GUIDANCE ON

Testing for Pertussis

FOR HEALTHCARE PROVIDERS

Timely and accurate diagnosis of pertussis is crucial for effective patient management, outbreak control, and prevention of further transmission. This testing guidance aims to assist healthcare providers in selecting appropriate diagnostic tests and interpreting results in the context of pertussis suspicion.

*** If a person suspected of having pertussis presents in your office:**

1 Promptly Isolate

Promptly isolate to avoid disease transmission and place a mask on the patient.

2 Collect Sample

For diagnosis, collect a nasopharyngeal swab in viral transport media for PCR (available through commercial laboratories), preferably early in the course of illness (within 2–3 weeks of cough onset). In suspected outbreak scenarios, pertussis PCR can also be performed at the State Laboratories Division with pre-approval from the Disease Outbreak Control Division. Serologic diagnosis is not recommended because of poor sensitivity and specificity.

Diagnostic Testing Recommendations:

Nucleic Acid Amplification Tests (NAATs)

- NAATs, such as polymerase chain reaction (PCR), are the preferred diagnostic method for pertussis due to their high sensitivity and specificity.
- Obtain nasopharyngeal swabs or aspirates for PCR testing, preferably during the acute phase of illness (within the first 2-3 weeks of cough onset).

Culture

- Culture of B. pertussis remains an option for diagnostic confirmation, especially in cases with negative PCR results or when laboratory resources permit.
- Collect nasopharyngeal specimens using specialized transport media suitable for pertussis culture.

Interpretation of Test Results:

Positive Result

A positive NAAT or culture confirms the presence of B. pertussis DNA or viable organisms, respectively, indicating active infection. Treat the patient promptly and implement appropriate infection control measures.

Negative Result

A negative NAAT or culture does not exclude pertussis, especially if obtained late in the illness course or from suboptimal specimens. Consider clinical and epidemiological factors when interpreting negative results.

Additional Guidance:

Serology

Positive serological findings (elevated IgG/IgA titers) may suggest recent or past pertussis infection but do not distinguish between acute and convalescent phases. Use serology cautiously and in conjunction with clinical assessment.

Special Considerations

- Testing in Infants: Infants <6 months of age are at highest risk of severe pertussis complications. Expedite testing and treatment in this vulnerable population, even in the absence of typical symptoms.
- Vaccination Status: Vaccination history may influence the clinical presentation and interpretation of diagnostic tests. Consider pertussis testing regardless of vaccination status, as breakthrough infections can occur.

Reporting and Public Health Collaboration:

*Reportable Disease: Pertussis is a reportable infectious disease in most jurisdictions. According to the Hawaii Administrative Rules Chapter 11-156, pertussis is reportable in the State of Hawaii and is considered **urgent**.

*Follow Hawaii Department of Health's (HDOH) reporting requirements and collaborate closely with public health authorities for case management and outbreak control. Healthcare providers should call **HDOH's Disease Reporting Line at (808)-586-4586** and report if there is a positive laboratory test result or if there is a strong suspicion (clinical symptoms present and tests ordered) of pertussis.

For Additional Resources, Visit:

- Clinical Overview of Pertussis (CDC): www.cdc.gov/pertussis/hcp/clinical-overview
- Department of Health Amendment and Compilation of Chapter 11-156 Hawaii Administrative Rules: health.hawaii.gov/docd/files/2017/01/HAR-Title-11_Chapter-156.pdf
- Hawaii Health Care Providers Disease Reporting Requirements (HDOH): health.hawaii.gov/docd/for-healthcare-providers/reporting-an-illness-for-healthcare-providers/reportable-diseases/
- Laboratory Testing for Pertussis (CDC): www.cdc.gov/pertussis/php/laboratories
- Managing Pertussis: Think, Test, Treat & Stop Transmission: www.health.state.mn.us/diseases/pertussis/hcp/managepert.pdf