



Infectious Disease Epidemiology Report

Varicella, 2016



Background

Varicella is a very contagious disease caused by the varicella-zoster virus. It causes a blister-like rash, itching, tiredness, and fever. Varicella can be serious, especially in babies, adults, and people with weakened immune systems. Varicella is spread in the air through coughing or sneezing. It can also be spread by touching or breathing in the virus particles that come from the blisters.

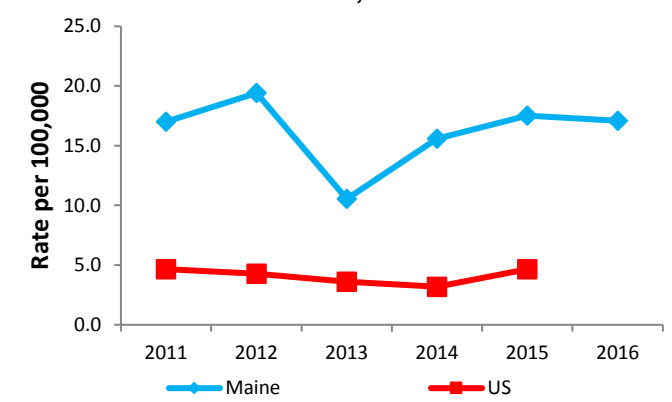
Methods

Varicella disease is defined as isolation of varicella-zoster virus from a clinical specimen or a clinically confirmed report of a diffuse maculopapulovesicular rash. Maine CDC conducts investigations for all reported varicella cases in children 18 years and younger, hospitalized cases, and deaths. All other varicella cases are documented in Maine CDC's surveillance system.

Results

A total of 228 cases of varicella were reported in 2016. The rate of Maine varicella cases in 2015 was 17.1 cases per 100,000 persons (Figure 1). As of 2015, only 40 states report varicella surveillance data to federal CDC.

Figure 1. Rates of varicella disease - Maine and the United States, 2011-2016



Of the 228 cases of varicella reported in 2016, 104 cases (45.6%) were identified in individuals less than 20 years of age (Table 1). The age range was from 7 months to 93 years with the median age of 26.

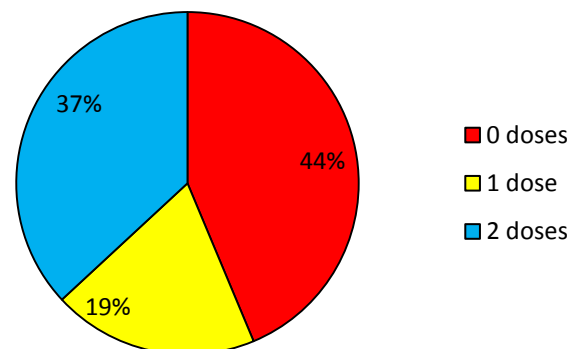
years. 110 cases (48.2%) were male and 118 cases (51.7%) were female.

Table 1: Varicella disease by age- Maine, 2016

Age	Cases	
	#	%
Years		
0-4	33	14.5
5-9	41	18.0
10-14	22	9.6
15-19	8	3.5
20-34	23	10.1
35-49	23	10.1
>= 50	78	34.2
Total	228	100.0

Overall, out of 228 Maine varicella cases reported in 2016, 59 (25.8%) cases had documentation of varicella vaccine. Since only pediatric cases of varicella are investigated vaccination statistics are better understood in this population. Of the 104 cases under 20 years old, 59 (56.7%) had received at least one vaccine dose, 38 (36.5%) had received two vaccine doses, and 45 (43.2) were unvaccinated. (Figure 2).

Figure 2. Varicella vaccination data in individual cases under 20 years old - Maine, 2016



One school experienced a confirmed outbreak of varicella (3 or more cases) during 2016, and a total

Varicella – Maine, 2015

of 47 schools and daycares reported at least one case.

Varicella was identified among residents in all 16 Maine counties in 2016 (Table 2), with the highest rate of cases in Hancock Penobscot and Piscataquis counties: 25.7, 31.0 and 47.5 per 100,000 persons respectively. Patient address was available for all cases.

Table 2: Varicella disease by county- Maine 2016

County	Count	Rate (per 100,000 persons)
Androscoggin	15	14.0
Aroostook	4	5.9
Cumberland	42	14.4
Franklin	1	3.3
Hancock	14	25.7
Kennebec	19	15.8
Knox	8	20.1
Lincoln	6	17.5
Oxford	11	19.2
Penobscot	47	31.0
Piscataquis	8	47.5
Sagadahoc	4	11.3
Somerset	10	19.6
Waldo	4	10.2
Washington	5	15.9
York	30	14.8
Maine	228	17.1

Discussion

Maine CDC conducts routine surveillance on all varicella cases with an emphasis on cases involving children enrolled in school or childcare centers. Varicella is a notifiable disease, and the majority of varicella case reports come from schools. National surveillance data is limited since 10 states do not report varicella cases.

All Maine children are required to have one dose of varicella vaccine for school or daycare enrollment. Parents of students who do not show proof of disease immunity or vaccine history and choose not to get their child vaccinated must sign an exemption letter stating the guardian has a medical, religious, or philosophical reason for refusing vaccine. Children who do not have proof of varicella immunity will be excluded from school or daycare for 16 days from the onset of symptoms of the last identified case.

The Advisory Committee for Immunization Practices (ACIP) recommends the following persons receive varicella vaccine:

- First dose: 12 through 15 months of age
- Second dose: 4-6 years of age
- Catch up series for children
 - 2 doses at least 3 months apart for 7-12 years
 - 2 doses at least 4 weeks apart for 13-18 years
- Susceptible adults at high risk for exposure or transmission:
 - Teachers
 - Child care employees
 - Staff members in institutional settings
 - Healthcare workers
 - Family contacts of immunocompromised persons
 - International travelers
 - Non-pregnant women of childbearing age

The shingles vaccine is approved by FDA for people aged 50 years and older. CDC recommends a one-time vaccination for people 60 years and older to prevent shingles.

All cases of varicella disease in Maine must be reported by calling 1-800-821-5821, or by faxing reports to 1-800-293-7534. For more information, contact your healthcare provider or local health center.

Additional information about Varicella disease can be found at:

- Maine CDC
<http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/vaccine/varicella.shtml>
- Federal CDC
<http://www.cdc.gov/chickenpox/>