Diagnosing *bordetella pertussis* infection (Whooping Cough)

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Whooping cough continues to be a problem in our community.

It is diagnosed by culture, PCR, and serology.

In the laboratory, we frequently receive the **wrong swabs**. We cannot perform culture on an orange or blue transwab, or on a nose swab. Please ensure that the correct swabs are sent when you request pertussis testing.

**Culture** is performed on a **charcoal nasopharyngeal swab**. Sensitivity is reduced by duration of illness and antibiotic therapy. Ideally, charcoal swabs for culture should be collected before antibiotic therapy and early in the course of illness. After three weeks of cough, the sensitivity of culture drops to approximately 25%.

**PCR** is performed on a **flocked nasopharyngeal swab**. The sensitivity of PCR is superior to that of culture, and PCR should be requested if antibiotics have been prescribed and/or symptoms have been present for more than two weeks.

**Serology** may be useful in patients with cough lasting for more than three weeks. Usually serology gives a retrospective diagnosis, when antibiotic treatment is no longer indicated. IgG and IgA are produced after infection; IgG is produced after primary vaccination. However, IgA can also be detected after a booster dose of acellular vaccine. Thus, serological testing cannot with certainty distinguish between infection and response to vaccination. Acute and convalescent serological testing provides more information than a single test. IgM responses are uninterpretable.

Information regarding immunisation against whooping cough can be found here -


*Dr Arlo Upton*