

Pertussis Update

During the first two weeks of August, the Vermont Department of Health (VDH) received an increased number of reports of clinical pertussis, including one culture-confirmed case in an infant less than 6 months of age who had been hospitalized. An advisory was issued on August 19, requesting that clinicians consider pertussis and increase testing. Between August 26 and October 20, 7 laboratory-confirmed pertussis cases were reported to VDH. All cases were identified in school-aged children from Chittenden (4) and Washington (3) counties. Most cases were identified before school began. The most recent positive laboratory finding was a positive pertussis PCR test reported on October 21 from Washington County; this case is under investigation. Eleven pertussis cases have been confirmed year-to-date in 2010; an additional 16 probable cases (individuals meeting the clinical case definition of cough lasting ≥ 14 days along with whoop, paroxysms, or post-tussive vomiting) have been reported. Ages of those with confirmed pertussis ranged from 1 month through 18 years of age (median 10 years). For those diagnosed with probable pertussis, ages ranged from 1 month through 59 years (median 11 years). None of the 4 individuals 40 years of age or older with probable pertussis were tested within six weeks of symptom onset.

Vermont has seen a significant drop in pertussis cases since tetanus, diphtheria and acellular pertussis (Tdap) booster doses were introduced in 2005, with only 11 cases confirmed in 2009. The incidence of pertussis is cyclical, with peaks occurring every 3 to 5 years in the United States. The last peak was in 2005, when approximately 25,000 cases were reported nationally (90 in Vermont). California is currently experiencing its largest pertussis outbreak since 1950, with more than 5,200 cases, including 10 infant deaths, reported between January and October 19, 2010.

Since 2005, the Advisory Committee on Immunization Practices has recommended that the Tdap vaccine replace a single decennial dose of Td vaccine for people aged 10 to 64. For adults with infant contact and health care personnel (HCP) with direct patient contact, the single recommended Tdap dose is suggested to be administered as soon as 2 years after the last tetanus vaccination; some experts advocate no minimum interval for these groups.

A recent National Health Interview Survey found that among adults aged 18-64 years, self-reported tetanus vaccination coverage (vaccination within the preceding 10 years) was 61.6% in 2008. Tdap coverage was estimated to be 5.9%. Tdap vaccination coverage among adults with infant contact was 5.0% and among HCP was 15.9%. Of those who reported receiving a tetanus vaccination during 2005-2008, 52% reported receiving Tdap.

In Vermont, Tdap is being offered to new mothers in 6 of 12 birthing hospitals, with 2 additional hospitals planning to begin soon. New fathers can receive Tdap at the local District Health office if they do not have access to a provider who offers it. Tdap is available at no cost to all providers enrolled in the Vaccines for Children (VFC) and Vaccines for Adults (VFA) programs. For information about these programs, call the Immunization program at 1-800-640-4374 or 802-863-7240.

Testing for pertussis remains important for diagnosis but also allows for public health interventions to decrease disease transmission to close contacts and the community. Testing for *B. pertussis* is available at the Vermont Department of Health Laboratory (VDHL). Testing by culture is available at VDHL for no charge, and culture with PCR testing can be requested for \$36. For more information or to report suspected cases, contact the Vermont Department of Health (802-863-7240 or 1-800-640-4374 in-state) to allow for timely public health interventions.

