

Montana Health Alert Network

DPHHS HAN

ADVISORY

Cover Sheet

DATE

June 19, 2020

SUBJECT

Detection of Ciprofloxacin-resistant, β -lactamase-producing *Neisseria meningitidis* Serogroup Y Isolates, United States, 2019–2020

INSTRUCTIONS

DISTRIBUTE AT YOUR DISCRETION. Share this information with relevant SMEs or contacts (internal and external) as you see fit.



For LOCAL HEALTH DEPARTMENT reference only
DPHHS Subject Matter Resource for more information regarding this HAN, contact:

DPHHS CDCP

Epidemiology Section
1-406-444-0273

For technical issues related to the HAN message contact the Emergency Preparedness Section at 1-406-444-0919

DPHHS Health Alert Hotline:
1-800-701-5769

DPHHS HAN Website:
www.han.mt.gov

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Please ensure that DPHHS is included on your HAN distribution list.
hhshan@mt.gov

Categories of Health Alert Messages:

Health Alert: conveys the highest level of importance; warrants immediate action or attention.

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Health Update: provides updated information regarding an incident or situation; unlikely to require immediate action.

Information Service: passes along low level priority messages that do not fit other HAN categories and are for informational purposes only.

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INFORMATION

On average, 1-3 cases of *Neisseria meningitidis*, or meningococcal disease, are reported each year in Montana, with the most recent cases reported in 2019. Both isolates were serotype Y but no resistance patterns were detected. Please refer to the CDC HAN on ciprofloxacin-resistant beta-lactamase-producing *Neisseria meningitidis* serogroup Y isolates and distribute at your discretion.

This is an official **CDC HEALTH ADVISORY**

Distributed via the CDC Health Alert Network
June 18, 2020, 1:00 PM ET
CDCHAN-00433

Detection of Ciprofloxacin-resistant, β -lactamase-producing *Neisseria meningitidis* Serogroup Y Isolates, United States, 2019–2020

Summary

Meningococcal disease, which typically presents as meningitis or meningococemia, is a life-threatening illness requiring prompt antibiotic treatment for patients and antibiotic prophylaxis for their close contacts. *Neisseria meningitidis* isolates in the United States have been largely susceptible to the antibiotics recommended for treatment and prophylaxis. However, 11 meningococcal disease cases reported in the United States during 2019–2020 had isolates containing a *bla*_{ROB-1} β -lactamase gene associated with penicillin resistance, as well as mutations associated with ciprofloxacin resistance. An additional 22 cases reported during 2013–2020 contained a *bla*_{ROB-1} β -lactamase gene but did not have mutations associated with ciprofloxacin resistance.

Background

Meningococcal disease is a sudden-onset, life-threatening illness caused by the bacterium *Neisseria meningitidis*. Prompt antibiotic treatment can reduce morbidity and mortality among patients and antibiotic prophylaxis can prevent secondary disease in close contacts (<https://redbook.solutions.aap.org/chapter.aspx?sectionid=189640131&bookid=2205>). Resistance to the antibiotics used for meningococcal treatment and prophylaxis, including penicillin and ciprofloxacin, has been rare in the United States. Recently, however, penicillin- and ciprofloxacin-resistant *N. meningitidis* serogroup Y (NmY) isolates have been detected in the United States.

The U.S. Centers for Disease Control and Prevention (CDC) made a request for isolate submissions from state health departments and reviewed the existing whole genome sequencing data for those isolates. CDC identified 33 meningococcal disease cases occurring between 2013 and 2020 that were caused by NmY isolates containing a *bla*_{ROB-1} β -lactamase enzyme gene conferring resistance to penicillins. The 33 cases were reported from 12 geographically disparate states. A majority of the cases (22/33, 67%) occurred in Hispanic individuals. Isolates from 11 of these cases, reported during 2019–2020 from nine states, were also resistant to ciprofloxacin. These cases represent a significant increase in penicillin- and ciprofloxacin-resistant meningococci in the United States.

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.
- In states that have experienced meningococcal disease cases caused by ciprofloxacin-resistant strains within the past 1–2 years, **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.
- **State and territorial health departments** should continue submitting all meningococcal isolates to CDC for AST and whole genome sequencing. Health departments also should report any suspected meningococcal treatment or prophylaxis failures.
- For cases with isolates determined to be β -lactamase screen-positive or ciprofloxacin-resistant, **health departments** should complete a supplemental case report form (available at <https://www.cdc.gov/meningococcal/surveillance/index.html>) or on request from

meningnet@cdc.gov). Forms can be submitted to CDC via secure email (meningnet@cdc.gov) or FTP site.

For More Information

MMWR on Detection of Ciprofloxacin-resistant, β -lactamase-producing *Neisseria meningitidis* Serogroup Y Isolates: 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>

The Centers for Disease Control and Prevention (CDC) protects people's health and safety by preventing and controlling diseases and injuries; enhances health decisions by providing credible information on critical health issues; and promotes healthy living through strong partnerships with local, national, and international organizations.

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Health Alert Requires immediate action or attention; highest level of importance
Health Advisory May not require immediate action; provides important information for a specific incident or situation
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##This message was distributed to state and local health officers, state and local epidemiologists, state and local laboratory directors, public information officers, HAN coordinators, and clinician organizations##