State of Montana *Health Alert Network*

DPHHS HAN ADVISORY

MONTANA
Department of Public Health & Human Services

Cover Sheet

DATE: May 15, 2012

SUBJECT: Pertussis

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State of Montana ***Health Alert Network***
DPHHS HAN

Information Sheet

Date: May 15, 2012

Subject: Pertussis

Information: Recommendations for period of increased pertussis activity in MT

Actions requested:

- Maintain a high clinical index of suspicion for pertussis, see guidance below.
- Report all suspect and confirmed cases of pertussis to your local health department immediately.
- Be sure patients are up-to-date on pertussis vaccination, especially the following persons:
  - Pregnant women ≥ 20 weeks gestation, postpartum women, healthcare workers, persons aged >11 years with, or anticipating, contact with an infant or a pregnant woman.
  - Infants, children, and teens underimmunized against pertussis.

Background

Since January 1, 2012, 155 cases of pertussis from 17 Montana counties have been reported. Among the cases, 12 (8%) occurred in infants aged <12 months. The largest proportion of cases has occurred among children aged 11–18 years. During 2007–11 in Montana, the number of reported cases of pertussis ranged from 54 to 134 cases per year. Cases have been reported among children fully immunized and partially immunized against pertussis.

Diagnostic testing

What diagnostic test should be used when testing for pertussis?

- Pertussis PCR is the preferred diagnostic test.
- Culture can be used. While more specific than PCR, culture is less sensitive and may take up to 7 days.

Who should be tested for pertussis?

A) Symptomatic infants aged <12 months:

- Persistent or worsening cough with no or low-grade fever and without other explanation
- Persistent or paroxysmal cough with no or low-grade fever and any of the following: cyanosis, post-tussive vomiting, seizure, pneumonia, non-purulent coryza, unexplained apnea spells, and inspiratory whoop
- *NOTE: When caring for infants, a high clinical index of suspicion for pertussis is required, especially if the infant has been exposed to a family member or caregiver with a cough illness. Infants with pertussis may have minimal or absent cough and apnea may be the only sign. Early signs of pertussis in infants can include feeding difficulties, tachypnea, and bradycardia.*

B) Symptomatic children and adults aged ≥12 months:

- Cough ≥7 days in persons with no or low-grade fever and any of the following: paroxysms, post-tussive vomiting, inspiratory whoop
- Cough ≥14 days with no or low-grade fever and no alternative diagnosis
- Cough of any duration with no alternative diagnosis and any of the following:
  - Close contact with a pertussis case or with a person with a prolonged cough illness
  - Patient is pregnant and in 3rd trimester
  - Patient is a close contact of an infant or pregnant woman

When should you test?
The optimal time to test is within 3 weeks of cough onset.

How should you obtain specimens?
Collect specimens for pertussis PCR by nasopharyngeal swab or aspiration. Instructions for the proper method of specimen collection including a video demonstration can be found at http://www.cdc.gov/pertussis/clinical/diagnostic-testing/specimen-collection.html

To avoid falsely-positive PCR tests:
- **DO NOT TEST ASYMPTOMATIC PERSONS**. Testing asymptomatic persons is not recommended for close contact investigation or for post-exposure prophylaxis.
- Prevent specimen contamination:
    - Prepare and administer vaccines in areas separate from pertussis specimen collection because doing so may reduce the opportunity for cross contamination of clinical specimens
- Take care to avoid contamination of surfaces when preparing and administering vaccines.

Treatment
- If within 3 weeks of cough onset, begin antibiotic treatment based on laboratory confirmation or clinical diagnosis. **Negative results do not rule out pertussis if clinically suspected**.
- Azithromycin (5-day regimen), clarithromycin, and erythromycin are the preferred treatments for persons aged >1 month. For infants aged <1month, azithromycin is the preferred treatment. Infants aged <1 month who receive a macrolide should be monitored closely for adverse events, including infantile hypertrophic pyloric stenosis. Persons aged ≥2 months may be treated with trimethoprim-sulfamethoxazole as an alternative to macrolide therapy.
- The preferred antibiotic regimen for post-exposure prophylaxis of close contacts is the same as for treatment.

