NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

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From: Emma Doran, MD, MPH, Medical Epidemiologist
To: North Carolina Clinicians
Subject: Increase in Ciprofloxacin- and Penicillin-Resistant Meningococcal Disease Update
Date: October 1, 2025

Summary
The North Carolina Division of Public Health (NC DPH) is updating clinicians in North Carolina on an additional ciprofloxacin- and penicillin-resistant case of invasive meningococcal disease caused by *Neisseria meningitidis* serogroup Y (NmY) in the Charlotte Metropolitan region.

Since February 2024, providers in the Charlotte Metropolitan region including Cabarrus, Gaston, Iredell, Lincoln, Mecklenburg, Rowan, and Union Counties were recommended to discontinue the use of ciprofloxacin for prophylaxis of close contacts of invasive meningococcal disease cases and prescribe rifampin, ceftriaxone, or azithromycin instead. Providers treating residents from Chester, Lancaster, or York counties in South Carolina were also recommended to follow this guidance for patients being treated in North Carolina medical facilities.

Given the identification of an additional case with ciprofloxacin- and penicillin-resistance, providers should continue to follow these recommendations through April 2027 unless additional cases with resistance are identified in the catchment area and the timeline is extended.

Background
The number of meningococcal disease cases caused by ciprofloxacin-resistant or ciprofloxacin- and penicillin-resistant NmY strains has increased nationwide. Although no instances of prophylaxis failure associated with ciprofloxacin resistance in the United States have been reported to date, use of ciprofloxacin as prophylaxis in areas with known ciprofloxacin resistance might increase the likelihood of failure.

Since February 2023, three cases of invasive meningococcal disease have been found to be resistant to ciprofloxacin and penicillin in residents of Mecklenburg County and one case in a resident of neighboring York County, South Carolina. These cases meet the threshold to recommend discontinuing the use of ciprofloxacin for prophylaxis of close contacts per CDC's updated guidance.

From January 2022 to September 2025, there have been 63 cases of invasive meningococcal disease reported in North Carolina; 18 cases in 2022, 26 cases in 2023, 13 cases in 2024, and 6 cases so far in 2025. The average number of cases from 2017 to 2021 was 9 cases per year. Of the 63 cases reported since 2022, 38 (60%) have been caused by NmY.

Prevention and Control
Early identification and prompt public health follow up remain key to preventing further transmission of NmY. State and local health departments respond to reports of suspected meningococcal disease by

rapidly identifying close contacts for whom post-exposure prophylaxis is recommended. NC DPH has defined a catchment area based on CDC's updated guidance that is limited to the Charlotte Metropolitan region including the following NC counties: Gaston, Lincoln, Iredell, Rowan, Mecklenburg, Cabarrus, and Union. North Carolina providers treating residents from Chester, Lancaster, or York counties in South Carolina are also recommended to follow this guidance.

Providers in the Charlotte Metropolitan region (as defined above) should:

- **Avoid the use of ciprofloxacin for prophylaxis of close contacts.**
- Prescribe rifampin (4 oral doses over 48h hours) or ceftriaxone (single injection) for prophylaxis of close contacts. Note that azithromycin (single oral dose) is an alternative but is not recommended routinely because it is not as well studied for prophylaxis of close contacts. See the Manual for the Surveillance of Vaccine-Preventable Diseases Meningococcal Disease Table 1 for details on recommended chemoprophylaxis regimens.
- Continue to follow updated prophylaxis guidance until notified by NC DPH that a full 24 months have passed without any invasive meningococcal disease cases caused by ciprofloxacin-resistant strains reported in the catchment area.

All North Carolina providers should:

- Immediately notify your local health department (LHD) if meningococcal disease is suspected based on clinical findings or laboratory identification of gram-negative diplococci or *Neisseria meningitidis* from a normally sterile site.
- Remind your performing laboratory to work with their LHD to ensure an isolate or residual specimen from sterile sites when culture is not performed, is submitted to the North Carolina State Laboratory of Public Health (NCSLPH) for serogrouping.
- Continue to empirically treat cases of *N. meningitidis* infection per CDC guidance. Providers should request antimicrobial susceptibility testing of *N. meningitidis* isolates at their medical facility's laboratory to help guide clinical treatment if testing is available.
- 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 7th grade (or by 12 years of age) followed by a booster dose prior to entering 12th 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.

Clinicians should contact their local health departments or the Communicable Disease Branch epidemiologist on-call 24/7 number (919-733-3419) with questions.

For more information:

CDC - Meningococcal Disease
Meningococcal Vaccination: Information for Healthcare Professionals
Vaccine-Preventable Diseases Reported in North Carolina, 2023