



LAC DPH Health Update:
Cluster of Locally Acquired Cases of
Dengue in Los Angeles County
September 18, 2024



*This message is intended for emergency medicine, primary care, urgent care, internal medicine, and infectious disease providers.
Please distribute as appropriate.*

Key Messages

- Two additional cases of locally acquired dengue have been identified in Baldwin Park.
- Healthcare providers should consider dengue in any patient with acute febrile illness and consistent symptoms, regardless of travel history, and order appropriate testing.
- Providers should immediately report any suspected cases of locally acquired dengue to Public Health by phone.
- Patients should be routinely educated about the importance mosquito bite prevention at home and during travel.

Situation

Los Angeles County Department of Public Health (LAC DPH) has identified [two additional cases](#) of locally acquired dengue in residents of the City of Baldwin Park. LAC DPH initially confirmed a case on September 9, 2024.

The two additional cases have no history of domestic or international travel prior to their symptoms. Both cases report mosquito bites at home. All three of these locally acquired cases of dengue reside in the same neighborhood and fell ill in August.

Cases of locally acquired dengue were previously confirmed by [Long Beach](#) and [Pasadena](#) in fall 2023.

This is an unprecedented number of locally acquired cases for a region where dengue has not previously been known to be transmitted by mosquitoes.

LAC DPH urges healthcare providers to be vigilant for dengue, order appropriate tests, and discuss mosquito prevention activities with patients and travelers.

Read the September 9 Health Alert below for more details, including the clinical presentation, diagnosis, and reporting of dengue, and to view the actions requested of providers.

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LAC DPH Health Alert
Locally Acquired Case of Dengue in Los Angeles County
September 9, 2024



*This message is intended for emergency medicine, primary care, urgent care, internal medicine, and infectious disease providers.
Please distribute as appropriate.*

Key Messages

- A case of locally acquired dengue has been detected in a resident of Baldwin Park, Los Angeles County. It is the third case of locally acquired dengue in LA County and California.
- Although the risk of widespread dengue transmission in LA County remains low, these cases indicate the presence of infected mosquitoes locally and underscore the need for public education and preventive measures.
- Providers should consider dengue in any patient with acute febrile illness and consistent symptoms, regardless of travel history.
- Providers should report any suspected cases of locally acquired dengue to Public Health immediately by phone.

Situation

A case of locally acquired dengue has been identified in a Baldwin Park resident. Neither the case nor their household members have a history of domestic or international travel. The case has reported mosquito bites at home. They are now recovering. No additional suspect cases have been identified at this time.

Los Angeles County Department of Public Health (LAC DPH) is working with the local vector control district to respond to the situation. The vector control district has increased mosquito trapping and testing activities and is conducting increased mosquito abatement to reduce the risk of additional cases in the area.

This is the first case of locally acquired dengue reported in LA County in 2024. In 2023, the first locally acquired cases of dengue in California were identified in residents of Pasadena and Long Beach.

Overall, the risk of sustained local spread of dengue remains low in LA County.

Dengue cases are, however, on the rise globally and in the [United States](#). Latin America and Puerto Rico are experiencing a record number of cases of dengue this year, which has led to a higher number of travel-associated dengue cases in LA County and the U.S.

Mosquitos thrive in hot weather, increasing the risk of bites and mosquito-borne diseases.

With mosquitoes capable of transmitting dengue present throughout LA County and travel-associated cases on the rise, the risk of sporadic local transmission continues to be a concern.

LAC DPH encourages healthcare providers to suspect and test for mosquito-borne diseases and routinely discuss prevention strategies with patients and travelers.

Actions Requested of Providers

- Obtain a travel history in all patients presenting with acute febrile illness. Ask about a history of travel among household members as well.
- Consider dengue in any patient with acute febrile illness and recent travel (within 14 days prior to illness onset) to [areas with frequent or continuous dengue transmission](#).
- Consider dengue in a patient without a history of travel if presenting with an acute febrile illness and strongly suggestive signs and symptoms of dengue (e.g., fever, thrombocytopenia, leukopenia, aches, pains, rash). (see Clinical Presentation below)
- Order appropriate diagnostic tests for acute dengue infection. Use either one of these dengue test combinations: 1) reverse transcription polymerase chain reaction [RT-PCR] test and an IgM antibody test or 2) a non-structural protein 1 [NS1] antigen test and an IgM antibody test. These tests should be ordered regardless of time since symptom onset. Do not delay appropriate care while waiting for test results to confirm dengue. (see Laboratory Testing below)
- Report any patient suspected to have locally acquired dengue infection to Public Health immediately. (see Reporting below)
- Discuss the importance of mosquito bite prevention with patients and travelers. (see Prevention below)

Dengue Overview

Background

Dengue is an arbovirus infection caused by any of the four distinct but closely related dengue viruses (DENV-1, DENV-2, DENV-3, DENV-4). People can be infected with dengue more than once due to the four different dengue viruses. Dengue is endemic in many tropical and subtropical regions worldwide and global incidence of dengue in 2024 has been the highest on record.