Vaccination
- Make sure all children aged <7 years are up-to-date on their DTaP series.
- Ensure the following persons have received a single dose of Tdap:
    - Children aged 7–10 years who are not fully immunized against pertussis
    - Adolescents aged 11–18 years
    - Pregnant women ≥20 weeks gestational age and post-partum women
    - All adults aged >18 years, especially those with, or anticipating, close contact with an infant or pregnant woman (e.g. day care providers)
    - Healthcare personnel and daycare personnel

Public Health Considerations
- **Report all suspect or confirmed cases of pertussis to your local health department.**
- **Exclusion during infectious period of illness**: Administrative Rules of Montana stipulate persons suspected of having pertussis should not return to daycare, school, work, nor attend activities in public until the patient has completed 5 days of antibiotic treatment or 21 days has passed since the onset of cough.
- **Cases of public health interest:** Testing may be requested for persons of public health interest.
- **Culture confirmations:** Public health authorities may request a small number of culture tests (<5) per outbreak.

Resources

1. Centers for Disease Control and Prevention. Guidelines for the Control of Pertussis Outbreaks. Centers for Disease Control and Prevention: Atlanta, GA, 2000. (amendments made in 2005 and 2006) http://www.cdc.gov/vaccines/pubs/pertussis-guide/guide.htm
2. Montana's Immunization Program website. http://www.dphhs.mt.gov/publichealth/immunization/
3. Montana Department of Public Health and Human Services website: http://www.dphhs.mt.gov/publichealth/immunization/pertussis.shtml

INFORMATION FOR PARENTS

Whooping Cough (Pertussis)

Last updated July 2011

What is whooping cough?

Whooping cough—or pertussis—is a very serious respiratory (in the lungs and breathing tubes) infection caused by bacteria. It causes violent coughing you can't stop. Whooping cough is most harmful for young babies and can be deadly. The DTaP vaccine protects against whooping cough.

What are the symptoms of whooping cough?

Whooping cough starts with the following symptoms:

- Runny or stuffed-up nose
- Sneezing
- Mild cough
- A pause in breathing in infants (apnea)

After 1 to 2 weeks, coughing, which can be severe, starts.

- Children and babies can cough very hard, over and over.
- When children gasp for breath after a coughing fit, they make a "whooping" sound.This sound is where the name "whooping cough" comes from. Babies may not make this sound.
- Coughing fits make it hard to breathe, eat, drink, or sleep. Coughing fits happen more at night.
- Babies and young children may turn blue while coughing from lack of oxygen.
- Coughing fits can last for 10 weeks, and sometimes recur with the next respiratory illness.

How serious is whooping cough?

The disease is most dangerous for babies and young children. From 2004 through 2009, there were 121 deaths from whooping cough reported in the U.S. Babies 3 months and younger accounted for 110 of them.

More than half of babies younger than 1 year who get the disease need care in the hospital. About 1 out of 5 babies and children with whooping cough will get pneumonia (a serious lung infection). Whooping cough can also cause seizures (jerking or staring) and brain damage.

How does whooping cough spread?

Whooping cough spreads easily through the air when an infected person breathes, coughs, or sneezes. A person can spread the disease while he or she has cold-like symptoms and for at least 2 weeks after coughing starts.

Many babies and young children get whooping cough from adults or older brothers or sisters who don't know they have the disease. Pregnant women with whooping cough can give it to their newborn babies. Because whooping cough is so harmful in babies, everyone around them needs to be vaccinated—to make a circle of protection.

Benefits of the DTaP vaccine

- Saves lives.
- Protects children from serious disease.
- Keeps others safe.

