MLS Laboratory Update: National Increase in Invasive Meningococcal Disease Serogroup Y

APRIL 8, 2024

Purpose of this Message:

To provide awareness to MLS laboratories regarding the national increase in invasive meningococcal disease, mainly attributable to *Neisseria meningitidis* serogroup Y.

Action Item:

Reminder to submit *N. meningitidis* isolates or sterile site clinical specimens (CSF, blood, etc.) that tested positive for *N. meningitidis* to the MDH Public Health Laboratory, per the communicable disease reporting rule.

Report suspected, probable or confirmed Invasive Meningococcal Disease (IMD) cases immediately by telephone, 651-201-5414.
Report Meningoccal Disease (https://www.health.state.mn.us/diseases/meningococcal/report.html)

- Suspected IMD cases include those with gram-negative diplococci detected in a sterile site specimen.
- Confirm that your facility has processes in place including laboratory and infection prevention protocols for reporting IMD cases internally and to MDH.

Background:

Invasive meningococcal disease (IMD), caused by the bacterium *Neisseria meningitidis*, is a rare but severe illness with a case-fatality rate of 10–15% even with appropriate antibiotic treatment.

The Centers for Disease Control and Prevention (CDC) recently issued a Health Advisory to alert health care providers to a national increase in IMD, mainly attributable to *Neisseria meningitidis* serogroup Y. Increase in Invasive Serogroup Y Meningococcal Disease in the United States (https://emergency.cdc.gov/han/2024/han00505.asp) One meningococcal serogroup Y strain (ST-1466) is responsible for most (101 of 148, 68%) serogroup Y cases reported and sequenced in 2023. Cases caused by this strain are disproportionately occurring in people ages 30–60 years (65%), people who are Black or African American (63%), and people living with HIV (15%). Sixty-five percent of IMD caused by this strain were males and 35% were females. In addition, most cases of IMD caused by this strain in 2023 had a clinical presentation other than meningitis: 64% presented with bacteremia, and at least 4% presented with septic arthritis. Of 94 patients with known outcomes, 17 (18%) died; this case-fatality rate is higher than the historical case-

fatality rate of 11% reported for serogroup Y cases in 2017–2021. Isolates of serogroup Y, ST-1466 that have been tested, have been susceptible to all first-line antibiotics recommended for treatment and prophylaxis. This is a different strain from the serogroup Y strain that has been associated with ciprofloxacin-resistance.

From 2018 through 2023, there were 15 cases of IMD identified in Minnesota. The median annual case number was 3 with a range 0-6 cases. Eight were serogroup B, two were serogroup Y and 5 were non-groupable. To date in 2024 there have been two cases of IMD, one serogroup Y and one non-groupable.

Additional Action Items for Clinicians and Laboratorians:

- Maintain a heightened suspicion for invasive meningococcal disease (IMD).
    - Be aware that IMD patients may present with bloodstream infection or septic arthritis and without symptoms typical of meningitis.
- Recognize that IMD may affect people of any age or demographic group.
    - The current national increase in meningococcal disease is disproportionately affecting people ages 30–60 years, people who are Black or African American, and people living with HIV.
- Report Meningoccal Disease (https://www.health.state.mn.us/diseases/meningococcal/report.html): Report suspected, probable or confirmed IMD cases immediately by telephone, 651-201-5414.
    - Suspected IMD cases include those with gram-negative diplococci detected in a sterile site specimen.
    - Confirm that your facility has protocols in place including laboratory and infection prevention protocols for reporting IMD cases internally and to MDH
- Send meningococcal sterile-site isolates to the MDH Public Health Laboratory for characterization, including serogroup identification. If an isolate is not available send the clinical specimen.
- Offer vaccine to all people recommended for Meningococcal Vaccination: Recommendations of the Advisory Committee on Immunization Practices (https://www.cdc.gov/mmwr/volumes/69/rr/rr6909a1.htm) including people living with HIV.

Additional Information:

- MDH Meningococcal Disease (Neisseria meningitidis, "Bacterial Meningitis") (https://www.health.state.mn.us/diseases/meningococcal/index.html)
- CDC: Meningococcal Disease Clinical Information (https://www.cdc.gov/meningococcal/clinical-info.html)
- CDC: Meningococcal Vaccination: Information for Health care Professionals (https://www.cdc.gov/vaccines/vpd/mening/hcp/index.html)

Questions:

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Thank you for your continued partnership.

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