Dengue is primarily transmitted to humans by the bite of an infected *Aedes* mosquito. Local transmission of dengue in the United States has been limited, with sporadic cases reported in Florida, Hawaii, Texas, and more recently Arizona and California.

Clinical Presentation

Dengue can range from asymptomatic infection or mild illness to severe disease. The typical incubation period is 5-7 days.

Approximately one in four patients develop symptoms and most commonly have a mild to moderate, nonspecific, acute febrile illness. Typical presentation includes acute onset fever accompanied by a combination of the following: headache, retro-orbital pain, myalgia, bone pain, arthralgia, nausea and vomiting, rash, a positive [tourniquet test](#), and leukopenia.

Approximately one in twenty symptomatic patients develop life-threatening disease with severe bleeding, shock, and/or respiratory distress.

Warning signs of severe dengue usually appear as fever starts to decline, and include persistent vomiting, severe abdominal pain, fluid accumulation, mucosal bleeding, lethargy/restlessness, postural hypotension, liver enlargement, and progressive increase in hematocrit.

Persons at increased risk of severe dengue include those with a prior history of dengue infection, infants, older adults (≥ 65 years), pregnant women, and those with chronic medical conditions. A second infection with a different DENV virus from the first infection carries a higher risk of severe disease than the first, third or fourth infection, however any infection can lead to severe disease.

See CDC [Clinical Features of Dengue](#) for more details.

Laboratory Testing

All patients with suspected dengue should be tested with either one of these test combinations:

- A nucleic acid amplification test (NAAT) (e.g., RT-PCR) and an IgM antibody test
OR
- A NS1 antigen test and an IgM detection test.

These tests should be ordered regardless of the time from symptom onset, although the test sensitivity of RT-PCR and NS1 antigen tests decrease after the first 7 days. A serum sample is preferred for dengue testing.

IgG detection in a single serum sample should not be used to diagnose acute dengue because it does not distinguish between current and previous infection.

Testing for [West Nile virus](#), a mosquito-borne virus endemic in LA County, should be obtained at the same time as dengue tests. West Nile can have a similar clinical presentation. In addition, cross-reactivity among arboviral antibody tests can result in false positive tests results.

These tests are available at commercial laboratories. If access to commercial testing is not available, testing can be conducted at LAC DPH Public Health Laboratory after obtaining approval from LAC DPH.

See CDC [Clinical Testing Guidance for Dengue](#) for more details.

Management

No specific antiviral treatment for dengue is available. Treatment is supportive and requires careful volume management. Appropriate triage, management, and follow-up remain the most effective interventions to reduce dengue morbidity and mortality.

Patients with mild symptoms should be advised to stay well hydrated and avoid aspirin and other nonsteroidal anti-inflammatory drugs (such as ibuprofen) because of their anticoagulant properties. Fever should be controlled with acetaminophen and tepid sponge baths.

For at least one week, patients should avoid mosquitoes and use insect repellent to prevent additional spread.

Patients with severe disease require hospitalization. Intravenous fluid therapy is the mainstay of supportive care. Close observation and frequent monitoring in an intensive care unit may be required. Prophylactic platelet transfusions and steroids are not recommended.

See CDC [Treatment Recommendations](#) and [Dengue Case Management Pocket Guide](#).

Prevention

Preventing mosquito bites is the best way to prevent dengue and other mosquito-borne diseases. While there is an FDA-approved vaccine, it is only approved for children 9-16 years old with previous dengue infection and living in endemic areas. See CDC [Dengue Vaccine](#).

Aedes mosquitoes bite during the day and night and live indoors and outdoors. The best way to prevent mosquito bites is to use insect repellent, wear loose-fitting, long-sleeved shirts and pants and take steps to control mosquitoes in and around the home. Information for the public, including print resources (in [English](#) and [Spanish](#)) are available on the CDC [Preventing Mosquito Bites](#) webpage.

Patients can be referred to their local vector control district to report problems with mosquitoes and request assistance. See [flyer](#).

See CDC [Preventing Dengue](#).

Reporting

Healthcare providers must report any suspected locally acquired dengue to Public Health immediately by phone.

Los Angeles County DPH Acute Communicable Disease Control:

- Weekdays 8:30am–5pm: call 888-397-3993.
- After-hours: call 213-974-1234 and ask for the physician on call.

Long Beach Health and Human Services:

- Weekdays 8am-5pm: call 562-570-4302.
- After hours: call the duty officer at 562-500-5537.

Pasadena Public Health Department:

- Weekdays 8am-5pm: call 626-744-6089.
- After hours: call 626-744-6043.

Travel-associated dengue virus infection must be [reported to Public Health](#) within 1 working day from identification.

Additional Dengue Resources

CDC

- [Dengue for healthcare providers](#)
- [Clinical management pocket guide](#)
- [Dengue general](#)

LAC DPH

- [Dengue](#)—resources for the public and healthcare providers

CDPH

- [Dengue home page](#)

This Health Alert was sent by Dr. Sharon Balter, Director, Acute Communicable Disease Control Program, Los Angeles County Department of Public Health

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