

# MLS Laboratory Update: Meningococcal Disease Cases with Travel to the Kingdom of Saudi Arabia

MAY 22, 2024

## Purpose of this Message:

To provide awareness to MLS laboratories regarding cases of meningococcal disease linked to travel to the Kingdom of Saudi Arabia (KSA).

## Action Item:

Submit *Neisseria meningitidis* isolates from sterile sites or 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 meningococcal disease cases immediately by telephone, 651-201-5414.

### Report Meningococcal Disease

(<https://www.health.state.mn.us/diseases/meningococcal/report.html>)

- Suspected meningococcal disease 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 meningococcal disease cases internally and to MDH.

## Background:

Meningococcal disease, 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 cases of meningococcal disease linked to Umrah travel to KSA.

Meningococcal Disease Cases Linked to Travel to the Kingdom of Saudi Arabia (KSA): [Ensure Pilgrims are Current on Meningococcal Vaccination](#)

(<https://emergency.cdc.gov/han/2024/han00508.asp>). Umrah is an Islamic pilgrimage to Mecca, KSA, that can be performed any time in the year; the Hajj is an annual Islamic pilgrimage this year taking place June 14–19, 2024. Since April 2024, 12 cases of meningococcal disease linked to KSA travel for Umrah have been reported to national public health agencies in the United States (5 cases, including one case who resides in Minnesota and whose isolate was resistant to ciprofloxacin), France (4 cases), and the United Kingdom (3 cases). Two cases were in children aged ≤18 years, four cases were in adults aged 18–44 years, four cases were in adults aged 45–64 years, and two cases were in adults aged 65 years or older. Ten cases were in

patients who traveled to KSA, and two were in patients who had close contact with travelers to KSA. Ten cases were caused by *Neisseria meningitidis* serogroup W (NmW), one U.S. case was caused by serogroup C (NmC), and the serogroup is unknown for one U.S. case. Of nine patients with known vaccination status, all were unvaccinated. The isolates from the one U.S. NmC case and two NmW cases (one U.S., one France) were resistant to ciprofloxacin; based on whole-genome sequencing, the remaining eight NmW isolates were all sensitive to penicillin and ciprofloxacin. Meningococcal disease outbreaks have occurred previously in conjunction with mass gatherings including the Hajj pilgrimage. The most recent global outbreak of meningococcal disease associated with travel to KSA for Hajj was in 2000–2001 and was primarily caused by NmW.

## Additional Action Items for Clinicians and Laboratorians:

- Recommend vaccination with MenACWY conjugate vaccine for people 2 months of age and older traveling to the Kingdom of Saudi Arabia (KSA) to perform Hajj or Umrah (pilgrims) in addition to routine meningococcal vaccination for adolescents and other people at increased meningococcal disease risk.
  - Follow the Advisory Committee on Immunization Practices (ACIP) vaccine recommendations for travel under the special situations section of CDC’s [Child Immunization Schedule \(https://www.cdc.gov/vaccines/schedules/hcp/imz/child-schedule-notes.html#note-mening\)](https://www.cdc.gov/vaccines/schedules/hcp/imz/child-schedule-notes.html#note-mening) and [Adult Immunization Schedule \(https://www.cdc.gov/vaccines/schedules/hcp/imz/adult-schedule-notes.html#note-mening\)](https://www.cdc.gov/vaccines/schedules/hcp/imz/adult-schedule-notes.html#note-mening).
  - KSA requires all travelers one year of age or older performing Hajj or Umrah to have received one dose of either a:
    - MenACWY conjugate vaccine within the last 5 years administered at least 10 days prior to arrival.  
OR
    - MenACWY polysaccharide vaccine (MPSV4 is no longer available in the United States) within the last 3 years administered at least 10 days prior to arrival.
  - Refer to [CDC: Meningococcal Vaccination: Information for Healthcare Professionals \(https://www.cdc.gov/vaccines/vpd/mening/hcp/index.html\)](https://www.cdc.gov/vaccines/vpd/mening/hcp/index.html), [CDC Yellow Book 2024 \(https://wwwnc.cdc.gov/travel/yellowbook/2024/infections-diseases/meningococcal-disease#prevent\)](https://wwwnc.cdc.gov/travel/yellowbook/2024/infections-diseases/meningococcal-disease#prevent) and [KSA's Hajj Health Requirements \(https://www.moh.gov.sa/en/HealthAwareness/Pilgrims\\_Health/Pages/default.aspx\)](https://www.moh.gov.sa/en/HealthAwareness/Pilgrims_Health/Pages/default.aspx) for additional details.
- Counsel patients to immediately seek medical attention if they, their child, or another close contact develops [symptoms of meningococcal disease \(https://www.cdc.gov/meningococcal/symptoms/index.html\)](https://www.cdc.gov/meningococcal/symptoms/index.html):
  - Symptoms of meningococcal meningitis may include fever, headache, stiff neck, nausea, vomiting, photophobia (eyes being more sensitive to light), or altered mental status (confusion).
  - Symptoms of meningococcal bloodstream infection may include fever and chills, fatigue, vomiting, cold hands and feet, severe aches and pains, rapid breathing, diarrhea, or, in later stages, a dark purple rash.

