

March 21, 2012

Subject: Pertussis outbreak in New Brunswick

Dear colleagues:

The Office of the Chief Medical Officer of Health would like to advise practitioners that New Brunswick is experiencing an outbreak of pertussis. As of March 9, 2012, there have been 86 confirmed cases of pertussis reported in New Brunswick since January 2012, a significant increase in the number of cases compared to previous years. Most cases are seen in the 9-14 age group and there is also a significant number of cases in the under 1 year age group. At present the majority of cases occur around Moncton and Saint John areas.

This letter is to advise you on diagnosis, notification, testing, treatment and isolation of cases with confirmed or suspected pertussis, post-exposure prophylaxis of contacts as well as pertussis immunization.

Diagnosis

Pertussis is a highly infectious disease. Clinically it progresses through catarrhal, paroxysmal and convalescent stages.

- Catarrhal stage – non-specific coryza, mild cough, sneezing and other cold-like symptoms. Symptoms in patients presenting at this stage resemble symptoms of other respiratory illnesses therefore it is important to ask patients about exposure to anyone with paroxysmal stage symptoms and consider pertussis if appropriate. This stage typically lasts 1 to 2 weeks.
- Paroxysmal stage – history of paroxysmal cough (succession of dry coughs without inspiration, often causing distress to patient and caregivers) of any duration, cough ending in vomiting or associated with apnea and cough with inspiratory “whoop”. It is important to note that patients may go for hours between paroxysms and thus may not present these symptoms while in your office. Older children and adults can have atypical manifestations of pertussis with prolonged cough with or without paroxysms and no whoop. This stage typically lasts 1 to 10 weeks.
- Convalescent stage – gradual recovery with cough becoming less paroxysmal and disappearing in 2 or 3 weeks.

The most serious pertussis disease occurs in young infants, who may experience complications such as pneumonia, seizures and encephalopathy. Case fatality in infants under 2 months of age is approximately 1%. In order to limit infant morbidity and mortality, anyone presenting with compatible symptoms should be asked about close contact with infants in particular.

Transmission occurs by direct contact with respiratory droplets of infected persons. Individuals are most contagious during the early catarrhal stage and in the first 2 weeks after onset of cough. Individuals most at risk of contracting pertussis are close contact of cases of pertussis. Close contacts are generally those who had direct face-to-face exposure for five or more minutes with a symptomatic case during the infectious period or shared a confined space for one hour or longer with a symptomatic case during the infectious period or had a direct contact with respiratory, oral or nasal secretions from a symptomatic case during the infectious period such as kissing, being directly sneezed or coughed upon or sharing food or eating utensils during a meal.

Clinicians are requested to maintain a high index of suspicion for pertussis diagnosis and to consider pertussis infection in any patient presenting with compatible symptoms, regardless of their age and vaccination status.

Notification

Pertussis is a reportable disease under the Public Health Act in New Brunswick. Please report all suspected cases of pertussis to the Regional Medical Officers of Health verbally within 24 hours and in writing within 7 days. It is not necessary to wait for laboratory confirmation to report a suspected case.

Testing

All patients presenting with compatible symptoms for pertussis should be tested, as this is important for confirmation of disease, surveillance and public health management. Most laboratories in New Brunswick offer PCR test. Nasopharyngeal (NP) swab should be collected or where the appropriate apparatus is available, nasopharyngeal aspirate may also be done according to local practices. Please consult with your local laboratory on collection kits and shipping instructions.

Treatment

Antibiotics should be administered as soon as possible after onset of illness in patients with suspected pertussis to eradicate the organism and limit ongoing transmission. Antimicrobial agents administered during the catarrhal stage may also ameliorate the disease. Azithromycin, erythromycin and clarithromycin are appropriate first line agents for treatment of pertussis. Treatment with antibiotics is usually recommended within 3 weeks of the onset of cough for patients older than 1 year old and within 6 weeks of cough onset for infants younger than 1 year old. Azithromycin and clarithromycin are not licensed in Canada for infants less than 6 months of age; however azithromycin is a preferred antibiotic for treatment in infants younger than 1 month of age because of a lower risk of hypertrophic pyloric stenosis compared to erythromycin. Risk of pertussis in infants younger than 1 month age outweighs the potential risk of developing pyloric stenosis associated with macrolides.

Patients are considered to be non-infectious after completing the fifth day of appropriate anti-microbial treatment, but should complete a full regimen to avoid bacterial relapse. Please refer to treatment schedule in the appendix with this letter.

Practitioners are requested to advise patients with confirmed or suspected pertussis to whom antibiotic treatment is prescribed to avoid close contact with other individuals, particularly vulnerable persons (e.g. infants under 1 year of age and pregnant women in 3rd trimester) until 5 days of antibiotic treatment have been completed or until 21 days from the onset of cough when no antibiotic treatment is taken. Regional Medical Officers of Health may exclude individuals with pertussis from high-risk settings.

Immunization

Immunization is the best available protection against the disease. Please check the vaccination status of all presenting patients to ensure that children and adults are up-to-date with their immunization according to the New Brunswick Routine Immunization Schedule (it can be found on the following website <http://www2.gnb.ca/content/dam/gnb/Departments/h-s/pdf/en/CDC/Immunization/RoutineImmunizationSchedule.pdf>).

School age children, adolescents and adults who did not receive a pertussis-containing vaccine in the last 5 years and who have close contacts with infants under 1 year of age should be offered pertussis vaccination (for individuals 7 years and older Tdap (Adacel or Boostrix) vaccine is recommended).

Please counsel pregnant women you see in your practice about protection against pertussis. Available options include offering pregnant women, who previously have not received Tdap, vaccination during pregnancy preferably during the third or late second trimester or administering Tdap immediately postpartum. In the US, the Advisory Committee on Immunization Practices (ACIP) supports maternal vaccination; please refer to their statement for your information at <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6041a4.htm>. Please discuss matters of immunization in pregnancy with Regional Medical Officer of Health if needed.

Individuals who recovered from pertussis illness and who are not up to date with recommended vaccinations for pertussis should also be offered pertussis vaccine appropriate for their age.

When vaccinating individuals please ensure the proper recording of vaccinations. This includes completing patients' immunization record as well as recording the vaccine name, lot number, expiry date, dose, route and site of administration in the patients' chart. Please also note the dose number when multiple doses of the same vaccine are given.

Post-exposure prophylaxis

Please ensure timely reporting to Regional Medical Officers of Health to enable local Public Health staff to perform contact tracing and determine who requires chemoprophylaxis. If you are considering prophylaxis of close contacts of a case, you may wish to speak with your Regional Medical Officer of Health. You may be asked by your local Public Health to prescribe chemoprophylaxis to contacts who are your patients. *The agents, doses and duration of chemoprophylaxis are the same as for treatment.*

For more information, please contact your local Public Health office. Thank you very much for your assistance in controlling this disease of public health importance.

Sincerely,



Alexander Doroshenko, MD, MPH, FFPH(UK), FRCPC
Provincial Medical Officer of Health