

# HEALTH ADVISORY



**Public Health**  
Prevent. Promote. Protect.

**REGION IV PUBLIC HEALTH**

Clark, Cowlitz, Skamania, Wahkiakum  
counties and Cowlitz Tribe

**TO: Physicians and other Healthcare Providers**

**Please distribute a copy of this information to each provider in your organization.**

Questions regarding this information may be directed to the following Region IV health officers:

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Wahkiakum County Health & Human Services, (360) 795-6207

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Cowlitz County Health & Human Services, (360) 414-5599

## Alert categories:

**Health Alert:** conveys the highest level of importance; warrants immediate action or attention.

**Health Advisory:** provides important information for a specific incident or situation; may not require immediate action.

**Health Update:** provides updated information regarding an incident or situation; no immediate action necessary.

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## Best Practices for Using PCR to Diagnose *Haemophilus influenzae* and *Neisseria meningitidis* and Identify Serotype or Serogroup

### Summary

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Determining serotype for *Haemophilus influenzae* (Hi) and serogroup for *Neisseria meningitidis* (Nm) is crucial for identifying potential outbreaks and determining appropriate public health responses. Several new commercial multiplex polymerase chain reaction (PCR) assays capable of simultaneously testing a single specimen for an array of pathogens that cause blood infections, meningitis, or encephalitis are available. These assays can rapidly identify Hi and Nm species, but most do not determine serotype or serogroup. Laboratories should continue to perform culture and use validated, specific real-time PCR assays capable of detecting and differentiating all six serotypes (a-f) of Hi and six serogroups (A, B, C, W, X, and Y) of Nm; otherwise, additional steps need to be taken including performing a reflex culture or at a minimum retaining a clinical sample for further testing.

### Recommendations

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- Hi and Nm culture isolates are valuable not only for serotyping or serogrouping but also for monitoring antimicrobial susceptibility and for conducting whole genome sequencing, which is necessary for strain comparisons during outbreak investigations and to monitor vaccine effectiveness over time.
- Clinical and commercial laboratories considering PCR for Hi and Nm should select assays capable of detecting and differentiating all Hi serotypes (serotypes a-f) and all Nm serogroups common in the United States (serogroups B, C, W, and Y).
- Per Washington State reporting requirements, all laboratories should submit the following to the Washington State Public Health Laboratory for further testing:
  - ➔ all isolates of *H. influenzae* obtained from pediatric patients (under 5 years of age).
  - ➔ all isolates of *N. meningitidis* obtained from patients with invasive meningococcal disease.

### For more information

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- Best Practices for Use of PCR for Diagnosing *H. influenzae* and *N. meningitidis* and Importance of Identifying Serotype/Serogroup (<http://www.cdc.gov/meningococcal/laboratory/pcr-guidance-mening-hflu.html>).
- CDC Bacterial Meningitis Laboratory (<http://www.cdc.gov/meningococcal/laboratory.html>).
- Association of Public Health Laboratories (APHL) Vaccine Preventable Diseases Reference Laboratories ([http://www.aphl.org/programs/infectious\\_disease/Pages/VPD.aspx](http://www.aphl.org/programs/infectious_disease/Pages/VPD.aspx)).

For questions, please call:

- Clark County Public Health: (360) 397-8182.
- Cowlitz County Health Department: (360) 414-5599
- Skamania County Community Health: (509) 427-3850
- Wahkiakum County Health and Human Services (360) 795-6207

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