- Initial symptoms of meningococcal disease can at first be vague, but worsen rapidly, and can become life-threatening within hours.
- Maintain a heightened index of suspicion for meningococcal disease among symptomatic people who have recently been in KSA and among close contacts of people who have recently been in KSA, regardless of vaccination status.
- **Preferentially consider using rifampin, ceftriaxone, or azithromycin instead of ciprofloxacin as prophylaxis for close contacts in the United States of meningococcal disease cases associated with travel in KSA (3 of the 11 isolates were ciprofloxacin resistant).**
- Report Meningococcal Disease (<https://www.health.state.mn.us/diseases/meningococcal/report.html>): Report suspected, probable or confirmed meningococcal disease cases immediately by phone 24 hours a day, seven days a week by calling 651-201-5414 or 877-676-5414.
  - Suspected meningococcal disease 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 meningococcal disease cases internally and to MDH
- Send sterile-site *N. meningitidis* isolates to the MDH Public Health Laboratory for characterization, including serogroup identification. If an isolate is not available send the clinical specimen.

## Additional Information:

- [CDC: Meningococcal Vaccination: Information for Healthcare Professionals](https://www.cdc.gov/vaccines/vpd/mening/hcp/index.html) (<https://www.cdc.gov/vaccines/vpd/mening/hcp/index.html>)
- [CDC Yellow Book 2024](https://wwwnc.cdc.gov/travel/yellowbook/2024/infections-diseases/meningococcal-disease#prevent) (<https://wwwnc.cdc.gov/travel/yellowbook/2024/infections-diseases/meningococcal-disease#prevent>)
- [KSA's Hajj Health Requirements](https://www.moh.gov.sa/en/HealthAwareness/Pilgrims_Health/Pages/default.aspx) ([https://www.moh.gov.sa/en/HealthAwareness/Pilgrims\\_Health/Pages/default.aspx](https://www.moh.gov.sa/en/HealthAwareness/Pilgrims_Health/Pages/default.aspx))
- [MDH: Reporting Meningococcal Disease](https://www.health.state.mn.us/diseases/meningococcal/report.html) (<https://www.health.state.mn.us/diseases/meningococcal/report.html>)
- [CDC: Child Immunization Schedule](https://www.cdc.gov/vaccines/schedules/hcp/imz/child-schedule-notes.html#note-mening) (<https://www.cdc.gov/vaccines/schedules/hcp/imz/child-schedule-notes.html#note-mening>)
- [CDC: Adult Immunization Schedule](https://www.cdc.gov/vaccines/schedules/hcp/imz/adult-schedule-notes.html#note-mening) (<https://www.cdc.gov/vaccines/schedules/hcp/imz/adult-schedule-notes.html#note-mening>)

## Questions:

Please contact: Paula Snippes Vagnone at [paula.snippes@state.mn.us](mailto:paula.snippes@state.mn.us) or 651-201-5581

Thank you for your continued partnership.

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[www.health.state.mn.us/diseases/idlab/mls/index.html](http://www.health.state.mn.us/diseases/idlab/mls/index.html)

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