Rapid Pertussis Testing May Be Overly Sensitive

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TORONTO — *Bordetella pertussis* polymerase chain reaction tests can be positive months after clinical illness, Dr. Bryan Stone reported in a poster presentation at the annual meeting of the Pediatric Academic Societies.

It took a full 7 months for patients who initially tested positive for *B. pertussis* by polymerase chain reaction (PCR) to convert to a negative status, according to data from a prospective cohort study of 36 patients.

Rapid PCR testing has a sensitivity of 94%-98%. But there are concerns the test may be overly sensitive.

Patients with pertussis are believed to be contagious through the first 21 days of illness or completion of 5 days of antibiotics. What hasn't been known is the length of time after reported onset of symptoms that PCR testing remains positive, said Dr. Stone, medical director of the neuroscience trauma unit and assistant professor of pediatrics at the University of Utah, Salt Lake City.

The analysis was based on 36 participants providing 61 samples taken 4-204 days from onset of symptoms. Thirteen "index" cases were PCR-positive infants admitted to a tertiary care center and 23 were in close contact with an infected infant and had a cough lasting 7 or more days. The mean age of the index cases was 78 days, and none had received any pertussis immunizations.

Testing occurred weekly for 3 weeks and then monthly or every other month for 12 months or until the test became negative. Overall, 15 patients allowed serial sampling; 16 allowed only one sample; and 5 were initially negative, but remained ill for more than 21 days from onset of symptoms. There was no difference in antibiotic exposure in patients who tested PCR positive or negative. Half of the participants remained PCR positive between 60 and 150 days after onset of symptoms. ■