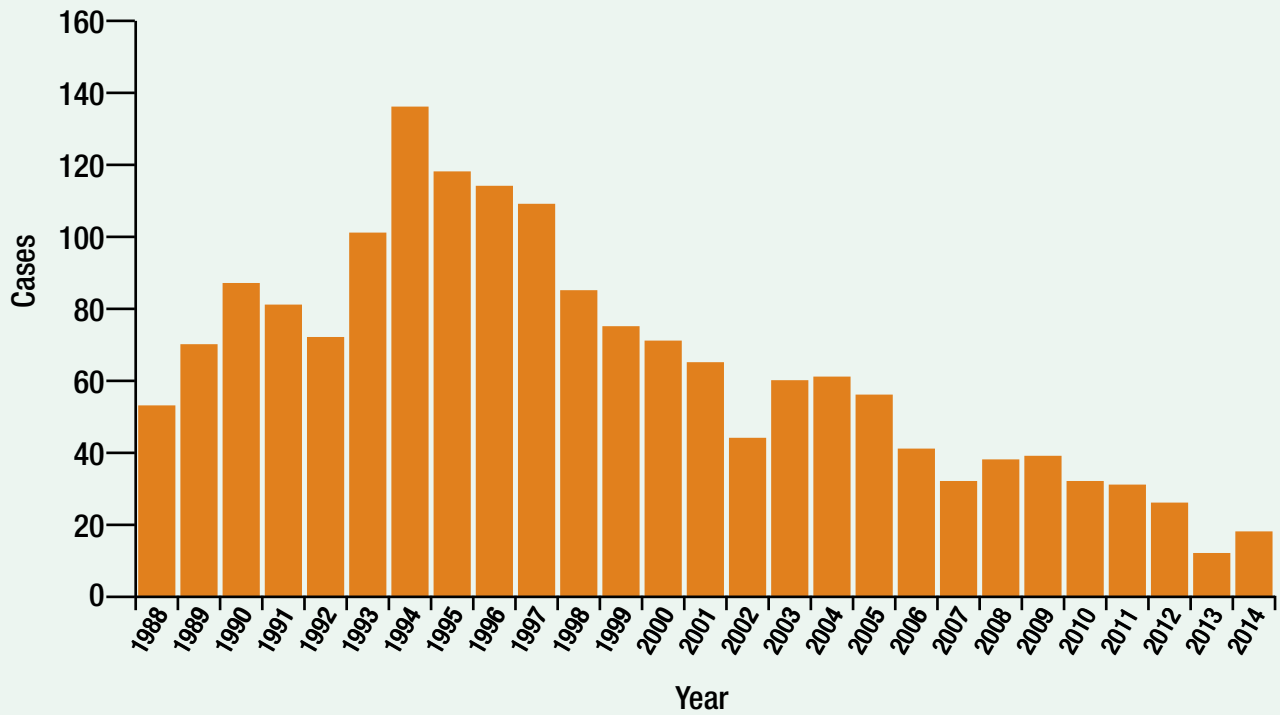
The burden of meningococcal disease was highest in those ≤ 5 years of age (2.5/100,000). Meningococcal disease is treated with intravenous antibiotics.

American Committee on Immunization Practices (ACIP) recommends routine vaccination with quadrivalent (contains antigens from serogroups A, C, Y, and W-135) meningococcal conjugate vaccine for all persons 11–21 years of age. Meningococcal vaccine is also recommended for persons 2 months to 55 years of age who are at increased risk for the disease due to complement deficiency, travel to or residence in a country where meningococcal disease is hyperendemic or epidemic, or inclusion in a defined risk group during a community or institutional outbreak.

