Clark County Combined Health District

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Clark County Combined Health District- Health Alert

Pertussis in Clark County

October 24, 2024

The Clark County Combined Health District (CCCHD) has noted an increase in cases of pertussis in 2024. Healthcare providers are asked to consider pertussis for patients presenting with respiratory and other appropriate symptoms.

Actions for Clinicians:

1.) **Consider pertussis as a diagnosis** when evaluating patients with respiratory symptoms. See below for more information about pertussis symptoms.

2.) **Familiarize yourself with the laboratory tests available to diagnose pertussis:** Culture is the gold standard laboratory test and most specific. PCR may also be used. See below for more information about specimen collection.

3.) **Promptly report any positive pertussis cases to CCCHD at 937-390-5600.**

4.) **Remind patients to take preventative measures.** These include recognizing signs and symptoms of pertussis, properly washing hands and covering mouth when coughing or sneezing and receiving proper vaccination.

5.) **Give positive patients accurate guidelines for isolation and treatment.** Positive cases or symptomatic with exposure cases should isolate for either 21 days from onset of cough or five days after receiving antibiotic treatment.

6.) **Provide postexposure prophylaxis (PEP) treatment to those with exposure.** Please see Table 1 for recommended antimicrobial treatments.

Symptoms

Initially, pertussis symptoms resemble those of a common cold, including sneezing, runny nose, low-grade fever and a mild cough. After 1 to 2 weeks, the traditional symptoms of whooping cough may appear and include:

- Fits of many rapid coughs followed by a high-pitched “whoop” sound
- Vomiting (throwing up) during or after coughing fits
- Exhaustion (very tired) after coughing fits

Coughing episodes may recur for one to two months and are more frequent at night. Young infants, adolescents, and adults do not have these typical coughing spells. ***Older people or partially immunized children may have milder symptoms.***

Laboratory Criteria for Diagnosis

- **Culture** is considered the gold standard laboratory test and is the most specific of the laboratory tests for pertussis. Cultures should be collected from a nasopharyngeal (NP) specimen during the first two weeks of cough. Cultures are less likely to be positive if the patient has received prior antibiotic therapy, if the specimen collection is beyond the first two weeks of cough, or the patient has been vaccinated.
- **PCR** may also be tested from NP swabs during the first three weeks following cough onset. After the fourth week of cough, the amount of bacterial DNA rapidly diminishes which increases the risk of obtaining false-negative results. False-negative results may also occur if PCR testing is performed after antibiotic therapy. PCR testing after 5 days of antibiotic use is unlikely to be of benefit and is generally not recommended.

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Treatment and Isolation

Early treatment of pertussis is very important. Please see Table 1 for recommended antimicrobial treatments.
Symptomatic patients should isolate for 5 days after receiving proper antimicrobial treatment OR 21 days from onset of cough if no treatment is administered.

Prevention

Immunization with pertussis vaccine is the most important measure for the control of pertussis. All students entering school should have received a minimum of 4 doses of DTaP with the last dose being received on or after 4 years of age. In addition, in 2011, a progressive requirement was added for seventh graders that they receive a booster Tdap dose.

Every adult should have one Tdap in their lifetime. Additionally, a dose of Tdap should be given to a pregnant woman during each pregnancy, regardless of the patient's previous history of receiving Tdap.

Prophylaxis of Contacts

Postexposure prophylaxis with an effective antimicrobial agent can be administered to contacts prior to illness onset.

- **Household Contacts:** Prophylaxis of asymptomatic household contacts within 21 days of onset of cough in the index patient is recommended by CDC and can prevent symptomatic infection. Symptomatic (coughing) household members of a pertussis patient should be treated as if they have pertussis. The recommended antimicrobial agents and dosing regimens for postexposure prophylaxis are the same as those for treatment of pertussis (see table). All persons should be watched closely for respiratory symptoms for 14-21 days after last contact.
- **Contacts in Other Settings (Schools, Work, Extra-curriculars, etc.):** CDC supports providing postexposure prophylaxis to the following high-risk individuals:
    - Infants and women in their third trimester of pregnancy
    - All persons with pre-existing health conditions that may be exacerbated by a pertussis infection (for example, but not limited to immunocompromised persons and patients with moderate to severe medically treated asthma)
    - Contacts who themselves have close contact with either infants under 12 months, pregnant women or individuals with pre-existing health conditions at risk of severe illness or complications;
    - All contacts in high risk settings that include infants aged <12 months or women in the third trimester of pregnancy. These include, but are not limited to neonatal intensive care units, childcare settings, and maternity wards.

Additional Information

For additional information, please call your local health jurisdiction or visit https://www.cdc.gov/pertussis/clinical/index.html.

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*Table 1: Recommended antimicrobial treatment and postexposure prophylaxis for pertussis, by age group. *Trimethroprim sulfamethoxazole (TMP-SMX) can be used as an alternative agent to macrolides in patients aged ≥2 months that are allergic to macrolides, who cannot tolerate macrolides, or who are infected with a rare macrolide-resistant strain of Bordetella pertussis.*

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

American Academy of Pediatrics. Pertussis. In: Kimberlin DW, Brady MT, Jackson MA, Long SS, eds. Red Book: 2015 Report of the Committee of Infectious Diseases. 30th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2015: p.611.

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Message Details

Date: 10/24/2024
Time Sensitivity: Urgent
To: Medical offices, Urgent Cares, Clinics, Hospitals, Laboratories and ICPs
Target Audience: Physicians, PA, NP, Nurses, Medical Staff, ICP staff, and Laboratorians
Relevance to Public Health: High Concern