

June 21, 2023

Health Notice for District of Columbia Health Care Providers Guidance On Measles During Summer Travel Season — 2023

SUMMARY

As the summer travel season begins, it is important for healthcare professionals and public health officials to prioritize measles prevention among international travelers. As of June 21, 2023, the Centers for Disease Control and Prevention (CDC) has issued a Health Alert Network (HAN) notice, serving as a crucial reminder to remain vigilant in identifying measles cases and providing guidance for individuals planning international travel. Measles, a highly contagious disease, has been recently reported in the United States (U.S.) with links to international travel. According to recent reports from the CDC, there have been 16 confirmed cases of measles across 11 jurisdictions in the U.S. as of June 8, 2023¹, and alarmingly, 88% of these cases have been associated with international travel. Notably, one single laboratory-confirmed case of measles has been reported to the DC Department of Health, where the patient had recently traveled to Tanzania during the measles outbreak from May 2022 to June 2023. Healthcare providers are strongly encouraged to maintain awareness of measles cases and promptly report suspected and confirmed cases to DC Health. This health notice provides comprehensive guidance for measles prevention among international travelers, along with recommendations for healthcare providers, reporting guidelines in DC, and additional resources on measles. Prompt identification of measles cases is crucial to prevent further exposure and outbreaks. To reduce the importation and transmission of measles, it is essential for all U.S. residents, regardless of their travel destination, to ensure they are up to date on their measles-mumps-rubella (MMR) vaccination before embarking on international travel.

BACKGROUND

Measles, also known as rubeola, is a highly contagious, acute viral respiratory illness caused by a virus in the family paramyxovirus, genus *Morbillivirus*. Measles occurs most often in children. Measles is characterized by a prodrome of a stepwise increase in fever to 103°F-105°F, anorexia, malaise, and the classic triad of cough, coryza (inflammation of the nasal mucosa), and conjunctivitis [the “3 Cs”], and Koplik spots (bluish-gray spots on a red base on the buccal mucosa which are pathognomonic for measles), followed by a maculopapular rash^{3,4}. The incubation period of measles from exposure to prodrome ranges from 7-12 days. The rash appears 2-4 days after the onset of the prodrome and lasts 3-5 days. The average time from exposure to rash onset is 14 days (range, 7-21 days)^{3,4}. The rash starts at the hairline, proceeds to involve the face and upper neck, and spreads down the body and outward to the extremities. Sometimes immunocompromised patients do not develop a rash. Most people have an uncomplicated recovery from measles, but measles can have serious complications which can result in disability and even death. The most

frequent complications of measles are pneumonia and encephalitis. People at high risk for severe illness and complications from measles include infants younger than 12 months, pregnant women and immunocompromised people.

Measles is one of the most contagious of all infectious diseases: About 90% of susceptible persons with close contact to a measles patient will develop measles^{3,4}. Patients are contagious from 4 days before the rash appears through 4 days after the rash appears. The virus is transmitted by large respiratory droplets or by airborne droplet nuclei in enclosed spaces when an infected person breathes, coughs or sneezes. The measles virus can remain infectious in the air and on surfaces for up to two hours after an infected person leaves an area.

Globally, more than 61 million doses of measles-containing vaccine were postponed or missed during the COVID-19 pandemic. As a result, measles outbreaks have been occurring in all regions of the world, including the United States. Measles cases increased in the U.S. from 49 in 2021 to 121 in 2022, all among children who were unvaccinated or not fully vaccinated. Outbreaks have occurred in U.S. states including Ohio and Minnesota.²

RECOMMENDATIONS FOR HEALTH CARE PROVIDERS

- Health care providers should make sure that everyone, especially those who are planning to travel internationally, are up to date on the MMR vaccine and other recommended vaccines before their trip.
- The CDC advises all U.S. residents over 6 months old who will be traveling abroad and have no proof of immunity to get the MMR vaccine before they leave.
 - Infants between 6 and 11 months old should get one dose of MMR vaccine before traveling. If they get a dose before their first birthday, they should get two more doses: One between 12 and 15 months old, and the second at least 28 days later.
 - Children aged 12 months and older should get two doses of MMR vaccine, with at least 28 days between doses.
 - Teenagers and adults who do not have evidence of measles immunity should have documentation of receiving two doses of MMR vaccine, with a minimum separation of 28 days between doses.

Suspected Measles:

- Healthcare providers should consider measles as a diagnosis in anyone who presents with a febrile illness and clinically compatible symptoms (e.g., rash, cough, coryza, conjunctivitis), especially in individuals with recent international travel or exposure to a person with a febrile rash illness.
- Do not allow patients with suspected measles to remain in the waiting room or other common areas of a healthcare facility. Patients should be isolated immediately in a single-patient airborne infection isolation room (AIIR), if available.

