



NEW YORK CITY DEPARTMENT OF
HEALTH AND MENTAL HYGIENE
Mary T. Bassett, M.D., M.P.H.
Commissioner

ALERT # 9: Pertussis in New York City

Distribute to All Primary Care, Infectious Disease, Emergency Medicine, Internal Medicine, Pediatrics, Family Medicine, Laboratory Medicine, and Infection Control Staff

- **An increase in pertussis cases has been identified in Orthodox Jewish communities in Brooklyn.**
- **Ensure that patients are up to date with pertussis-containing vaccines.**
- **Obtain diagnostic testing and report clinically suspect cases to the Health Department promptly.**

May 22, 2015

Dear Colleagues:

The New York City Department of Health and Mental Hygiene (DOHMH) has detected an increase in pertussis cases in the Orthodox Jewish communities in Williamsburg and Borough Park, Brooklyn. From October 2014 through April 2015, 21 cases of pertussis have been confirmed, including 18 children and 3 adults. Among the children, 12 were unvaccinated, 2 were vaccinated but not up to date with pertussis-containing vaccine; the remaining 4 were appropriately vaccinated. Among the children, 10 were infants aged <12 months. None of the mothers of the infants with pertussis had documentation of having received the recommended tetanus-diphtheria-acellular pertussis (Tdap) vaccination during their most recent pregnancy. Two infants were hospitalized, of which one had pneumonia.

To address this observed increase in cases, we ask that you:

1. Make sure all patients are up to date with DTaP and Tdap vaccines
2. Vaccinate pregnant women with Tdap during every pregnancy
3. Report suspect cases
4. Follow droplet precautions
5. Obtain optimal specimens for diagnostic testing
6. Provide antibiotic treatment and/or post-exposure prophylaxis

Vaccination remains the best way to prevent pertussis or “whooping cough”; the routine immunization schedule is available at <http://www.cdc.gov/vaccines/schedules/index.html>. Children should receive 5 doses of the diphtheria-tetanus-acellular pertussis (DTaP) vaccine at 2, 4, and 6 months of age, a fourth dose between 15–18 months of age, and a fifth dose between 4–6 years of age. Tdap is recommended at age 11 years. Adolescents and adults who have not received a dose of Tdap, or for whom vaccine status is unknown, should receive a single dose of Tdap as soon as feasible. Tdap can be administered regardless of interval since any previous

tetanus-diphtheria (Td) dose. Children and adolescents are required to receive DTaP and Tdap vaccines according to the routine immunization schedule to attend child care and school. Pregnant women should receive Tdap during each pregnancy, preferably between 27 and 36 weeks gestation; vaccination during pregnancy provides for passive antibody transfer to the infant to protect the baby before they are old enough to develop protection from vaccination. Evidence demonstrates that this strategy can reduce cases of pertussis among infants born to mothers vaccinated prior to delivery. Women who have never received Tdap and who do not receive it during pregnancy should receive it immediately postpartum. To obtain the full recommendations, see: www.cdc.gov/mmwr/preview/mmwrhtml/mm6207a4.htm.

Pertussis is a highly contagious bacterial infection that can cause serious illness in infants, children, and adults. The illness begins with nonspecific upper respiratory symptoms that last for 7-10 days, followed by onset of cough. The classic pertussis cough includes persistent paroxysms (coughing fits), an inspiratory “whoop”, apnea, and/or post-tussive vomiting. Cough may last weeks to months if not treated early. People with prior history of disease or vaccination may have milder symptoms and lack classic features of disease, making diagnosis more difficult. In infants, apnea can be a prominent feature. Infants are at highest risk for the most severe complications of pertussis, including pneumonia, encephalitis, and death. In adults, complications of pertussis include post-tussive syncope and rib fracture, in addition to persistent cough. Individuals are infectious for up to three weeks or until 5 days after the start of effective antimicrobial treatment.

If pertussis is suspected based on clinical presentation or known exposure to a pertussis case, clinicians should collect a nasopharyngeal (NP) swab and send it to a commercial laboratory for polymerase chain reaction (PCR) testing. Specimens are most likely to be positive when patients have a clinically compatible illness and specimens are collected within the first three weeks of cough onset and prior to the completion of antibiotics. The DOHMH does not recommend serologic testing for pertussis because standardized tests are not available, making the results of commercially available tests difficult to interpret. More information about pertussis diagnostics can be found at www.cdc.gov/pertussis/clinical/downloads/diagnosis-pcr-bestpractices.pdf.

Antibiotic treatment can alleviate symptoms and reduce pertussis transmission if given early in the course of illness. If there is a strong suspicion of pertussis, treatment should be provided to persons aged ≥ 1 year within 3 weeks of cough onset and to infants < 1 year and pregnant women within 6 weeks of cough onset. Treatment beyond this period is not thought to alter the duration of cough nor transmission to others and is not recommended. Physicians should prescribe either a macrolide or, for macrolide allergic patients, trimethoprim-sulfamethoxazole. Antibiotics should also be provided to close contacts (e.g. household members) of confirmed pertussis cases as post-exposure prophylaxis (PEP) to prevent illness and transmission. The antibiotics and dosing for treatment and prophylaxis are the same. If pertussis is strongly suspected, then PEP should begin while awaiting laboratory confirmation. For antibiotic details, see Table 4 at www.cdc.gov/mmwr/preview/mmwrhtml/rr5414a1.htm#tab4.

In healthcare facilities, a dose of Tdap is routinely recommended for all healthcare personnel (HCP). HCPs should observe droplet precautions, such as wearing surgical masks, while evaluating suspect pertussis cases. Precautions should be observed regardless of the vaccination status of HCP. HCP with known unprotected exposure to pertussis and who are likely to expose

pregnant women or neonates should receive PEP. Other HCP should either receive PEP or be monitored daily for 21 days after pertussis exposure and treated if pertussis symptoms develop.

Clinicians should report all suspected cases of pertussis to DOHMH. Do not wait until laboratory confirmation to report. Early reporting allows DOHMH to investigate cases and assist the facility in identifying those who need post-exposure prophylaxis to prevent further infections. Recognition of the increase in pertussis cases was hampered by reporting delays and inadequate diagnostic testing. To report a suspected case, clinicians should call DOHMH at 866-692-3641 during business hours or the Poison Control Center at 212-764-7667 after hours.

As always, your cooperation is appreciated.

Sincerely,

Jennifer Rosen

Jennifer Rosen, MD
Director, Epidemiology and Surveillance
Bureau of Immunization

Jane Zucker

Jane R. Zucker, MD, MSc
Assistant Commissioner
Bureau of Immunization