

Info-MADO

Newsletter on Reportable Diseases

Nunavik Department of Public Health

PERTUSSIS (WHOOPING COUGH)

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Context:

The bacteria responsible for pertussis is actively circulating in Quebec, with outbreaks reported in several regions, including Estrie, Chaudière-Appalaches, Capitale-Nationale, and Bas-Saint-Laurent. These regions all have a significantly higher disease incidence rate than the average for the 2015-2019 pre-pandemic years. Since the beginning of 2024, the epidemiological situation is alarming, with a province-wide incidence rate of 10.3 cases per 100,000 people, compared with an average rate of 3.6 cases for the same period before the pandemic. Young people aged 10 to 19 are the most affected, accounting for 62% of cases.

A reminder about pertussis:

Bordetella pertussis, which causes pertussis, can only be transmitted between humans. The incubation period usually lasts from 5 to 10 days but can extend to 21 days. The contagious period begins 1 to 2 weeks before the onset of coughing and lasts until around 5 days after the start of antibiotic therapy. In the absence of antibiotic treatment, the contagious period can last up to 3 weeks after the onset of coughing.

Vaccination constitutes the best protection against pertussis. Three doses are given at the age of 2, 4 and 12 months, followed by a booster shot between the ages of 4 and 6 years old. A booster dose is also recommended for pregnant women between the 26th and 32nd week of pregnancy.

Babies under 1 year old are at higher risk of severe complications from whooping cough. In fact, the majority of children under 6 months who contract it have to be hospitalized.

Clinical facts:

Pertussis evolves in 3 phases and lasts on average from 6 to 10 weeks:

- **The catarrhal phase**, which lasts for about 1-2 weeks, is characterized by general symptoms such as malaise, anorexia, rhinorrhea, lacrimation, and non-productive cough.
- **The paroxysmal phase**, which can last from 1 to 6 weeks, is characterized by a distinctive paroxysmal cough, often followed by vomiting or apnea. The coughing fits, defined by successive expiratory bursts without a pause for inhaling, may be followed by long inspirations resembling a whooping sound. This phase may be less pronounced in adolescents and adults, especially if they have been vaccinated. In infants, apnea can be the first symptom, and the cough may be mild or absent.
- **The convalescent phase**, which lasts from 2 to 6 weeks, is characterized by a gradual improvement in symptoms. Fever, when present, may indicate complications such as acute otitis media or pneumonia.

Complications are more serious and frequent in young babies. Deaths are rare, but most often occur in infants under 3 months of age.

Diagnosis:

The diagnosis should be considered for anyone who has had a cough for more than 2 weeks with no other obvious cause and who displays at least one of the following symptoms: paroxysmal cough (fits), whooping sound, or vomiting after coughing. The diagnosis is confirmed by a nasopharyngeal PCR test.

Treatment:

Antibiotic treatment is recommended for pertussis, unless the cough has been present for more than 3 weeks. The antibiotics used to treat pertussis are the same as those recommended for antibiotic prophylaxis, with identical dosages and duration of administration. Although they have little effect on the clinical course once the cough is established, antibiotics accelerate the elimination of the micro-organism and limit the spread of the disease.

Prevention:

The disease does not confer long-term immunity. However, vaccination against pertussis can protect against the disease, or considerably reduce its complications and the severity of symptoms. The vaccination of pregnant women prevents approximately 90% of hospitalizations and 95% of pertussis-related deaths in infants under 3 months of age.

What clinicians are expected to do:

- Collect a lab sample from all suspected cases.
- Quickly report all cases to the Department of Public Health (DPH).
- Assess close contacts who are symptomatic or potentially at risk.
- During the case's contagious period, exclude them from environments such as daycares, schools, or any other places where there are contacts with infants under 12 months or pregnant women.
- Promote hygiene and respiratory etiquette as well as hand hygiene.
- Update pertussis vaccination according with PIQ recommendations for both children and pregnant women.

Public health interventions:

An epidemiological investigation is initiated for each case, including the search for close contacts at risk of complication. Antibiotic prophylaxis may be offered.

Any case of pertussis or other notifiable diseases (MADO) must be reported to the DPH as instructed below:

- Fill out the form AS-770 and send it:
 - by email at mado-declarations.rr17@ssss.gouv.qc.ca OR
 - by fax at 1-866-867-8026;
- During evenings, weekends, and holidays, the declaration must also be made by phone to the DPH on-call doctor for Infectious Diseases at 1-855-964-2244 or 1-819-299-2990.

These contact details are reserved for healthcare professionals and should not be shared with the public.