New PCR Test for Pertussis Requiring New Specimen Collection Device

Effective February 12, 2019, the Microbiology department will be offering a new PCR test for the simultaneous detection of *Bordetella pertussis* and *Bordetella parapertussis* in nasopharyngeal specimens. The new PCR test will be replacing our previously used molecular method for pertussis detection and will require the use of a new specimen transport collector, called Universal Transport Medium (UTM). The availability of the new pertussis test will allow for a shorter turn-around time and has the added ability to detect *B. parapertussis*.

Background

Pertussis, also known as whooping cough, is a bacterial infection of the respiratory tract that is most commonly caused by *B. pertussis*. A less serious form of the disease is caused by *B. parapertussis.* Prior to the availability of an effective vaccine, pertussis was a major pediatric pathogen, particularly in infants, where the mortality rate was high. Despite the widespread use of the vaccine, occasional outbreaks of disease occur throughout the U.S.

Symptoms

Pertussis is characterized by a chronic or persistent, non-productive cough that often produces coughing paroxysms. These paroxysms can be so intense that the child is gasping for air which is then followed by a large inspiratory breath sounding like a "whoop", hence the name whooping cough. Even though pertussis is generally regarded as a childhood disease, adults can become infected as their immunity wanes years following childhood vaccination.

Diagnosis

The most reliable test for establishing the laboratory diagnosis of pertussis is the use of a polymerase chain reaction (PCR) assay. Other methods, such as culture and a direct specimen immunofluorescent test, have been used over the years but they have been proven to be insensitive compared to the PCR assay. The PCR test is performed from a patient's nasopharyngeal specimen that is transported to the laboratory using Universal Transport Media (UTM). UTM can be obtained by contacting Client Services at Laboratory Alliance of Central New York (315-461-3008).

Test:	B.PERTUSSIS/PARA PCR
Test Code:	PERPAR
Method:	Polymerase Chain Reaction (PCR)
Specimen Requirement: ***NEW***	Collect a nasopharyngeal sample with a flocked, rayon, or polyester mini-tip swab and then place swab in the Universal Transport Media (UTM).
Remarks:	Pertussis Molecular Assay is for the detection of *Bordetella pertussis* and *Bordetella parapertussis* (whooping cough) in nasopharyngeal samples.
Transport:	Transport samples refrigerated at 2°C to 8°C. If there will be a long delay before sample processing (greater than three days from the date of collection), samples should be frozen at -70°C or colder and transported on dry ice.
Stability:	Samples can be stored at 15°C to 30°C (room temperature) for up to 8 hours, or 2°C to 8°C (refrigerated) for up to 7 days. If testing cannot be performed within 7 days of collection, the sample must be frozen at ≤ -70°C and is stable for up to 5 months.
Unacceptable Conditions:	Calcium alginate-tipped nasopharyngeal or swabs in Amies transport medium. (The material is inhibitory to PCR assay.)
Schedule of Testing:	Mon, Wed, Fri
CPT4 Code:	87798 x 2
Billing Code:	3010457

Questions regarding the Pertussis assay should be directed to Russ Rawling, MS, M(ASCP)SM, RM(NRM)SM, Microbiology Manager, at 315-410-7060 or russellrawling@lacny.com.