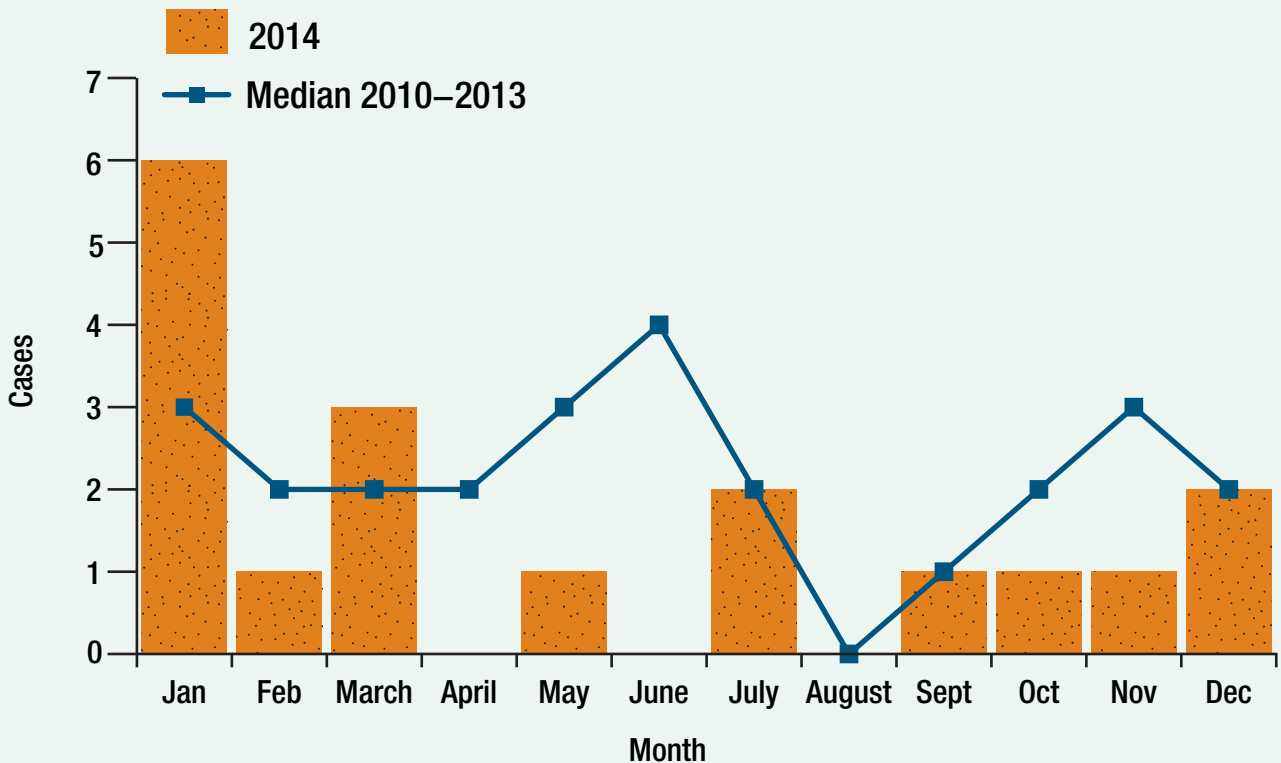
In October 2014, the Food and Drug Administration (FDA) licensed the first serogroup B meningococcal vaccine (MenB-FHbp, Trumenba®). FDA approved this vaccine for use in people 10–25 years of age as a three-dose series. On January 23, 2015, FDA licensed a second serogroup B meningococcal vaccine (MenB-4C, Bexsero®). FDA approved this vaccine for use in people 10–25 years of age as a two-dose series.

MenB vaccination is now recommended for those ≥ 10 years with complement deficiencies, anatomic or functional asplenia, microbiologists who have contact with *N. meningitidis*, and others at increased risk during a serogroup B outbreak.