- Healthcare personnel (HCP) should use respiratory protection (e.g., N95 respirator) upon entry to the room of a confirmed or suspected measles patient, regardless of the HCP's measles immunization status.
- ***Laboratory Testing:*** At the initial visit of a patient with suspected measles, healthcare providers should collect:
 - A serum sample for measles-specific IgM and IgG serology (acute-phase specimen)**AND**
 - A respiratory specimen for RT-PCR (reverse transcriptase-polymerase chain reaction) testing: Either a nasopharyngeal swab OR throat swab.
 - Collecting a urine specimen for RT-PCR testing in addition to a respiratory specimen can increase the likelihood of detecting measles virus.
 - If an acute-phase serum specimen collected < 3 days after rash onset is negative and the case has a negative RT-PCR result (or one was not done), a second serum specimen collected 3-10 days after symptom onset is recommended, because the IgM response may not be detectable until 3 days after symptom onset.
 - Coordinate with DC Health to submit specimens to the DC Public Health Laboratory for testing.
- People with suspected measles should be isolated until measles is ruled out.
- People with confirmed measles should be isolated through day 4 after the rash appears. (Day 0 = day rash appears)
- There is no specific anti-viral treatment for measles and treatment is mainly supportive.
- Severe measles cases in children are associated with vitamin A deficiency. Therefore, the World Health Organization recommends all children diagnosed with measles should receive vitamin A supplementation regardless of their country of residence, based on their age⁵.

Measles Exposure and Prevention:

- Healthcare providers should recommend MMR vaccination for all patients who are unvaccinated or not fully vaccinated.
- Persons exposed to measles who do not have evidence of immunity should be offered postexposure prophylaxis (PEP), which may prevent development of measles or modify the disease course.
- ***Evidence of Immunity:*** Acceptable evidence of immunity against measles includes one of the following:
 - Documentation of adequate vaccination for measles
 - Serologic evidence of measles immunity
 - Laboratory confirmation of measles
 - Birth before 1957

- ***Measles postexposure prophylaxis (PEP)***: Administer the MMR vaccine within 72 hours of the initial measles exposure OR administer immunoglobulin (IG) within 6 days of initial exposure. The MMR vaccine is preferred for vaccine eligible people aged 12 months and older. The following groups of people should receive IG: infants younger than 12 months, pregnant women without evidence of measles immunity, and severely immunocompromised people (e.g., people with hematologic and solid tumors, who are receiving chemotherapy, with congenital immunodeficiency, on long-term immunosuppressive therapy or patients with HIV infection who are severely immunocompromised).
 - MMR vaccine and IG should not be administered simultaneously, as this practice invalidates the vaccine.
- Individuals who do not receive appropriate PEP should quarantine for 21 days.

REPORTING REQUIREMENTS

Cases and suspected cases of measles must be reported immediately (within 24 hours) by submitting a [Notifiable Disease and Condition Case Report Form](#) online using the DC Reporting and Surveillance Center (DCRC), which can be found on our Infectious Diseases website dchealth.dc.gov/node/143092.

ADDITIONAL RESOURCES

- [Global Measles Outbreaks](#). (CDC 2023)
- [Measles Specimen collection, storage, and Shipment](#). (CDC, 2022)
- [For Healthcare Providers-Diagnostics and Laboratory Testing](#). CDC (2020)
- [Disease-specific Guidance for specimen collection and Laboratory Testing](#). CDC (2019)
- [Measles-Vaccine Preventable Diseases Surveillance Manual](#). CDC (2019)

REFERENCES

1. Centers for Disease Control and Prevention. (2023). Measles cases and outbreaks. Retrieved from <https://www.cdc.gov/measles/cases-outbreaks.html>
2. Centers for Disease Control and Prevention. (2022, November 23). *Global measles outbreaks*. Centers for Disease Control and Prevention. <https://www.cdc.gov/globalhealth/measles/data/global-measles-outbreaks.html>
3. Gastanaduy, P., Haber, P., Rota, P., and Patel, P. (2021). Measles. In Hall, E., Wodi, A.P., Hamborsky, J., et al. (Eds). *Epidemiology and Prevention of Vaccine-Preventable Diseases*. (14th ed.). Washington, D.C. Public Health Foundation, 2021.

4. Bischoff, W. E., McNall, R. J., Blevins, M. W., Turner, J., Lopareva, E. N., Rota, P. A., & Stehle, J. R., Jr (2016). Detection of Measles Virus RNA in Air and Surface Specimens in a Hospital Setting. *The Journal of infectious diseases*, 213(4), 600–603.
academic.oup.com/jid/article/213/4/600/2459431
5. Shane, A. L. (2006). Red Book: 2006 Report of the Committee on Infectious Diseases, 27th Edition. *Emerging Infectious Diseases*, 12(12), 2003–2004.
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Please contact the DC Health Division of Epidemiology-Disease Surveillance and Investigation at: Phone: (202) 442-9371/442-8141 (8:15 am-4:45 pm) | 844-493-2652 (after-hours calls) | Fax: (202) 442-8060 | Email: doh.epi@dc.gov