

Pertussis

Testing Recommendations For Health Care Providers



Pertussis Testing Recommendations

Kansas Department of Health and Environment encourage testing patients with suspected pertussis by polymerase chain reaction (PCR) due to better sensitivity and rapid result turnaround time compared to other test methods (Table 1).

Pertussis testing is commercially available in Kansas. The Kansas Health and Environmental Laboratories (KHEL) has limited capacity for PCR testing but is accessible on a case-by-case basis.

Prior authorization is required for KHEL PCR testing by contacting the Epidemiology Hotline at 877-427-7317, option 5.

Table 1: Pertussis Test Types and Result Interpretation

| Test | Specimen | Timing of Collection | Test Result Interpretation | Advantages and Disadvantages |
|---------------------|--------------------------------------|---|---|--|
| PCR | Nasopharyngeal (NP) swab or aspirate | Best within 3 weeks of cough onset but detectable up to 4 weeks | (+) Positive: Confirms pertussis if clinical presentation/exposure history supports diagnosis. (-) Negative: Does not rule out pertussis. Consider clinical presentation/exposure history. | Excellent sensitivity and rapid turnaround time (1-3 days). May still detect bacteria after antibiotic use. Risk of false negatives increase when collected > 4 weeks after cough onset. |
| Culture | | Within 2 weeks of cough onset | (+) Positive: Confirms pertussis. (-) Negative: Does not rule out pertussis. Consider clinical presentation/exposure history. | Excellent specificity. Longer turnaround time (up to 7 days). Not appropriate for those treated with antibiotics. False negatives can occur when specimen is collected >2 weeks after cough onset. |
| Serology (IgG) | Serum | If used, best at 2-8 weeks after cough onset, but can be used up to 12 weeks | Diagnoses should be made based on clinical presentation/exposure history. | This is not a CDC-recommended test for diagnosing pertussis. Recent vaccination, previous infection, and cross-reactivity can cause invalid results |
| Serology (IgA, IgM) | Serum | Not recommended | Diagnoses should be made based on clinical presentation/exposure history. | This is not a CDC-recommended test for diagnosing pertussis. Recent vaccination, previous infection, and cross-reactivity can cause invalid results |