

Pneumococcal Meningitis Investigation Overview

The following guidelines provide a brief overview of the steps of a pneumococcal meningitis investigation. *Streptococcus pneumoniae* (pneumococcus) is a gram-positive bacterium that can cause a variety of clinical syndromes, including invasive diseases like pneumonia, bacteremia, and meningitis.

Pneumococcal meningitis is the only form of invasive disease that is reportable in North Carolina. There are over 90 pneumococcal serotypes, and vaccines are available to protect against those that are most likely to cause invasive disease. Pneumococcal infections are most common during the late winter and early spring.

Transmission of pneumococcus occurs as the result of direct contact with respiratory droplets from an infected person. Certain groups are at higher risk of invasive pneumococcal disease, including children less than 2 years of age, adults over 65, and people with certain chronic medical conditions. Contacts to persons infected with pneumococcus are not generally at increased risk and antibiotic prophylaxis is rarely indicated.

Basic Steps of a Pneumococcal Meningitis Investigation

1. Determine date of symptom onset	<ul style="list-style-type: none">• Use information collected from lab reports and the medical record to determine which clinical syndromes are present. It is not necessary to interview the patient.• Case investigations are not usually warranted.
2. Review the lab report	<ul style="list-style-type: none">• Verify that the isolate is from a normally sterile site.• If the patient is age 15 years or less, assure the isolate is sent to the State Laboratory of Public Health for further serotyping by the CDC Reference Lab.
3. Contact Investigation	<ul style="list-style-type: none">• A contact investigation and control measures such as antibiotic prophylaxis are not usually indicated.• Persons eligible for vaccine should be vaccinated to protect against future disease exposure.<ul style="list-style-type: none">➤ Routine vaccination with a series of 4 PCV13 vaccinations prior to 15 months of age is recommended for all children.➤ Pneumococcal vaccination with PCV13 followed by PPSV23 is recommended for all adults over age 65 and for adults aged 18-64 who are at increased risk of infection.➤ The recommended number of doses for high-risk adults and additional recommendations for catch-up vaccination and vaccination of individuals with certain conditions can be found at the CDC's website at https://www.cdc.gov/vaccines/vpd/pneumo/hcp/recommendations.html.

Resources

- APHL/CDC Vaccine Preventable Disease Reference Centers
- North Carolina Vaccine Preventable Disease Annual Report <https://epi.dph.ncdhhs.gov/cd/figures.html>
- Red Book, Report of the Committee on Infectious Diseases of the American Academy of Pediatrics, 30th edition, 2015.
- CDC Manual for the Surveillance of Vaccine-Preventable Diseases <https://www.cdc.gov/vaccines/pubs/surv-manual/chpt11-pneumo.html>