Side effects of the DTaP vaccine

- The most common side effects are usually mild and occur in about 1 out of 4 children. They include the following:
  - Redness, swelling, and pain from the shot
  - Fever
  - Vomiting
- A fever over 105 degrees occurs in about 1 out of 16,000 children.
- Nonstop crying for 3 hours or more occurs in about 1 out of 1,000 children.
- Seizures (jerking or staring) occur in about 1 out of 14,000 children. The seizures do not cause long-term harm.
- Serious reaction to the DTaP vaccine occurs in fewer than 1 in a million children.

What is the DTaP vaccine?

The DTaP vaccine is a shot that combines the vaccines for whooping cough (pertussis) and two other serious diseases: diphtheria and tetanus. The DTaP vaccine protects children by preparing their bodies to fight the bacteria.

Most children (about 85 children out of 100) who get all doses of the DTaP vaccine will be protected from whooping cough. Some children who are vaccinated do get the disease, but it is usually a milder case.

Why should my child get the DTaP vaccine?

Getting your child the DTaP vaccine helps protect him against whooping cough. It also protects other people who can't get the vaccine—especially newborn babies, who can get very sick and die from whooping cough.

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When should my child get the DTaP vaccine?

Children should get five doses of the DTaP vaccine at the following ages for best protection:

- One dose each at 2 months, 4 months, and 6 months;
- A fourth dose at 15 through 18 months; and
- A fifth dose at 4 through 6 years of age.

It is safe to get the DTaP vaccine at the same time as other vaccines, even for babies.

If my child does not get the DTaP vaccine, will he get whooping cough?

Almost everyone who is not immune to whooping cough will get sick if exposed to it. Before the whooping cough vaccine, about 8,000 people in the U.S. died each year from the disease. Today, because of the DTaP vaccine, this number has dropped to fewer than 50.

But every few years, outbreaks of whooping cough can occur, and we don't know why the outbreaks happen. In 2010, in California alone, an outbreak of whooping cough made more than 9,400 people sick. Ten babies died. All of these babies were too young to be fully protected against whooping cough. Several other states also had outbreaks and deaths from whooping cough.

Is the DTaP vaccine safe?

The DTaP vaccine is very safe, and it is effective at preventing whooping cough (and two other diseases: diphtheria and tetanus). Vaccines are like medicines, and any medicine can have side effects. But severe side effects from the DTaP vaccine are very rare.

What can I do to protect my child from whooping cough (pertussis)?

- ✔ Keep newborns away from anyone with cold symptoms or a cough.
- ✔ Vaccinate your child on time.
- ✔ Make sure you, your child's caregivers, and older siblings get a one-time recommended dose of Tdap vaccine to protect themselves and children too young to be fully vaccinated.
- ✔ Talk with your child's doctor if you have questions.
- ✔ Keep a record of your child's vaccinations to make sure your child is up-to-date.

How can I learn more about the DTaP vaccine?

To learn more about the DTaP vaccine or other vaccines, talk to your child's doctor.

Call **800-CDC-INFO** (800-232-4636) or go to ***http://www.cdc.gov/vaccines*** and check out the following resources:

- Pertussis (Whooping Cough)—What You Need to Know: ***http://www.cdc.gov/features/pertussis/***
- Common Questions Parents Ask about Infant Immunizations: ***http://www.cdc.gov/vaccines/spec-grps/infants/parent-questions.htm***
- Vaccines website for parents: ***http://www.cdc.gov/vaccines/parents***

Booster vaccine for pre-teens and adults continues protection from whooping cough

Protection from the DTaP vaccine for babies and young children decrease over time. When this happens, a person is at risk for getting and spreading whooping cough.

A one-time booster vaccine called Tdap for pre-teens and adults helps people stay protected against the disease.

Pre-teens should get the Tdap vaccine at 11 or 12 years of age. Adults and teens who didn't get the Tdap vaccine as pre-teens also should get it. This is very important for families and caregivers of babies. Pregnant women should get the vaccine right after delivery, before they leave the hospital.

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The Centers for Disease Control and Prevention, American Academy of Family Physicians, and American Academy of Pediatrics strongly recommend all children receive the DTaP vaccine according to the recommended schedule.