



NC DEPARTMENT OF  
**HEALTH AND  
HUMAN SERVICES**

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Division of Public Health

From: Erica Wilson, MD, MPH, Medical Epidemiologist

To: North Carolina Clinicians

Subject: Increase in Invasive Meningococcal Disease

Date: October 2, 2023

### Summary

The North Carolina Division of Public Health (NC DPH) is alerting clinicians to an increase in invasive meningococcal disease in North Carolina. Providers should maintain a high index of suspicion for meningococcal disease and encourage all patients who are [at increased risk](#) to get vaccinated.

### Background

From January 2022 to September 2023, there have been 35 cases of meningococcal disease reported in North Carolina; 18 cases in 2022 and 17 cases so far in 2023. The average number of cases from 2017 to 2021 was 9 cases per year. Of the 35 cases reported since 2022, 24 (69%) have been caused by *Neisseria meningitidis* serogroup Y (NmY); only one was resistant to ciprofloxacin. Most case-patients have developed septicemia, with common symptoms including fever, nausea, vomiting, and muscle aches.

The majority of cases have been between the ages of 30 and 74 years (83%) and male (63%). Almost half of cases have occurred in Black/African American (49%) individuals. Eight cases (23%) have occurred in individuals living with HIV. Only one case-patient had a history of vaccination for serogroup Y meningitis.

The Virginia Department of Health recently [declared a statewide outbreak](#) of NmY. Nineteen of the 24 NmY cases identified in North Carolina since 2022 were found to be highly genetically related to cases in Virginia, and sequencing is pending for two additional isolates. No common link between cases has been found.

Invasive meningococcal disease is caused by the bacterium *Neisseria meningitidis*. It is a rare but very serious illness that can cause long-term problems such as loss of limbs or brain damage, and can be deadly. Six serogroups are responsible for most invasive disease: A, B, C, W, X, and Y. Routine vaccination for serotypes ACWY is recommended for all 11-12 year olds with a booster dose at 16, and for [some people who are at increased risk](#). For those who remain at risk, a booster dose is recommended every five years. Vaccination for serotype B is available for 16-23 year olds and for other children and adults that are at increased risk for developing meningococcal disease.

**NC DEPARTMENT OF HEALTH AND HUMAN SERVICES • DIVISION OF PUBLIC HEALTH**

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## Prevention and Control

Early identification and prompt public health follow up remain key to preventing further transmission. State and local health departments respond to reports of suspected meningococcal disease by rapidly identifying close contacts for whom post-exposure prophylaxis is recommended.

Providers should:

- Maintain a high index of suspicion for meningococcal disease. Clinical features include fever, headache, photophobia and stiff neck in meningococcal meningitis cases, and sepsis and rash in meningococcemia. A petechial rash with pink macules might be observed and may appear purple, dark brown, or black on darker skin tones.
- Immediately notify your [local health department \(LHD\)](#) if meningococcal disease is suspected based on clinical findings or laboratory results of gram-negative diplococci or *Neisseria meningitidis* from a normally sterile site. Please coordinate with your LHD to send specimens/isolates for newly identified cases to the North Carolina State Laboratory of Public Health (NCSLPH) for serogrouping.
- Ensure that all patients who are at increased risk for meningococcal disease are up to date on MenACWY vaccine. People at increased risk include: people with HIV, those with functional or anatomic asplenia, people with sickle cell disease, anyone with complement deficiency, or people taking complement inhibitors. A MenACWY booster is recommended every five years for people with increased risk due to medical conditions.
- Continue to encourage routine administration of MenACWY vaccine in adolescents. A dose of MenACWY vaccine is required for individuals entering the 7<sup>th</sup> grade (or by 12 years of age) followed by a booster dose prior to entering 12<sup>th</sup> grade (or by 17 years of age). Adolescents and young adults (16 through 23 years old) may also receive a serogroup B meningococcal vaccine. The preferred age for receipt is 16 through 18 years so adolescents have protection during the ages of increased risk.

For more information:

[CDC - Meningococcal Disease](#)

[Meningococcal Vaccination: Information for Healthcare Professionals](#)

[North Carolina Interactive Data Dashboard \(NCD3\)](#)

[Virginia Meningococcal Disease Outbreak Response](#)