



NC DEPARTMENT OF  
**HEALTH AND  
HUMAN SERVICES**

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Division of Public Health

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To: All North Carolina Clinicians and Clinical Laboratories

From: Erica Wilson, MD, MPH, Medical Epidemiologist

Re: Ciprofloxacin-resistant,  $\beta$ -lactamase-producing *Neisseria meningitidis* Serogroup Y isolates

This memo is intended to provide the latest information to all North Carolina clinicians and laboratory staff regarding ciprofloxacin-resistant,  $\beta$ -lactamase-producing *Neisseria meningitidis* Serogroup Y (NmY) isolates detected in North Carolina.

On June 18, 2020, CDC released a Health Advisory describing 11 meningococcal disease cases reported in the US during 2019-2020 with isolates containing a *bla*ROB-1  $\beta$ -lactamase gene associated with penicillin resistance, as well as mutations associated with ciprofloxacin resistance. An additional 22 samples during 2013-2020 contained the *bla*ROB-1  $\beta$ -lactamase gene conferring penicillin resistance, but did not have mutations associated with ciprofloxacin resistance. The majority of cases (22/33, 67%) occurred in Hispanic individuals. These cases represent a significant increase in penicillin and ciprofloxacin resistant NmY in the United States.

Three NmY isolates resistant to penicillin and ciprofloxacin have been detected in North Carolina during 2019-2020 in two counties in different parts of the state. North Carolina clinicians should be aware that penicillin and ciprofloxacin resistant NmY has been found in North Carolina and know the following recommendations:

- **Healthcare providers** should perform antimicrobial susceptibility testing (AST) to determine susceptibility of all meningococcal isolates to penicillin before changing from empirical treatment with cefotaxime or ceftriaxone to penicillin or ampicillin.
- **Clinicians and public health staff** should consider AST on meningococcal isolates to inform prophylaxis decisions. AST should not delay the initiation of prophylaxis with ciprofloxacin, rifampin, or ceftriaxone.
- **Clinical Laboratories** should continue to submit all *N. meningitidis* isolates to the NC State Laboratory of Public Health for serogroup identification in accordance with rule [10A NCAC 41A .0209](#). Note: NC SLPH does not do AST.

Cases of meningococcal disease should continue to be reported to the local health department or NC DPH Communicable Disease Branch epidemiologist on-call at 919-733-3419 within 24 hours.

For more information, please visit the CDC [meningococcal disease website](#).

#### References

- *MMWR* on Detection of Ciprofloxacin-resistant,  $\beta$ -lactamase-producing *Neisseria meningitidis* Serogroup Y Isolates: [https://www.cdc.gov/mmwr/volumes/69/wr/mm6924a2.htm?s\\_cid=mm6924a2\\_w](https://www.cdc.gov/mmwr/volumes/69/wr/mm6924a2.htm?s_cid=mm6924a2_w)
- CDC Meningococcal Disease Website: <https://www.cdc.gov/meningococcal/index.html>

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