Joe Lombardo
Governor

Richard Whitley, MS
Director

DEPARTMENT OF HEALTH AND HUMAN SERVICES

NEVADA DIVISION of PUBLIC and BEHAVIORAL HEALTH

Cody Phinney, MPH
Administrator

Ihsan Azzam, Ph.D., M.D.
Chief Medical Officer

TECHNICAL BULLETIN

DATE: July 11, 2024
TOPIC: Meningococcal Disease Associated with Travel to Saudi Arabia, Recommendations for Health Care Providers
AUTHOR: Samantha Dunning, Vaccine Preventable Disease Coordinator, Office of State Epidemiology
TO: Health Care Providers

Summary[1]

On June 6, the Centers for Disease Control and Prevention (CDC) published a Morbidity and Mortality Weekly Report (MMWR) regarding cases of meningococcal disease associated with travel to Saudi Arabia for Umrah Pilgrimage.

On April 17, CDC was notified of two invasive meningococcal disease (IMD) cases in the United States in persons with recent Umrah travel to Saudi Arabia. On April 23, public health authorities in the United Kingdom and France alerted CDC to additional Umrah travel–associated cases in those countries. CDC issued an Epidemic Information Exchange (Epi-X) notice on April 24, requesting that U.S. jurisdictions report any Saudi Arabia travel–associated IMD cases.

As of May 29, there were 12 identified Saudi Arabia travel-associated cases from three countries: the United States (five), France (four), and the United Kingdom (three). Seven patients were male, and five patients were female. Two cases occurred in persons aged 0-12 years, four each among adults aged 25-44 and 45-64 years, and two among adults aged ≥65 years. The 10 adult patients traveled to Saudi Arabia, and the two child patients were household contacts of a nonpatient asymptomatic adult traveler. Nine patients were unvaccinated, and the vaccination status of three patients is unknown. All travelers visited Saudi Arabia between March and May 2024, and symptom onset occurred upon return to their country of origin in April and May.

CDC's Preliminary Conclusions and Actions

Although vaccination is required by the Saudi Ministry of Health for Hajj and Umrah pilgrims, all identified cases occurred in persons who were either unvaccinated or whose vaccination status is unknown. It is important that persons considering travel to perform Hajj or Umrah consult with their health care providers, and providers can ensure that pilgrims aged ≥1 year have received a MenACWY vaccine within the last 3-5 years (depending upon vaccine type received) and ≥10 days before entering Saudi Arabia. Pilgrims should seek immediate medical attention if they develop signs or symptoms consistent with meningococcal disease.

Health departments should ascertain whether patients with meningococcal disease have traveled to Saudi Arabia or been in close contact with travelers to Saudi Arabia. CDC has published guidance on parameters specifying antibiotic selection for prophylaxis of close contacts of meningococcal disease

[1] Cases of Meningococcal Disease Associated with Travel to Saudi Arabia for Umrah Pilgrimage — United States, United Kingdom, and France, 2024 | CDC

patients.[2] Close contacts of people with meningococcal disease should receive antibiotic chemoprophylaxis as soon as possible after exposure, regardless of immunization status, ideally < 24 hours after the index patient is identified. Aligned with this guidance and considering that ciprofloxacin-resistant strains were identified in three of 11 cases with available information, prophylaxis with rifampin, ceftriaxone, or azithromycin should be preferentially considered over ciprofloxacin for close contacts of patients with Saudi Arabia travel-associated cases.

Meningococcal Disease Symptoms

Meningitis and blood stream infections are the two most common types of meningococcal infections. Both are serious and can be deadly in a matter of hours. Symptoms of meningococcal disease can first appear as a flu-like illness and rapidly worsen.

The most common symptoms of meningococcal meningitis include fever, headache, and a stiff neck. There are also often additional symptoms, such as altered mental status, nausea, photophobia, or vomiting.

Newborns and infants may not have the classic symptoms listed above, or it may be difficult to notice those symptoms in infants. Instead, infants may exhibit lethargy, irritability, vomiting, poor feeding, and/or bulging anterior fontanelle (the soft spot on the skull). In young children, reflexes may be observed to detect signs of meningitis.

