



December 5, 2013

**LAC DPH Health Advisory:  
Pertussis Increasing in LA County**

*This message is intended for primary care, emergency medicine, internal medicine, infectious disease, laboratory and infection control staff.  
Please distribute as appropriate.*

**Key communication**

- **There has been an increase in cases of pertussis among 11 to 18 year-olds in Los Angeles County (LAC).**
- **Be alert for pertussis symptoms in patients – including a persistent cough, paroxysms, an inspiratory whoop, and post-tussive vomiting – regardless of their age or immunization status.**
- **Treat all suspected cases of pertussis with an appropriate antibiotic treatment regimen before waiting for laboratory confirmation.**
- **Laboratory confirmation of pertussis requires culture or polymerase chain reaction (PCR) testing.**
- **Report all suspected cases within one working day, before waiting for laboratory confirmation.**

**Situation**

Los Angeles County is experiencing a rise in the number of reported cases of pertussis in 11 to 18 year-olds. A cluster of pertussis cases has occurred in schools with linkages via shared classrooms or extracurricular activities.

Because of the possibility of waning immunity from pertussis-containing vaccines, it is important to consider pertussis even in vaccinated persons.

**Actions requested of providers**

- ✓ Consider pertussis in any child, adolescent or adult that presents with a persistent cough illness, especially if it is associated with coughing paroxysms or whoop.
- ✓ Consider pertussis in any child with a cough who presents a notification from the Department of Public Health (DPH) indicating a possible exposure to a pertussis case.
- ✓ Consider pertussis in infants with a cough of any duration.
- ✓ Obtain specimens for confirmation of the diagnosis. All suspected cases of pertussis

should have a nasopharyngeal swab or aspirate obtained from the posterior nasopharynx for PCR or culture before starting antibiotics and within 3 weeks of cough onset. (See “Specimen Collection and Diagnosis” section below for details.)

- ✓ Treat all suspected cases with an appropriate antibiotic (azithromycin, erythromycin, clarithromycin, and TMP-SMZ). See “Treatment” section below for details and dosing.
- ✓ Ensure that children complete at least 5 days of antibiotic treatment before returning to school.
- ✓ Ensure that household members and close contacts of pertussis cases receive antibiotic chemoprophylaxis, regardless of the contacts’ immunization status.
- ✓ Report any suspect cases in Los Angeles County to the Morbidity Central Reporting Unit at 888-397-3993 **within 1 working day** of identification. Do NOT wait for laboratory confirmation.

### **Transmission**

Pertussis is highly contagious. Transmission typically occurs when a susceptible person inhales aerosolized droplets from the respiratory tract of an infected person.

### **Signs and Symptoms**

Catarrhal Stage: Runny nose, sneezing, occasional cough – similar to common cold

Paroxysmal Stage: More severe cough, repeated violent coughing episodes without inhalation, high-pitched inspiratory whoop, post-tussive vomiting or gagging

Convalescent Stage: Gradual recovery, less paroxysmal cough

Adolescents may initially present with a mild illness that may be indistinguishable from other upper respiratory infections. They may have a severe or repetitive cough with mucus production and occasional paroxysms. Post-tussive vomiting or gagging can occur without a whoop.

### **Specimen Collection and Laboratory Diagnosis**

All suspected cases of pertussis should have a nasopharyngeal swab or aspirate obtained from the posterior nasopharynx for PCR testing or culture; this should be done prior to starting antibiotic therapy. Providers should check with their laboratory before taking the specimen to ensure they have the appropriate collection kit.

- PCR testing: Sample the posterior nasopharynx using a rayon (Dacron) swab. (Do **not** use a calcium alginate swab.) Place the swab into universal or charcoal-containing transport media. Alternatively, collect a nasopharyngeal aspirate specimen in a sterile container.
- Culture: Insert the nasal pharyngeal swab specimen into a Regan-Lowe deep agar transport media kit.

Note: avoid Direct Fluorescent Antibody (DFA) tests and serological tests, as these are not reliable and may be difficult to interpret.