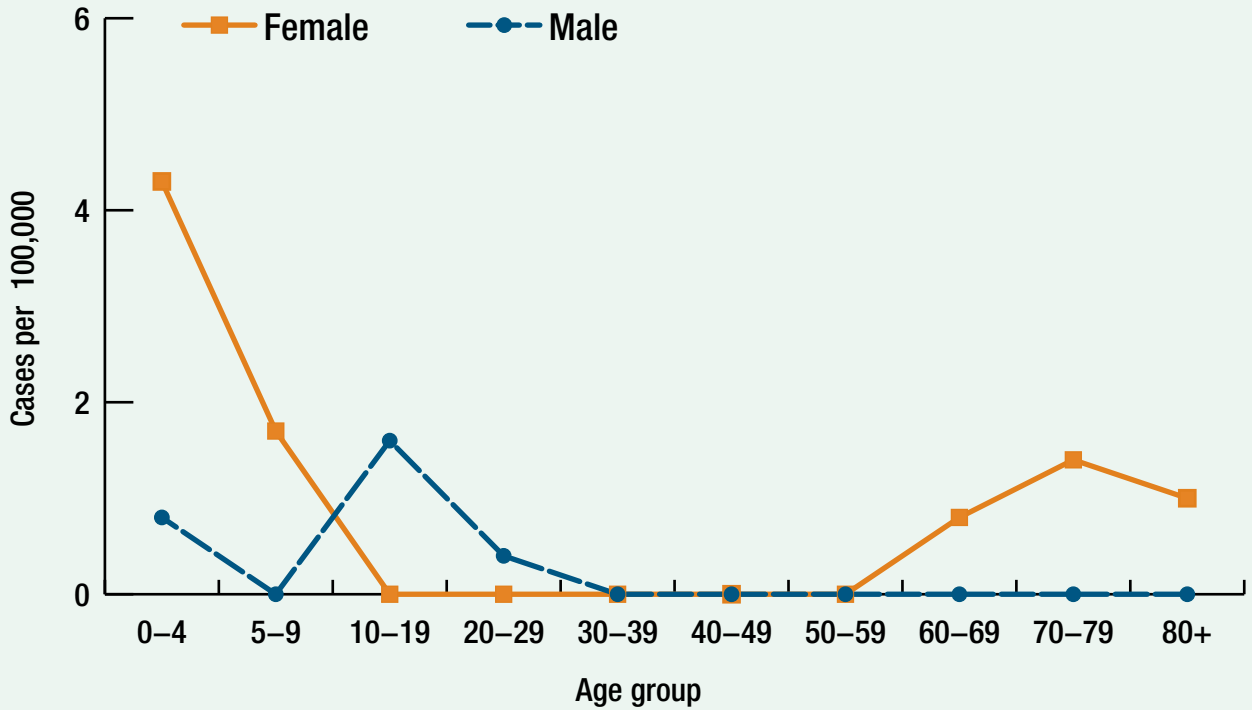
Meningococcal disease by year: Oregon, 1988–2014



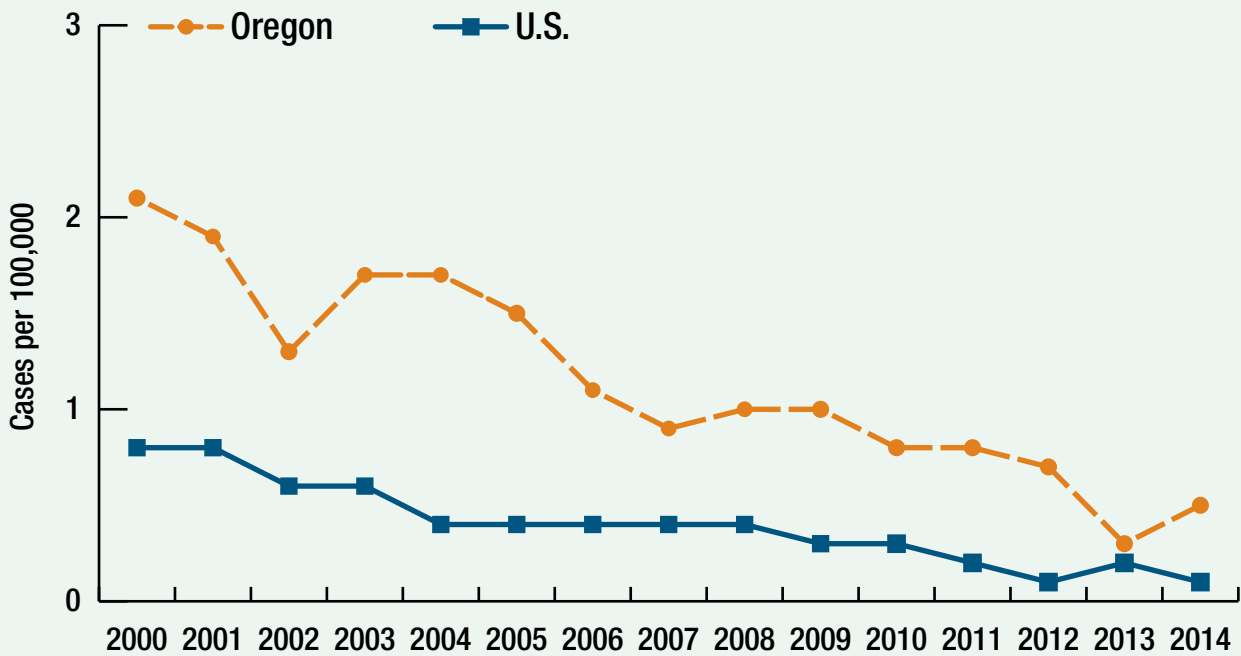
Meningococcal disease by onset month: Oregon, 2014