Symptoms of blood stream infections may include:

- Cold hands and feet
- Diarrhea or nausea with or without vomiting
- Fatigue
- Fever and chills
- Rapid breathing
- Severe aches or pain in the muscles, joints, chest or abdomen
- In the later stages, a dark purple rash

Laboratory Diagnosis[3]

Culture and polymerase chain reaction (PCR) laboratory testing methods can be used for diagnosis of meningococcal disease. Both culture and PCR have advantages and disadvantages that should be considered when making those clinical decisions. CDC provides laboratory guidance to help inform diagnostic decisions, which can be found online here.

Treatment[4]

According to CDC, effective therapy for suspected meningococcal disease should include an extended-spectrum cephalosporin, such as cefotaxime or ceftriaxone. Treatment with penicillin or ampicillin requires susceptibility testing. Once the microbiologic diagnosis is established, definitive treatment can be continued with an extended-spectrum cephalosporin (cefotaxime or ceftriaxone). Alternatively, if susceptibility of the meningococcal isolate to penicillin is confirmed, treatment can be switched to penicillin G or ampicillin.

Additional treatment may be needed to eradicate nasopharyngeal carriage. Ceftriaxone clears nasopharyngeal carriage effectively after 1 dose. If ceftriaxone or cefotaxime aren't used for treatment, one of the following is recommended before hospital discharge to eradicate nasopharyngeal carriage:

1. A course of rifampin (4 doses over 2 days)
2. A single dose of ciprofloxacin or ceftriaxone

---

[2] Selection of Antibiotics as Prophylaxis for Close Contacts of Patients with Meningococcal Disease in Areas with Ciprofloxacin Resistance — United States, 2024 | MMWR (cdc.gov)
[3] Best practice guidelines for diagnosis of Haemophilus influenzae and Neisseria meningitidis disease | Meningococcal | CDC
[4] Clinical Guidance for Meningococcal Disease | CDC

4150 Technology Way, Suite 300 ● Carson City, NV 89706 ● (775) 684-4200 ● Fax (775) 687-7570 ● dpbh.nv.gov

Vaccination[5]

Vaccines can help prevent meningococcal disease. There are three types of meningococcal vaccines available in the United States:

1. Meningococcal conjugate or MenACWY vaccines (Menveo® and MenQuadfi®)
2. Serogroup B meningococcal or MenB vaccines (Bexsero® and Trumenba®)
3. Pentavalent meningococcal or MenABCWY vaccine (Penbraya™)

All 11- to 12-year-olds should get a MenACWY vaccine, with a booster dose at 16 years old. Teens and young adults (16-23 years old) also may get a MenB vaccine. Those who are getting MenACWY and MenB vaccines at the same visit may instead get a MenABCWY vaccine. CDC also recommends meningococcal vaccination for other children and adults who are at increased risk for meningococcal disease.

Provider Reporting

Health Department	County	Phone Number to Report
Carson City Health and Human Services (CCHHS)	Carson City, Douglas, and Lyon	(775) 887-2190 (24 hours)
Central Nevada Health District (CNHD)	Churchill, Mineral, Eureka, and Pershing	(775) 866-7535 (24 hours)
Northern Nevada Public Health (NNPH, formerly WCHD)	Washoe	(775) 328-2447 (24 hours)
Southern Nevada Health District (SNHD)	Clark	(702) 759-1300 (24 hours)
Nevada Division of Public and Behavioral Health (DPBH) Office of State Epidemiology (OSE)	All other counties	(775) 684-5911 (M-F 8AM to 5PM) (775) 400-0333 (after hours)

Questions

For updated guidance, review the Division of Public and Behavioral Health Technical Bulletin web page regularly. Email DBPHEpi@health.nv.gov for other questions regarding Meningococcal Disease.

Cody Phinney, MPH
Administrator
Division of Public and Behavioral Health

Ihsan Azzam, Ph.D., M.D.
Chief Medical Officer
Division of Public and Behavioral Health

[5] Meningococcal Vaccination | CDC

4150 Technology Way, Suite 300 ● Carson City, NV 89706 ● (775) 684-4200 ● Fax (775) 687-7570 ● dpbh.nv.gov