

TO: Health Care Providers, Hospitals, Ambulatory Care Centers and School Nurses

FROM: Laura Ann Nicolai, Deputy State Epidemiologist for Infectious Disease

PERTUSSIS ADVISORY: MANAGING PERTUSSIS

Growing Number of Pertussis Cases

An increased number of pertussis cases have been reported in Vermont in recent weeks. As of Dec. 12, there have been 37 cases of pertussis reported this year; 23 (62%) have occurred between October 1 and Dec 12. For the same 11-week timeframe in 2014, only eight cases were reported. Most cases this year have occurred in Chittenden County, but recent cases have been reported in Chittenden, Franklin, Lamoille, Rutland, Windham and Windsor Counties. Families are notified when cases are identified in schools or child care settings.

Pertussis Information for Clinicians

Resources for clinicians are available on the Health Department's website:

<http://healthvermont.gov/prevent/pertussis/providers.aspx>.

Consider pertussis when evaluating cough illnesses.

Consider pertussis as a diagnosis for anyone who has the following symptoms, regardless of vaccination history:

- A cough in a person who has been exposed to pertussis, including anyone who has been notified of potential exposure at a school or other setting.
- A paroxysmal cough of any duration, with whooping, post-tussive vomiting/gagging, apnea, or cyanosis without the characteristic paroxysmal cough, especially in infants.
- Prolonged cough illness that lasts more than a week (during periods of increased pertussis illness).

Have a lower threshold for considering pertussis when the patient has close contact with an infant or others at high risk for pertussis complications.

Report all suspected and confirmed cases to the Health Department's Infectious Disease - Epidemiology Unit at 802-863-7240.

Test for pertussis.

- Collect a specimen using a nasopharyngeal (NP) swab applicator with a flexible shaft.
- Gently insert the swab into one of the nares and proceed to the posterior wall of the pharynx.
- Don't direct the swab upward or force the swab past obstruction.
- Turn the swab a quarter of a turn and hold in place until a paroxysmal cough is elicited, or ask patient to cough. (This ensures an adequate specimen and reduces the possibility of false negative results.)
- Insert NP swab into Regan-Lowe transport medium, ensuring the tip is completely covered.
- The Health Department recommends ordering both PCR and culture when feasible.

- The Health Department Laboratory can run both tests from one specimen, but both tests must be requested on the lab requisition form:
http://healthvermont.gov/enviro/ph_lab/documents/Laboratory_Clinical_Test_Request_Form.pdf.
- **Do not test if there are no symptoms.**
- **For questions about testing or to order specimen collection kits**, call the Health Department Laboratory at 802-338-4724.

Interpreting Test Results		
Test	Timing of specimen collection	Test result interpretation
PCR	Collect specimens as early as possible after cough onset. PCR will detect non-viable organisms present, even in those people who have been treated with antimicrobials; however, false negatives can occur and are more common later in the illness or after start of antibiotics.	(+) Positive: Confirms <i>B. pertussis</i> if patient has cough greater than 2 weeks and either paroxysmal coughing, post-tussive vomiting, or whooping. (-) Negative: Does not rule out <i>B. pertussis</i> infection; consider other factors.
Culture (results can take up to 7 days)	Collect specimens as early as possible after cough onset. Recovering the organism is unlikely beyond 3 weeks of cough or in patients who have received antimicrobials. False negatives are common even early in illness.	(+) Positive: Confirms <i>B. pertussis</i> infection. (-) Negative: Does not rule out <i>B. pertussis</i> infection; consider other factors.

Treat suspected and confirmed cases as indicated.

Treatment guidelines are available on the Health Department website:

<http://healthvermont.gov/prevent/pertussis/documents/pertussistreatment.pdf>

- Patients with suspected pertussis should be treated and advised to stay home for five days, even before getting a test result, or even if a test is not done. Close household-type contacts should receive chemoprophylaxis. Empiric treatment is especially recommended if there are high-risk contacts in the household (infants, pregnant woman, etc.).
- If 21 days have already elapsed since onset of cough, the patient is no longer infectious and treatment is not recommended because it will not improve outcome.
- Prescribe antimicrobial prophylaxis (same regimen as treatment) to people who are close contacts of pertussis cases. Symptomatic contacts should be evaluated for pertussis.
- Antimicrobial prophylaxis is recommended if exposure to an infectious case occurred within the previous 21 days (the maximum incubation period for pertussis).
- Asymptomatic contacts receiving prophylaxis should not be excluded from their usual activities.
- For questions about treatment, call the Health Department's Infectious Disease - Epidemiology Unit at (802) 863-7240.

Stop Transmission.

- **Exclude.** Inform patients with suspected pertussis to **stay at home** and avoid close contact with others until they have completed the fifth day of an appropriate antibiotic OR had cough symptoms for at least three weeks.

- **Vaccinate.** Vaccination is the best protection against pertussis. Because immunity from childhood pertussis vaccination wanes over time, the adolescent/adult pertussis booster vaccine (Tdap) is essential to reduce the risk of contracting pertussis, and can decrease severity of disease. Vaccinating adolescents and adults, especially family members or caregivers of infants and health care workers, can help prevent pertussis transmission to infants too young to be vaccinated. One dose of Tdap vaccine is recommended for people 11 years and older. There is no minimal time interval between doses of Td and Tdap. Specific indications for Tdap in those who are high-risk:
 - Children age 7 to 10 who have not completed the five dose DTaP series
 - Pregnant women during the third or late second trimester (27-36 weeks)
 - Adults who anticipate contact with infants
 - Health care providers

For providers participating in the Vermont VFC/VFA program, Boostrix® is available for those 10 years and older.

For information about ordering vaccine, call the Health Department's Immunization Program at 802-863-7240.

If you have any questions contact Laura Ann Nicolai, Deputy State Epidemiologist for Infectious Disease, at: 802-863-7240 ~ lauraann.nicolai@vermont.gov

HAN Message Type Definitions

Health Alert: Conveys the highest level of importance; warrants immediate action or attention.

Health Advisory: Provides important information for a specific incident or situation; may not require immediate action.

Health Update: Provides updated information regarding an incident or situation; unlikely to require immediate action.

Info Service Message: Provides general correspondence from VDH, which is not necessarily considered to be of an emergent nature.