

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, meningitis and AOM (acute otitis media). AOM is the most common clinical manifestation of pneumococcal infection among children and the most common outpatient diagnosis resulting in antibiotic prescriptions in that group.

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. The emergence of drug-resistant *S. pneumoniae* has made treatment of pneumococcal disease difficult. 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 5 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 <u>not</u> usually warranted.
2. Review the lab report	<ul style="list-style-type: none">• Verify that the isolate verifies meningitis (CSF).• 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 <u>not</u> usually indicated.• Persons eligible for vaccine should be vaccinated to protect against future disease exposure.<ul style="list-style-type: none">• All children younger than 5 years old should receive a 4-dose PCV series (PCV15 or PCV20) with 1 dose at each of the following ages 2 months, 4 months, 6 months, and 12-15 months.• Adults 50 years and older should receive PCV15, PCV20, or PCV21 if they have never received any pneumococcal conjugate vaccine or if their previous vaccination history is unknown.• Children 5 through 18 years of age and adults 19 through 49 years of age with certain risk conditions may be recommended to receive pneumococcal vaccines. The type of vaccine and number of doses recommended vary by age and vaccination history.• Use CDC's PneumoRecs VaxAdvisor App to quickly and easily determine which pneumococcal vaccines a patient needs and when.

Resources

CDC Manual for the Surveillance of Vaccine-Preventable Diseases, Chapter 11: [Pneumococcal](#)
CDC [Pneumococcal Vaccination](#) and [Adult Pneumococcal Vaccine Timing for Adults](#)