## **Treatment and Antibiotic Chemoprophylaxis**

All cases, their household members, and other close contacts, regardless of age and immunization status, should receive treatment or antibiotic chemoprophylaxis to reduce spread of infection within the household and the community. Dosing for antibiotic chemoprophylaxis is the same as for treatment.

Note: Current CDC guidelines recommend the exclusive use of azithromycin in infants under one month of age due to fewer adverse events compared to erythromycin.

The following antibiotics are recommended for treatment and for antibiotic chemoprophylaxis.

### Azithromycin:

- Adults - 500 mg orally once on day 1, then 250 mg orally once daily on days 2-5
- Infants and children 6 months of age and older - 10 mg/kg (maximum: 500 mg/day) orally once on day 1, then 5 mg/kg/day orally (maximum: 250 mg/day) once daily on days 2-5
- Infants less than 6 months of age - 10 mg/kg/day orally once daily on days 1-5

### Erythromycin:

Erythromycin should be avoided in persons on medications that inhibit the CYP3A hepatic pathway.

- Adults – 500 mg orally four times a day X 14 days
- Infants and children 1 month of age and older - 40 to 50 mg/kg/ day (maximum, 2 g/ day) orally in 4 divided doses each day X 14 days

### Clarithromycin:

Clarithromycin should be avoided in persons on medications that inhibit the CYP3A hepatic pathway

- Adults – 500 mg orally twice a day X 7 days
- Infants and children 1 month of age and older - 15 mg/kg/day orally (maximum: 1 g/day) in 2 divided doses each day X 7 days

### Trimethoprim-sulfamethoxazole (TMP-SMZ):

TMP-SMZ is preferable for persons taking medications that inhibit the CYP3A hepatic pathway, but should not be used for children under 2 months of age.

- Adults - 2 regular strength tablets (TMP-SMZ 80 mg-400 mg) or one double strength (DS) tablet (TMP-SMZ 160 mg-800 mg) orally twice a day X 14 days
- Children 2 months of age and older - TMP-8 mg/kg/day and SMZ-40 mg/kg/day orally (maximum: TMP 320 mg/day) in 2 divided doses each day X 14 days

## **Reporting:**

Providers must report a suspected case of pertussis to the local health department

within one working day. Do NOT wait for laboratory confirmation before reporting a suspect case. Per California law, **both** providers and laboratories are required to report (Title 17, California Code of Regulations, § 2500).

Cases are reported by phone to the local Health Department based on county of residence.

To report a suspect cases in Los Angeles County call:

- 888-397-3993 during business hours (Morbidity Central Reporting).
- During non-business hours (5pm to 7:30 am and weekends), call 213-974-1234.

For cases among residents of the Cities of Long Beach or Pasadena, please contact their local health departments:

- City of Long Beach Health Department: 562-570-4302
- City of Pasadena Health Department: 626-744-6000

#### **Preventing Pertussis: Vaccine Recommendations**

- 5 doses of DTaP are recommended for children under 7 years of age.
- Call the LAC Immunization Program to determine the appropriate catch-up schedule for children and adults who did not receive the recommended doses of DTaP before age 7.
- One dose of Tdap vaccine (the booster shot) is recommended for all adolescents 11 through 12 years of age (can be given as early as 10 years of age), and for all other adolescents and adults who have not received it.
- Pregnant women are recommended to receive one dose of Tdap with every pregnancy (preferably between weeks 27 and 36 of gestation).

#### **Additional Resources/For More Information**

- For technical assistance about pertussis, please call LAC DPH's Immunization Program's Surveillance Unit at (213) 351-7800.
- Additional information about pertussis is also available at:  
<http://publichealth.lacounty.gov/ip/DiseaseSpecific/Pertussis.htm>

The successful prevention of pertussis in LAC has been due to the vaccination efforts and early identification and reporting of pertussis by LAC health care providers. Thank you for your continuing efforts.

This advisory was sent by Dr. A. Nelson El Almin, Medical Director, Immunization Program.

Please email [hanhelp@ph.lacounty.gov](mailto:hanhelp@ph.lacounty.gov) if you wish to unsubscribe or have login problems.