



Infectious Disease Epidemiology Report

Pertussis, 2009

Background

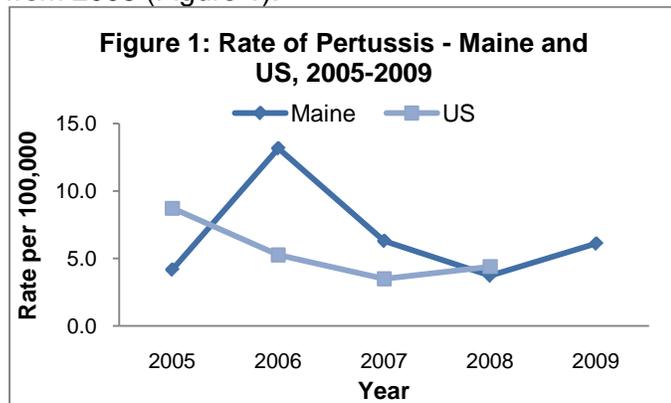
The Infectious Disease Epidemiology Program of the Maine Center for Disease Control and Prevention monitors the incidence of pertussis through mandatory reporting by health care providers, clinical laboratories and other public health partners. This report summarizes 2009 surveillance data on cases of pertussis disease.

Methods

Pertussis is defined as a cough illness lasting at least two weeks with one of the following: paroxysms of coughing, inspiratory “whoop,” or post-tussive vomiting in addition to laboratory confirmation or epi-linkage to a lab confirmed case. Standardized case reports were completed for all cases and were documented in Maine CDC’s surveillance system.

Results

A total of 80 cases of pertussis were reported in 2009. Of these, four (5%) pertussis cases were hospitalized. The 2009 rate of pertussis in Maine was 6.1 cases per 100,000 population an increase from 2008 (Figure 1).



Of the 80 cases of pertussis reported in 2009, the majority of cases were found among children and young adults aged 5-19 years (77.6%). Nine cases (11.3%) were identified in children less than 1 year of age (Table 1).

Table 1: Cases of Pertussis by Age – Maine, 2009

| Age | No. | % |
|--------------------|-----|------|
| Less than 6 months | 7 | 8.8 |
| 6 mo – 11 mo | 2 | 2.5 |
| 1-4 yr | 8 | 10 |
| 5-9 yr | 10 | 12.5 |
| 10 - 15 yr | 24 | 30 |
| 16 - 19 yr | 11 | 13.8 |
| 20 -29 yr | 1 | 1.3 |
| 30 - 39 yr | 2 | 3.8 |
| 40 - 49 yr | 7 | 8.8 |
| 50 - 59 yr | 6 | 6.3 |
| ≥60 yr | 2 | 2.5 |
| Total | 80 | 100 |

Almost all of pertussis cases were clinically diagnosed with paroxysmal cough (Table 2). A large proportion of cases also reported whoop and post tussive vomiting symptoms.

Table 2: Pertussis Disease by Symptoms* – Maine, 2009

| Symptoms | No. | % |
|------------------------|-----|------|
| Paroxysmal cough | 79 | 98.8 |
| Post tussive vomiting | 41 | 51.3 |
| Whoop | 26 | 32.5 |
| General focal seizures | 1 | 1.3 |

* Cases may have had more than one symptom

Pertussis cases were identified among residents of eleven Maine counties in 2009 (Table 3).

Table 3: Pertussis Disease - Maine, 2009

| County | No. | % |
|--------------|-----|------|
| Androscoggin | 1 | 1.3 |
| Aroostook | 4 | 5 |
| Cumberland | 2 | 2.5 |
| Franklin | 0 | 0 |
| Hancock | 12 | 15 |
| Kennebec | 0 | 0 |
| Knox | 0 | 0 |
| Lincoln | 5 | 6.3 |
| Oxford | 4 | 5 |
| Penobscot | 30 | 37.5 |
| Piscataquis | 0 | 0 |
| Sagadahoc | 1 | 1.3 |
| Somerset | 0 | 0 |
| Waldo | 7 | 8.8 |
| Washington | 1 | 1.3 |
| York | 13 | 16.3 |
| Total | 80 | 100 |

Maine had five pertussis outbreaks in four counties; Hancock, Knox, and Oxford had one pertussis outbreak while York had two pertussis outbreaks.

Discussion

Maine CDC collects routine surveillance on all pertussis cases. Maine surveillance data indicates case rates appear to be increasing slightly. Early treatment of pertussis is very important. If treatment for pertussis is started early in the course of illness symptoms may be lessened. This is particularly important for infants. Whenever possible, a nasopharyngeal (NP) swab or aspirate should be obtained from all persons with suspected pertussis.

- For infants aged <1 year with suspected pertussis, collect a specimen and then treat immediately with recommended antibiotics while awaiting results.
- When pertussis is suspected in persons aged >1 year --- who are presenting with persistent cough in the setting of increased disease and/or have the classic "whoop" --- collect a specimen and start antibiotics immediately, especially if the patient will be in contact with infants.

- For persons aged >1 year, clinicians should generally wait for test results to come back before administering treatment.

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

- Children under age 7 should get 5 DTaP shots. These are given at ages 2, 4, 6, 12-15 months and 4-6 years.
- Tdap vaccine can be given to persons 10–64 years old.
 - Adolescents should get 1 shot of Tdap at 11-12 years of age.
 - Adolescents 13-18 years old should receive Tdap if they have not received a tetanus booster within the last 5 years.
 - Adults should receive Tdap in place of the tetanus booster especially if they have close contact with infants, such as childcare and healthcare personnel and parents.

Pertussis should be reported to Maine CDC by calling 1-800-821-5821 or faxing to 1-800-293-7534. For more information contact your healthcare provider or local health center.

Additional information about Pertussis disease can be found at:

- Maine CDC
<http://www.mainepublichealth.gov>
- Federal CDC
<http://www.cdc.gov/features/pertussis>
<http://www.cdc.gov/vaccines/vpd-vac/pertussis/default.htm>