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ADVISORY: PERTUSSIS ON THE RISE IN NIAGARA COUNTY

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Whooping cough (medically known as pertussis) is on the rise in Niagara County with fifteen test-confirmed cases this year to date, compared to eleven cases for the entire year in 2011. Affected individuals range in age from sixty-five years to two months, with a predominance of cases in school-age children. There have been several infant hospitalizations and no deaths associated with pertussis in Niagara County. The Niagara County Department of Health has identified cases in all areas of Niagara County and is conducting intense follow-up with households and contacts to reduce further spread of this disease. Follow-up with cases includes treatment with antibiotics. Follow-up with contacts includes preventive treatment with antibiotics and pertussis vaccination, as needed. More test results are pending on other sick individuals. However, trends indicate many more cases often go unreported because confirmatory testing is not done when symptomatic or exposed individuals report to their doctors for care and receive antibiotics instead. Test results are most reliable when performed in the early stage of illness and before antibiotics are started.

Pertussis is a highly contagious serious disease usually characterized by long, violent coughing fits followed by a “whooping” sound heard as a person gasps for air. Gagging and vomiting may also follow severe coughing fits. Pertussis is caused by a bacterial infection that invades the respiratory tract. The bacteria release toxins that damage and irritate the lining of the respiratory system, triggering coughing that can persist for several weeks or months. Pertussis may start like the common cold, with runny nose or congestion, sneezing, fever, and possibly pinkeye and slight cough. It is during this early mild phase, that people are most contagious. Severe coughing begins within one to two weeks of infection; however, it may not develop in adults, young infants or fully-vaccinated children. People with pertussis usually spread the disease through the air by breathing, sneezing or coughing while in close contact to others, who breathe in the bacteria. Infected people can spread the disease from the early phase on to about two weeks after coughing starts.

Worldwide, there are thirty to fifty million cases of pertussis per year resulting in about 300,000 deaths. Pertussis is one of the leading causes of vaccine-preventable deaths, with most occurring in young infants who are either unvaccinated or incompletely vaccinated. In 2010, 27,550 cases were reported in the United States (U.S.), with infants accounting for twenty- twenty-five of twenty-seven deaths. Young infants are most vulnerable to pertussis infections and complications, particularly secondary bacterial pneumonia and convulsions. Young infants may exhibit apnea, or periods when breathing stops. Unvaccinated adults and adolescents are the primary sources of infections acquired by infants. Couples who are planning to have a baby should seek vaccination. All household members and caregivers should be up to date with pertussis vaccinations at least two weeks before the expected birth of a new infant. Pregnant women who have not been previously vaccinated should receive one dose of adult pertussis-containing vaccine (TDaP) vaccine during the third trimester or late second trimester of pregnancy. This will help protect their babies for the first two months after birth until they are old enough to start receiving their own vaccinations.

PUBLIC HEALTH: PREVENT. PROMOTE. PROTECT.

Although pertussis vaccination is not 100% effective, it is still the most effective way to prevent pertussis and reduce complications of the disease. Effectiveness of the vaccine in a fully vaccinated individual is about 98% if exposed to infection within one year of receiving the last booster dose. In results of a study released in 2010 the CDC found that children who never received any doses of DTaP vaccine had an eight times higher risk of pertussis than children who received all five doses of the vaccine. Public Health Director, Daniel Stapleton urges all adults and children in Niagara County to receive vaccinations against pertussis. School-age children should be fully vaccinated and given a fifth booster dose of vaccine at eleven years of age. With so many children in close proximity, schools are perfect environments for the spread of pertussis. High school students should receive a dose of adult vaccine, as well as any teachers and staff who are unvaccinated or have not been vaccinated since childhood.

The majority of the school-aged children diagnosed with pertussis in Niagara County had received part or all of their pertussis vaccination series. None of cases received their vaccinations from the Niagara County Department of Health. Recently, the CDC has found that improper vaccine storage may be contributing to vaccine failure or reducing the effectiveness of pertussis-containing vaccines. Vaccines should never be housed in dormitory style refrigerator/freezer units or left unmonitored.

The Niagara County Department of Health follows stringent vaccine storage guidelines which include maintaining a proper temperature range between 35°F and 46°F degrees in approved commercial vaccine refrigerators. Staff members check and record vaccine refrigerator temperatures twice daily. In addition to a built-in vaccine temperature monitoring system the county has a back-up Sensaphone temperature alarm system that will call Sheriff Dispatch after hours if the temperature moves out of range, and a back-up generator that will automatically fire up during a power failure.



Thermometer

Continuous Temperature Recording Wheel

National 2011 pertussis data are scheduled for release later this year. Reported cases vary from year to year, and tend to peak every three to five years. Public Health Director, Daniel Stapleton and Dr. Jerome Ulatowski, pediatrician and Niagara County Board of Health member recommend the following measures to control the spread of pertussis:

- Check your children's immunization records and get them fully vaccinated

- If you are pregnant, consult with your obstetrician and get vaccinated starting at 20 weeks of pregnancy or at least two weeks before the baby is born
- Vaccinate all individuals expecting, living with or caring for young vulnerable infants to form a cocoon of protection from pertussis
- Keep individuals with cold signs or symptoms away from infants and other vulnerable individuals
- Wash hands thoroughly before contact with infants or vulnerable individuals under your care and make others follow the same practice
- Do not send sick children to school, daycare or activities
- Consult your doctor if you or your child have
 - a cough that lasts seven days or more and is worse at night
 - violent coughing that comes on suddenly and is so severe it causes vomiting and gasping for air
 - severe cough with whoop sound when taking in air
 - been a close contact to someone with whooping cough, especially if developing cold signs and symptoms or fever
- Practice good hand-washing and cough into your sleeve
- If you or your family member has symptoms and is receiving antibiotic therapy for pertussis disease, stay home until completion of five full days of antibiotic treatment

Modern purified pertussis-containing vaccines are safe and very effective when stored and administered properly. A well- vaccinated population can help protect those who cannot receive the vaccine because of age or medical reasons and prevent widespread overuse of antibiotics in the community. More information on pertussis is available at www.cdc.gov/pertussis/ To make an appointment for pertussis immunization please contact your provider or call the Niagara County Department of Health Immunization Program at 716-278-1903.