

# MAINE PUBLIC HEALTH ALERT NETWORK SYSTEM

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*Maine Department of Health and Human Services  
Maine Center for Disease Control and Prevention (Maine CDC)  
(Formerly Bureau of Health)  
11 State House Station  
Augusta, Maine 04333-0011  
Phone 1-800-821-5821 / Fax 207-287-7443*

**\*\*ADVISORY – Important Information\*\***

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**2012PHADV006**

**TO:** All Academic, All Epidemiologists, HETL, All Local Public Health Liaisons, All Childcare, City and County Health Departments, All Healthcare, Lab Facilities, County EMA Directors, Maine Medical Association, Northern New England Poison Center, All Public Health, Public Health Nursing, EMS, All RRCs

**FROM:** Dr. Sheila Pinette, Maine CDC Director  
Dr. Stephen Sears, State Epidemiologist

**SUBJECT:** **Increase in Pertussis – Maine, May 2012**

**DATE:** Tuesday, May 15, 2012

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## **Increase in Pertussis – Maine, May 2012**

**Background:** Maine, like many other states, has been experiencing an increasing number of pertussis cases over the past year. During January 1–May 11, 2012, 55 pertussis cases have been reported to Maine CDC from 9 Maine counties. More than 200 cases of pertussis were reported to Maine CDC during 2011, far exceeding the 53 reported cases in 2010 and the 10-year average of 82 cases per year. Clusters of pertussis have occurred in schools, child care centers, camps, sport teams and workplaces.

Pertussis is a highly communicable, vaccine-preventable disease that can last for many weeks. It is transmitted through direct contact with respiratory secretions of infected persons. Classic pertussis symptoms include paroxysmal cough, whoop, and posttussive vomiting. Pertussis can cause serious illness and can even be life-threatening, especially in infants. More than half of infants less than 1 year of age who get pertussis must be hospitalized.

Maine CDC investigates confirmed cases of pertussis to reinforce treatment guidelines and identify close contacts to assess whether prophylaxis is warranted. Maine CDC also works with schools and communities to implement control measures and prevent disease transmission. These efforts include targeted health communications to inform medical providers, school officials, child care providers, parents and the public about pertussis and how to prevent infections. The primary goal of pertussis outbreak control efforts is to decrease morbidity and mortality among infants; a secondary goal is to decrease morbidity among persons of all ages.

The following recommendations are highlighted to guide clinical management of suspect cases and persons reporting exposure to pertussis.

### **Clinicians are encouraged to:**

1. Consider pertussis when evaluating any patient with an acute illness characterized by cough >2 weeks in duration, or cough with paroxysms, whoop, or posttussive vomiting. Infants may present with apnea and/or cyanosis and have an increased risk of hospitalizations.
2. Test persons who exhibit symptoms consistent with pertussis. Collect specimen with a nasopharyngeal swab. The Maine CDC's Health and Environmental Testing Laboratory (HETL) analyzes specimens by culture and polymerase chain reaction (PCR). Information on HETL's testing is available at [www.maine.gov/dhhs/etl/micro/submitting\\_samples.htm](http://www.maine.gov/dhhs/etl/micro/submitting_samples.htm)). Affiliated Laboratory Inc. in Bangor performs PCR testing as well. Testing is not recommended for persons who are asymptomatic, as contamination of patient specimens with DNA from pertussis vaccines has been documented in healthcare settings leading to false-positive results. Federal CDC has developed a document outlining best practices for PCR testing of suspect pertussis cases (<http://www.cdc.gov/pertussis/clinical/downloads/diagnosis-pcr-bestpractices.pdf>).
3. Treat patients diagnosed with pertussis with appropriate antibiotics and exclude from school, work, and social activities until 5 days of treatment have been completed. Symptomatic contacts of pertussis cases should be tested for pertussis and placed on appropriate antibiotics.
4. Prophylaxis is recommended for asymptomatic household and high-risk contacts of persons diagnosed with pertussis (e.g. infants and their household contacts, pregnant women, healthcare workers), regardless of vaccination status. Contact Maine CDC for assistance in prophylaxis decisions. See table below for dosing regimens for pertussis treatment and prophylaxis.

