DC HEALTH
GOVERNMENT OF THE DISTRICT OF COLUMBIA

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MURIEL BOWSER, MAYOR

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Health Notice for District of Columbia Health Care Providers
Increased Global Risk of Dengue Fever - UPDATE

SUMMARY

The DC Department of Health issues this Health Alert Network (HAN) Health Notice to share new information and guidance regarding the global and local increase in reported Dengue fever cases. Ten cases of dengue have been reported in the District of Columbia so far this year, compared to one case in the same time period in 2023. Healthcare providers are urged to consider dengue fever as a diagnosis, particularly in recent travelers, and promptly identify and report cases within 24 hours after provisional diagnosis or the appearance of suspicious symptoms.

BACKGROUND

Dengue Fever is a serious, potentially life-threatening disease spread by an infected Aedes species (*Ae. aegypti* or *Ae. albopictus*) mosquito and caused by four closely related viruses: dengue virus 1, 2, 3, and 4.[1,2] Mosquitoes that spread dengue prefer to bite people, live both indoors and outdoors, and bite during the day and night. Warmer and wetter months tend to see higher Dengue risk in many tropical and subtropical regions.[3] Transmission of dengue is possible from mother to child during pregnancy or around the time of birth, and, rarely, through breastfeeding. Though uncommon, dengue can also be spread through a blood transfusion, an organ transplant, or a needle stick injury.[4]

Local transmission of dengue is rare, but possible, given the presence of the *Aedes* mosquito in the District of Columbia. One locally acquired case of dengue was reported in a DC resident in 2019, but the resident had traveled to Puerto Rico months earlier and may have experienced a longer than usual incubation period.

One in four people infected with dengue will develop symptoms, which include fever, myalgia, arthralgia, nausea/vomiting, and rash.[5,6] Symptoms are typically mild, begin 4-10 days after infection, and may easily be confused with other illnesses.[5,7] One in twenty people who get sick with dengue will develop a severe illness. Warning signs that suggest progression to severe dengue include belly tenderness, persistent vomiting, bleeding from the nose or gums, blood in vomit or in the stool, liver enlargement, and feeling tired, restless, or irritable.[3,5] Severe dengue can lead to shock, internal bleeding, and death.[5] There is no specific treatment for dengue, and clinical care focuses on symptom management. Recovery from infection by one dengue virus confers lifelong

immunity to that particular virus serotype, but susceptibility to the other three serotypes remains, and subsequent infections increase the risk of developing severe dengue.[2]

Endemic in over 100 countries primarily in the Americas, Southeast Asia, and Africa, over half the global population is at risk of contracting dengue. A historic high of 6.5 million cases were reported globally in 2023, up from 5.2 million in 2019. The Americas carried the largest proportion of the global burden of dengue with 69% of all cases occurring in the region.[7] From January to July 2024, the Americas reported 10.9 million dengue cases, which is more than double the number reported in all of 2023.[3,11] While local spread of dengue is possible given the presence of the vector and dengue outbreaks occasionally occur in the continental United States, most cases are in travelers who were infected abroad.[8] With the exception of 2020 and 2021, years in which travel was curtailed by the COVID-19 pandemic, the US has seen a steady increase in travel-associated dengue cases since 2010, peaking in 2023 with 1,716 cases.[9]

So far in 2024, 1,059 travel-associated cases have been reported in the US compared to 632 cases in the same period in 2023.[9,10] This 68% increase follows trends in the region of the Americas, which report a 233% increase in suspected dengue cases in the first 28 weeks of 2024 compared to the same period in 2023 and a 418% increase compared to the average of the last 5 years.[11] Brazil (83%), Paraguay (5.3%), and Argentina (3.7%) were the hardest-hit countries, accounting for 92% of cases and 87% of deaths in Latin America and the Caribbean.[12] PAHO has declared the regional dengue outbreak an Emergency Grade 3 and called for collective action.[11,12]

To date, in 2024, ten cases of Dengue fever have been reported in Washington, DC compared to this time last year when one case of dengue had been reported in the District. None of the patients experienced severe dengue, and all have recovered. A total of six cases were reported in DC in 2023, all travel associated.

RECOMMENDATIONS FOR HEALTHCARE PROVIDERS

Dengue is a serious, potentially life-threatening disease. Prompt diagnosis and proper medical care greatly decrease fatality rates of severe dengue and limit ongoing transmission to local Aedes mosquitos. It is recommended that clinicians:

- Obtain travel history and consider dengue in febrile patients who have traveled to an area with dengue in the 14 days preceding symptom onset.
- Consider locally acquired dengue among patients who have highly compatible signs and symptoms in areas where the mosquito vector is present.
- Order appropriate diagnostic tests depending on whether the patient is in the acute or convalescent phase of illness. Please refer to the CDC's Clinical Testing Guidance for Dengue for the latest recommendations.

- Teach patients about the warning signs that indicate progression to severe dengue and instruct them to seek care immediately if they experience those warning signs.
- Hospitalize patients with severe dengue or any warning sign of progression to severe dengue and follow CDC/WHO protocols for IV fluid management.
- Provide prompt treatment for the symptoms of dengue.
- Discuss international travel plans with patients and discuss mosquito bite prevention for those traveling to areas with dengue. For more information, see https://www.cdc.gov/mosquitoes/prevention.
- Report suspected or confirmed dengue to DC Health by submitting a Notifiable Disease and Condition Case Report Form within 24 hours after provisional diagnosis or the appearance of suspicious symptoms.
- Contact DC Health at vectorborne.epi@dc.gov or (202) 442-9143 during business hours or (844) 493-2652 for any additional questions.

ADDITIONAL RESOURCES

- Dengue | CDC
- Dengue Warning Signs | CDC
- Clinical Testing Guidance for Dengue | CDC
- Areas with Risk of Dengue | CDC
- Data and Statistics on Dengue in the United States | CDC
- Dengue and severe dengue | WHO
- Dengue – Global situation | WHO
- Dengue Multi-Country Grade 3 Outbreak 2024 | PAHO

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5. "Symptoms of Dengue and Testing." *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 20 Sept. 2021, www.cdc.gov/dengue/signs-symptoms.
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8. "Data and Statistics on Dengue in the United States." Centers for Disease Control and Prevention, Centers for Disease Control and Prevention, 9 Jan. 2024, www.cdc.gov/dengue/data-research/facts-stats.
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11. "Situation Report No 28 - Dengue Epidemiological Situation in the Region of the Americas - Epidemiological Week 28, 2024." *PAHO/WHO | Pan American Health Organization*, https://www.paho.org/en/documents/situation-report-no-28-dengue-epidemiological-situation-region-americas-epidemiological. Accessed 7 August 2024.
12. 2024, 28 Mar. "PAHO Calls for Collective Action in Response to Record Increase in Dengue Cases in the Americas." *PAHO/WHO | Pan American Health Organization*, 28 Mar. 2024, www.paho.org/en/news/28-3-2024-paho-calls-collective-action-response-record-increase-dengue-cases-americas.

Please regularly visit the DC Health - Health Notices website at dchealth.dc.gov/page/health-notices for the latest updates and information.

Please contact the DC Health Division of Epidemiology-Disease Surveillance and Investigation at: Phone: (202) 442-9143/442-9364 (8:15 am-4:45 pm) | 844-493-2652 (after-hours calls) | Fax: (202) 442-8060 | Email: vectorborne.epi@dc.gov or doh.epi@dc.gov