

Bordetella parapertussis outbreak in southeastern Minnesota in 2014

21 September 2015

Study reports that an outbreak of *Bordetella parapertussis* occurred in 2014 in Southeastern Minnesota, in the months of October through December. This research is presented at ASM's 55th Interscience Conference of Antimicrobial Agents and Chemotherapy (ICAAC/ICC).

Pertussis, commonly known as "whooping cough," has been on the rise in the United States and globally over the past 25 years. It is a disease that stems most notably from an infection with a bacterium called *Bordetella pertussis*. It is predominantly seen in children and starts similarly to a common cold. However, in most cases a serious cough develops with coughing spells that can be so bad as to cause vomiting and the hallmark gasping for air, which often causes a "whooping" sound in young children. The cough may be persistent, lasting for weeks, giving it the name "100 days cough." Due to vaccination of children against [pertussis](#), the incidence of pertussis is lower in developed compared to developing countries. Despite the use of the vaccine, the incidence of pertussis is increasing.

Less commonly known is that the related species, *Bordetella parapertussis*, a "cousin" of *B. pertussis*, can cause a similar disease with the same symptoms.

One interesting finding is that all children involved in the outbreak were up to date with their pertussis vaccines. "This leads us to believe that the vaccine is not protecting children from the lesser-known species, *Bordetella parapertussis*," said study author Vytas P. Karalius, MPH, MA, Mayo Medical School, Mayo Clinic.

"Our finding is consistent with other research previous to ours. The [pertussis vaccine](#) and its efficacy have been under recent scrutiny; it may be beneficial to consider targeting *Bordetella parapertussis* in the development of future vaccines," he added.

The cases presented with the symptoms of typical pertussis or [whooping cough](#), indistinguishable from those expected with the better-known bacterium, *Bordetella pertussis*. Interestingly, over the same time period as the outbreak in Southeastern Minnesota, we observed a similar increase in the number of cases we diagnosed in our reference laboratory overall; our reference laboratory tests specimens from across the United States.

Provided by American Society for Microbiology

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