5. Check the vaccination status of all patients and ensure they are up-to-date on pertussis vaccination.
  - a. Infants and children should receive DTaP (diphtheria, tetanus, and acellular pertussis) vaccine at 2, 4 and 6 months, 15 through 18 months, and 4 through 6 years of age.
  - b. Tdap is routinely recommended as a single dose for those aged 11-18 years with preferred administration at 11-12 years.
    - Children aged 7-10 years who did not complete the childhood series of pertussis containing vaccines should receive a one-time dose of Tdap.
    - Adolescents and adults who have not received a dose of Tdap should receive a one-time dose, especially if they have close contact with an infant.
    - Pregnant women who have not previously received Tdap are recommended to receive a single dose of Tdap vaccine, preferably during the 3<sup>rd</sup> trimester or late 2<sup>nd</sup> trimester (after 20 weeks gestation).
6. Report suspect cases of pertussis to ME CDC at 1-800-821-5821.

**For More Information:**

- General information on pertussis can be found on the Maine CDC website <http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/vaccine/pertussis.shtml> or the federal CDC website <http://www.cdc.gov/pertussis/>.
- Information on best practices for the use of PCR for diagnosing pertussis can be found at <http://www.cdc.gov/pertussis/clinical/downloads/diagnosis-pcr-bestpractices.pdf>.
- For information about pertussis vaccine or vaccine schedules please contact the Maine Immunization program at [www.immunizeme.org](http://www.immunizeme.org) or by calling 1-800-867-4755.
- Maine CDC epidemiologists are available to answer any questions about pertussis diagnosis or management through the 24/7 disease reporting line at 1-800-821-5821.

**TABLE 4. Recommended antimicrobial treatment and postexposure prophylaxis for pertussis, by age group**

| Age group                             | Primary agents  |  |   | Alternate agent*   |
|---------------------------------------|---|--|---|--|
|                                       | Azithromycin  | Erythromycin   | Clarithromycin  | TMP-SMZ  |
| <1 month                              | Recommended agent. 10 mg/kg per day in a single dose for 5 days (only limited safety data available.) | Not preferred. Erythromycin is associated with infantile hypertrophic pyloric stenosis. Use if azithromycin is unavailable; 40–50 mg/kg per day in 4 divided doses for 14 days | Not recommended (safety data unavailable)                             | Contraindicated for infants aged <2 months (risk for kernicterus)  |
| 1–5 months                            | 10 mg/kg per day in a single dose for 5 days  | 40–50 mg/kg per day in 4 divided doses for 14 days   | 15 mg/kg per day in 2 divided doses for 7 days                        | Contraindicated at age <2 months. For infants aged ≥2 months, TMP 8 mg/kg per day, SMZ 40 mg/kg per day in 2 divided doses for 14 days |
| Infants (aged ≥6 months) and children | 10 mg/kg in a single dose on day 1 then 5 mg/kg per day (maximum: 500 mg) on days 2–5                 | 40–50 mg/kg per day (maximum: 2 g per day) in 4 divided doses for 14 days  | 15 mg/kg per day in 2 divided doses (maximum: 1 g per day) for 7 days | TMP 8 mg/kg per day, SMZ 40 mg/kg per day in 2 divided doses for 14 days   |
| Adults                                | 500 mg in a single dose on day 1 then 250 mg per day on days 2–5                                      | 2 g per day in 4 divided doses for 14 days   | 1 g per day in 2 divided doses for 7 days                             | TMP 320 mg per day, SMZ 1,600 mg per day in 2 divided doses for 14 days  |

\* Trimethoprim sulfamethoxazole (TMP–SMZ) can be used as an alternative agent to macrolides in patients aged ≥2 months who are allergic to macrolides, who cannot tolerate macrolides, or who are infected with a rare macrolide-resistant strain of *Bordetella pertussis*.

Source: CDC, *MMWR Recommendations and Reports*, Dec. 9, 2005; 54(RR14):1-16