



Summary of Vaccine Preventable Diseases Reported to the Michigan Department of Health and Human Services, 2014

This is a summary of reported cases of selected vaccine-preventable diseases in Michigan in 2014. Totals for 2013 are provided for comparison in the table on the final page.

Congenital Rubella – No cases of congenital rubella were reported in 2014.

Diphtheria – No cases of diphtheria were reported in Michigan in 2014.

***Haemophilus influenzae* invasive disease** – There were 106 cases of invasive *Haemophilus influenzae* invasive disease reported in 2014. Cases ranged in age from newborn to 98 years. There were 16 cases in persons under 15 years of age and there were 14 cases under the age of 5 years. All cases under age 15 years were serotyped. There were 4 cases attributable to serotype b, ages 4 months, 5 months, 2 years, and 4 years; all 4 occurred in unvaccinated children. Among the other cases under 15 years of age, 3 were serotype a, 3 serotype f, and 6 were untypeable isolates. There was one death reported, which occurred in a 4-day old child (serotype f).

Measles –

There were 5 cases of measles reported in 2014 in Michigan. All 5 were epidemiologically linked and all were confirmed cases. The index cases were a pair of adult unvaccinated siblings, ages 24 and 19 years, who traveled to the Philippines in November and were infected there. They experienced onset of illness after their return to Michigan. Three secondary cases were identified and confirmed in a family who had contact with the above cases. The secondary cases involved one adult age 38 years and two children, ages 6 and 8 years all three were previously unvaccinated against measles. The identified measles genotype was B3 which was responsible for the large Philippines measles outbreak in 2014.

Meningococcal disease –

There were 11 reported cases of invasive meningococcal disease reported in 2014, all were confirmed by positive culture result. The site from which *N. meningitides* was isolated was blood for 6 cases, cerebro-spinal fluid (CSF) for 3, and both blood and CSF for 2 cases. Cases ranged in age from 5 months to 87 years, with a median age of 27 years. Serogrouping was completed for all cases: 6 were due to serogroup B, 3 were serogroup C, one was serogroup Y, and one was not typeable. Three cases occurred in persons in the ages recommended for meningococcal vaccination, and two of them had a history of vaccination; all three involved serogroup B, the group not covered by current meningococcal vaccine formulations. Two cases died, a 5 month old male and an 87 year old female.

Mumps – A total of 42 mumps case were reported in Michigan in 2014, three were classified as Confirmed, 17 were Probable, and 22 were Suspect (note: Suspect mumps cases are not included in final CDC data). Two of the confirmed cases were the result of separate out-of-

country exposures, the third confirmed case was epidemiologically linked to a large outbreak in Ohio. All three confirmed cases were classified on the basis of positive mumps PCR testing which detected mumps viral RNA. The probable cases were classified on the basis of consistent mumps illness and positive mumps IgM serologic tests. Suspect cases represented clinically compatible mumps illnesses with no, or negative, laboratory findings supporting the diagnosis of mumps. There were no identified secondary cases in any of the reported cases. Cases ranged in age from 20 months to 75 years with a median age of 23 years. Cases were nearly evenly split by gender, with 50.9% reported among males.

Pertussis –

There were 1,424 pertussis cases reported in 2014 in Michigan, an increase of 43% over the number of cases reported in 2013. The age of cases ranged from 14 days to 90 years, with a median age of 10 years and a mean of 15.7 years. The largest proportion of reported cases was in the 11-19 years old age-group (27.5%), and 20% of cases were among individuals 20 years of age and older (see Pertussis Figure 1). Females accounted for 53.7% of cases. Admission to hospital was reported in 7.3% of cases. There were no reported deaths. Cases were reported in 67 of Michigan’s 83 counties (see Pertussis Figure 2).

Pertussis Figure 1

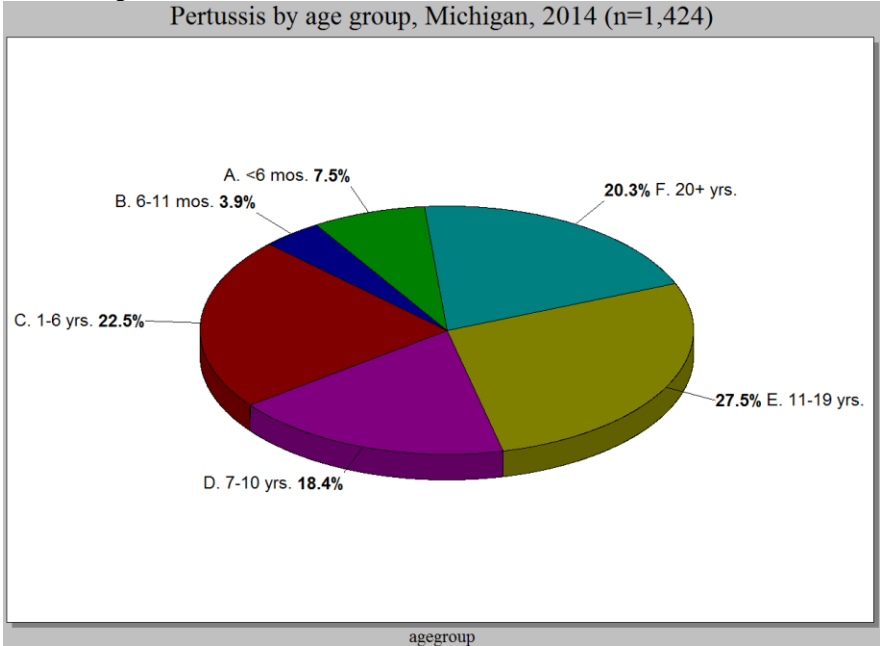


Table 1 - Number of reported cases of selected vaccine preventable diseases, Michigan, 2013 and 2014.

Disease	Total Cases 2013	Total Cases 2014
Congenital Rubella	0	0
Diphtheria	0	0
<i>H. influenzae</i> invasive <5 years (serotype b)	13 (0)	14 (4)
Measles	5	5
Meningococcal disease	6	11
Mumps	15	42
Pertussis	995	1,424
Poliomyelitis	0	0
Rubella	0	0
Tetanus	1	0
Varicella	719	726