Incidence of meningococcal disease by age and sex: Oregon, 2005–2014

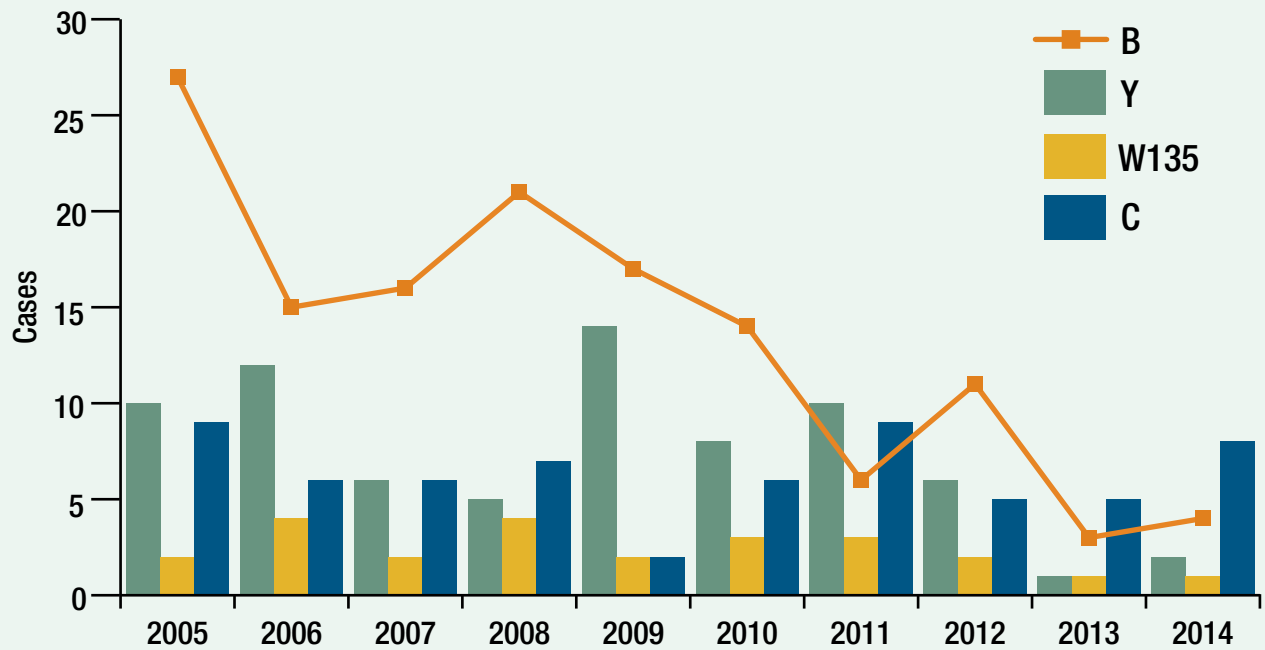


Incidence of meningococcal disease: Oregon vs. nationwide, 2000–2014



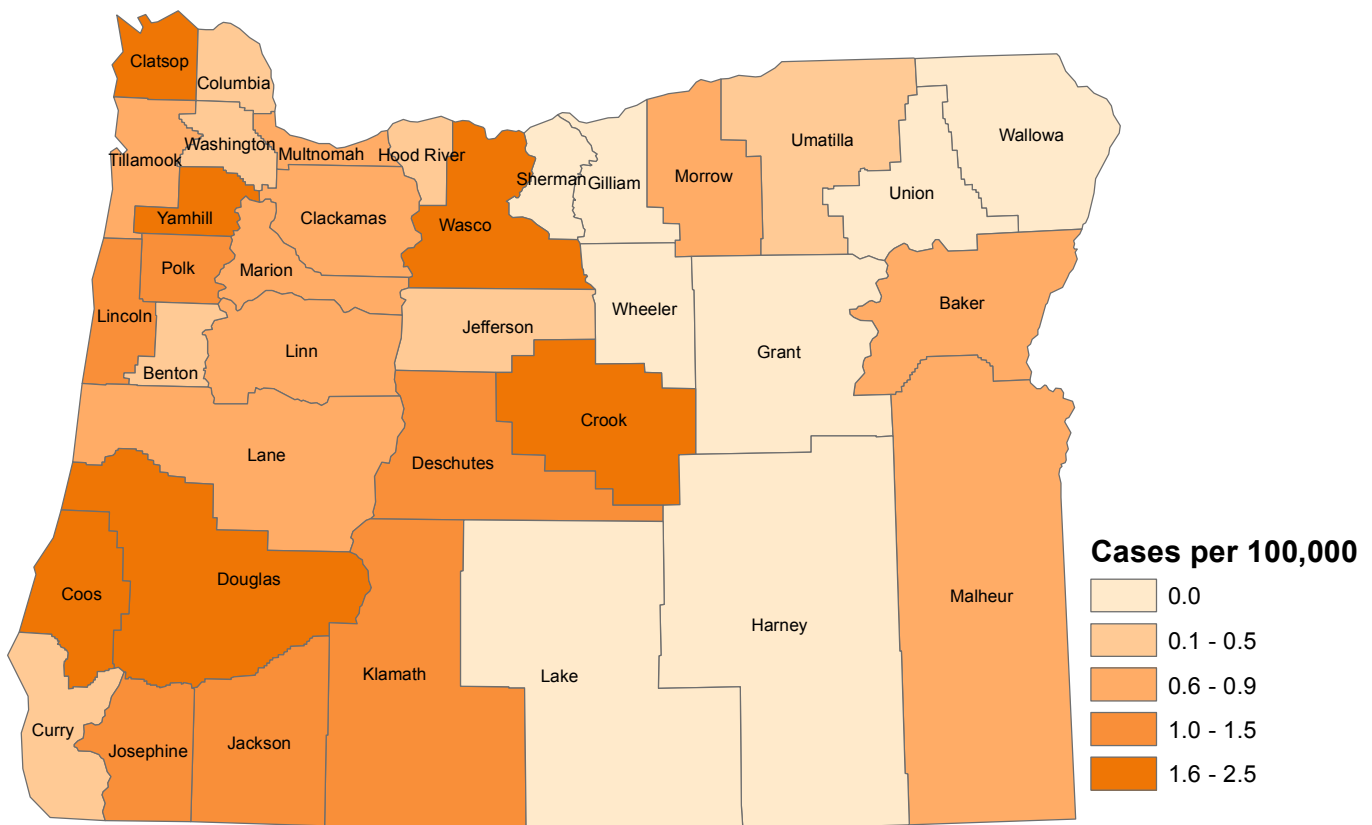
Oregon	2.1	1.9	1.3	1.7	1.7	1.5	1.1	0.9	1.0	1.0	0.8	0.8	0.7	0.3	0.5
U.S.	0.8	0.8	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.1	0.2	0.1

Meningococcal disease by serogroup: Oregon, 2005–2014



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
B	27	15	16	21	17	14	6	11	3	4
Y	10	12	6	5	14	8	10	6	1	2
W135	2	4	2	4	2	3	3	2	1	1
C	9	6	6	7	2	6	9	5	5	8

Incidence of meningococcal disease by county of residence: Oregon, 2005–2014



Prevention

- Vaccinate to prevent illness from serogroups A, C, Y, W-155 per ACIP guidelines.
- Vaccinate to prevent illness from serogroup B per ACIP guidelines.
- Identify and recommend prophylaxis of close contacts of confirmed and presumptive cases.
- Avoid smoking and exposing children to tobacco smoke, which have been associated with an increased risk of invasive meningococcal disease.