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Pertussis, 2013

Maine Department of Health and Human Services

Maine Center for Disease Control and Prevention

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Infectious Disease Epidemiology Report



Pertussis, 2013

Background

Pertussis is caused by bacteria called *Bordetella pertussis*. Pertussis is clinically defined as a cough illness lasting at least two weeks with one or more of the following:

- Paroxysms of coughing
- Inspiratory “whoop”
- Post-tussive vomiting

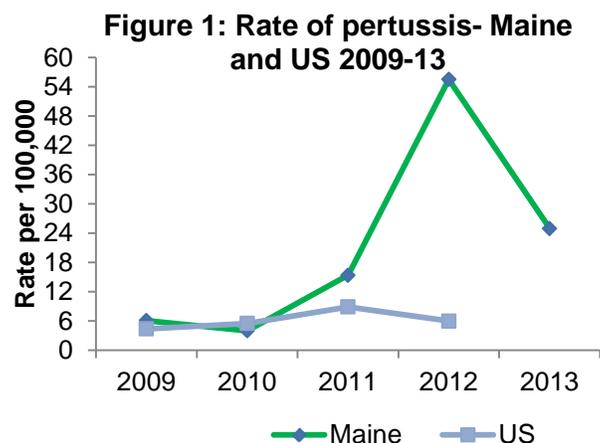
The disease symptoms mainly affect the respiratory tract. Pertussis can be very serious, especially in infants.

Methods

The Infectious Disease Epidemiology Program of Maine Center for Disease Control and Prevention monitors the incidence of pertussis through mandatory reporting by health care providers, clinical laboratories and other public health partners. Pertussis cases must be clinically compatible, with laboratory confirmation or epi-linkage to a lab confirmed case to be counted as a case. Standardized case reports were completed for all cases and were documented in Maine CDC’s surveillance system.

Results

A total of 332 cases of pertussis were reported in 2013. Of these, fourteen (4.2%) were hospitalized. The 2013 rate of pertussis in Maine was 25.0 cases per 100,000 persons, a significant decrease from the 2012 rate of 55.5 cases per 100,000 persons. (Figure 1).



Of the 332 cases of pertussis reported in 2013, the majority of cases occurred among children and adolescents aged 7-19 years (57.2%). The rate for the age groups 0-19 was significantly higher than the state rate. Nineteen cases (5.7%) were identified in children less than 1 year of age (Table 1).

Table 1: Pertussis by Age – Maine, 2013

Age group	# of cases	Rate per 100,000
< 6 mos	10	77.67
6-11 mos	9	69.90
1-6 yrs	63	74.96
7-10 yrs	104	175.77
11-19 yrs	86	57.70
20-29 yrs	9	5.86
30-39 yrs	15	10.11
40-49 yrs	12	6.20
50-59 yrs	11	5.09
≥ 60 yrs	13	4.17
All	332	24.98

Almost all pertussis cases reported having paroxysmal cough (Table 2).

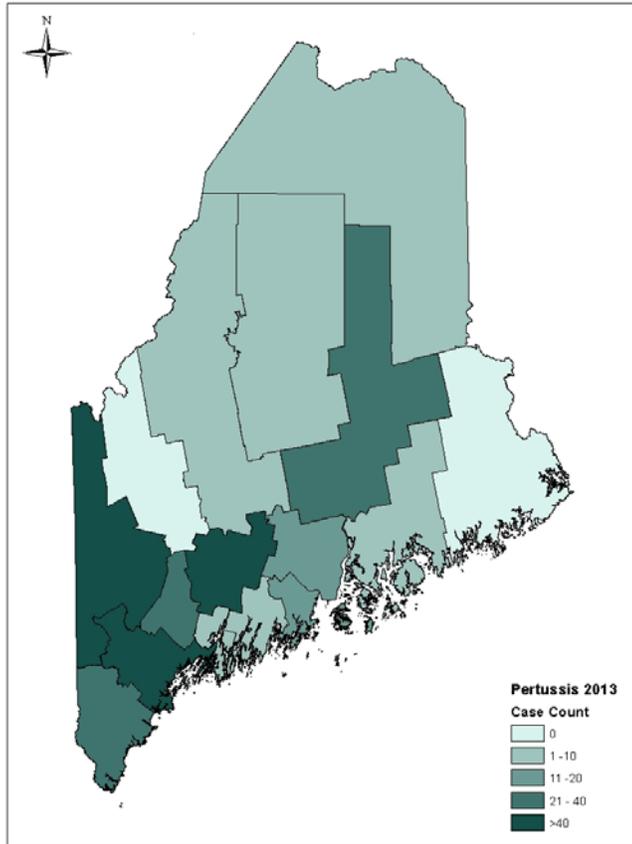
Table 2: Pertussis by Symptoms* – Maine, 2013

Symptoms	No.	%
Whoop	102	30.7
Post-tussive vomiting	223	67.2
Paroxysmal cough	324	97.6

* Cases may report more than one symptom

Pertussis cases were identified among residents of fourteen Maine counties in 2013 (Figure 2). Oxford had the highest incidence with 99.2 cases per 100,000 persons compared to the state rate of 25.0 cases per 100,000. Androscoggin, Kennebec, Knox, Piscataquis and Waldo rates were above the Maine rate.

Figure 2: Pertussis by County - Maine, 2013



7534. For more information contact your healthcare provider or local health center.

Additional information about pertussis disease can be found at:

- Maine CDC
<http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/vaccine/pertussis.shtml>
- Federal CDC
<http://www.cdc.gov/features/pertussis>
- Federal vaccine schedule
<http://www.cdc.gov/vaccines/schedules/>
- Infant guidance
<http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/vaccine/documents/Pertussis-Infants-Guidance-Clinicians.docx>

Discussion

Maine CDC encourages providers to test clinically appropriate patients and report all pertussis cases. Early treatment of pertussis is very important and may lessen symptoms. This is particularly important for infants due to the severity of illness. Maine CDC developed guidance for clinicians for infant cases modified from American Academy of Pediatrics California District.

Health care providers are encouraged to promote the use of pertussis vaccines. There are two pertussis vaccines (DTaP and Tdap). Both vaccines contain pertussis antigen in combination with tetanus and diphtheria.

- Tdap is recommended only for a single dose across all age groups except for pregnant women.
- Tdap is recommended during each pregnancy.

Pertussis cases can be reported to Maine CDC by calling 1-800-821-5821 or faxing to 1-800-293-