National and Local Increase in Invasive Meningococcal Disease
May 14, 2024

Summary and Action Items

- Since January 2023, 15 cases of invasive meningococcal disease have been reported to the Chicago Department of Public Health (CDPH), a similar increase to the national trend outlined in the CDC Health Alert issued March 28, 2024.
- Providers should have a high index of suspicion for invasive meningococcal disease and immediately begin antibiotic treatment while collecting blood and cerebrospinal fluid cultures as clinically indicated.
- Among the 15 cases, all presented with bacteremia and one also had septic arthritis.
- Ensure vaccination of eligible persons against meningococcal disease, with attention to people living with HIV or other immunocompromising conditions.
- Immediately notify CDPH with suspected or confirmed cases. Gram-negative diplococci identified from a normally sterile site and physician-diagnosed purpura fulminans are reportable in Illinois.

National Epidemiology: CDC is reporting an increase in invasive meningococcal disease (IMD), caused by Neisseria meningitidis. This bacterium is associated with meningitis but can also cause bacteremia or infection in other sterile body sites. Nationally, since 2023, cases of IMD caused by the most common serogroup Y sequence type 1466 (covered by the MenACWY vaccine) occurred in both males (65%) and females (35%) and disproportionately occurred in people ages 30–60 years (65%), Black or African American people (63%), and people with HIV (15%). Most of these patients presented with bloodstream infections rather than meningitis.

Chicago Epidemiology: Similar to national increases, CDPH is reporting an increase in cases of N. meningitidis. In 2023, there were 7 cases and in 2024, to date, there have been 8 cases of IMD, compared to 1-3 cases annually from 2017 to 2022. Trends in serogroup have also changed over time. During 2015–2021, serogroup C was the predominant serogroup in Chicago, including an outbreak in 2015–2016 primarily among Black, non-Hispanic men who have sex with other men, and living with HIV.

However, similar to national trends, in 2023–2024, 8 (53%) Chicago cases were caused by serogroup Y, 3 were non-groupable, and 3 are either pending or were unable to be serotyped (Figure). From 2023 to 2024, 9 (60%) cases have been in people ages 30–60 and 8 (53%) were Black, non-Hispanic. Eight cases (53%) occurred in males. Only 7% of cases were in persons living with HIV. No common exposure has been identified among cases.
Routine Vaccination: Routine vaccination with quadrivalent meningococcal vaccine (MenACWY vaccine) is recommended for adolescents aged 11-18 years. This includes an initial dose at 11 years of age and a booster dose at 16 years of age. Young children (down to 2 months old) and adults who are at increased risk should receive these vaccines. Risk factors for invasive meningococcal disease include:

- Medical conditions: complement deficiency (e.g., C5-C9, properdin, factor H, factor D), functional asplenia including sickle cell disease, and HIV
- Medications: complement inhibitors (e.g., Solaris® or Ultomiris®)
- Travel or residence in countries in which serogroups A, C, W or Y meningococcal disease is common
- Working in specific professions such as a microbiologist routinely exposed to *N. meningitidis*, military recruit, or first-year college student living in a residence hall not current with vaccination
- Being part of a community experiencing a serogroup A, C, W or Y meningococcal disease outbreak

Those who remain at increased risk need regular booster doses.

- For children under the age of 7 years, administer a booster dose 3 years after completion of the primary series and every 5 years thereafter.
- For children 7 years-old or older and adults, administer a booster dose 5 years after completion of the primary series and every 5 years thereafter.

Post-Exposure Prophylaxis: Meningococcal disease is transmitted through respiratory droplets or respiratory secretions of an infected individual. Chemoprophylaxis with rifampin, ciprofloxacin, or ceftriaxone is 90-95% effective and should be administered to eligible persons within 24 hours of identification of index patient. Isolates of *N. meningitidis* from IMD cases over the past three years have remained susceptible to ciprofloxacin in Illinois. Health departments conduct investigations to identify community contacts and continue to monitor resistance profiles of all invasive *N. meningitidis* specimens through CDC’s Bacterial Meningitis Laboratory.

Isolation Precautions: Patients suspected or confirmed to have IMD should be placed on droplet precautions until 24-hours after administration of effective antimicrobial therapy.

Reporting: Suspect or confirmed cases of IMD should be reported immediately in INEDSS, through the disease reporting line at 312-743-9000 (option 7) or 311 after business hours. Gram-negative diplococci identified from a normally sterile site and physician-diagnosed purpura fulminans are reportable in Illinois.

Additional Resources: CDC Health Alert, cdc.gov/meningococcal