

## HEALTH AND TRAVEL ADVISORY – December 2015

### Chikungunya and Dengue in Mexico and Latin America

Certain regions of Mexico and Latin America have experienced a significant increase in chikungunya and continued dengue infections in 2015. In Mexico, the number of reported chikungunya cases grew from 155 cases in 5 states in 2014 to over 10,000 cases in 25 states in 2015 (as of November). Chikungunya has also been reported in the Caribbean and Central and South America, with over 34,000 confirmed cases reported as of November 2015. Countries with the highest numbers of confirmed chikungunya cases include Mexico, Ecuador, Nicaragua, Colombia, and French Guiana.

Cases of dengue and dengue hemorrhagic fever also continued to be reported in 2015 in Mexico. As of November 2015, there have been over 23,000 confirmed cases in 30 Mexican states in 2015. Dengue transmission has been prevalent throughout Latin American countries in recent years. Countries with the highest numbers of confirmed dengue cases in 2015 include Brazil, Mexico, Peru, El Salvador, Paraguay, Nicaragua, Panama, and Ecuador.

#### Mosquito Vectors

Chikungunya and dengue viruses are transmitted by *Aedes aegypti* and *Aedes albopictus* mosquitoes. These two mosquitoes are aggressive day-biters that can potentially transmit the virus after biting an infected person. The immature stages typically develop in small, water-filled containers. The presence of *Aedes aegypti* has been established in Mexican cities along the California-Mexico border, such as Mexicali, Tecate, and Tijuana. In California, *Aedes aegypti* and *Aedes albopictus* mosquitoes have been detected in [twelve and five counties](#), respectively.

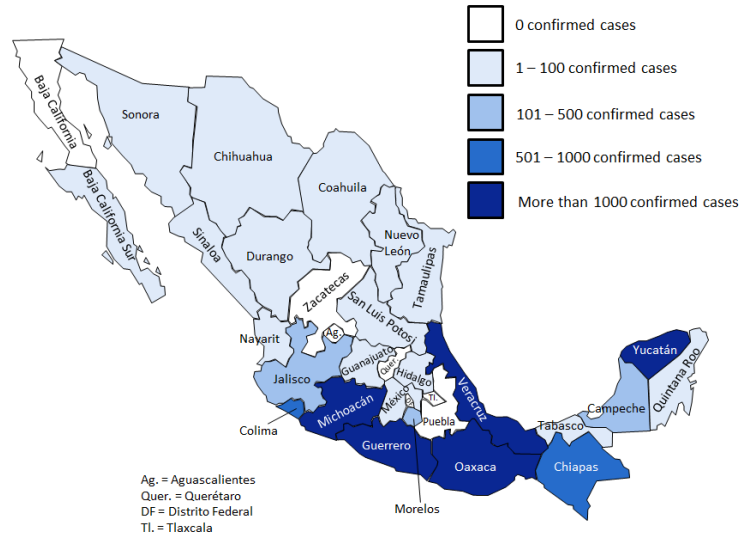
#### Reported Chikungunya and Dengue Cases in California

As of November 2015, California has seen an increase in the number of reported chikungunya cases (173) compared to this time last year (99). The number of reported dengue cases in California in 2015 (92 as of November) has remained steady compared to 2014.

#### Chikungunya Clinical Presentation

Chikungunya is characterized by acute onset of fever and severe diffuse joint pain. Chikungunya fever occurs 3-7 days after the bite of an infected mosquito. Joint pain and swelling are usually bilateral and symmetric, often involving the hands and feet and can be debilitating. Other symptoms may include headache, muscle pain, fatigue, and rash. Infected individuals are typically viremic for up to 7 days after onset of symptoms. Unlike dengue, most people infected with chikungunya virus become symptomatic. Similar to dengue, chikungunya has no animal reservoir and is not contagious person to person. Treatment is supportive. Acute symptoms typically

Confirmed Chikungunya Cases in Mexico by State  
January - November 2015



Confirmed Dengue Cases in Mexico by State  
January - November 2015



resolve within 7 – 10 days. Some patients may experience persistent or relapsing and debilitating symptoms for months to years after the initial infection. Persons at risk for more severe disease include neonates, older adults, and persons with chronic medical conditions.

### **Dengue Clinical Presentation**

Dengue is typically a mild, non-specific febrile illness and over half of infected people are asymptomatic. Classic dengue fever is characterized by acute onset of high fever 3 to 14 days after the bite of an infected mosquito. Additional symptoms often include severe headache, pain behind the eyes, muscle pain, joint pain, rash, and in severe cases bleeding manifestations. Infected individuals are viremic from approximately 1 day before to 4-5 days after onset of fever. Dengue has no animal reservoir and is not contagious person to person. Treatment is supportive.

### **More Information for Clinicians**

More information on the clinical presentation, epidemiology, and diagnostic criteria for chikungunya and dengue is available on the California Department of Public Health [Information for Clinicians Fact Sheet](#).

### **Traveler Warning**

If you are traveling to a region affected by dengue or chikungunya, the California Department of Public Health recommends taking appropriate precautions for avoiding mosquito bites during the day and at night. If you have returned from an affected region and have fever with joint pain or rash within the two weeks following your return, please contact your medical provider and tell the doctor where you have traveled.

### **Prevention**

There are no vaccines to prevent chikungunya or dengue infections. Preventing mosquito bites is the only way to avoid becoming infected.

- Use insect repellents containing DEET, picaridin, IR3535, oil of lemon eucalyptus, or para-menthane-diol for long lasting protection. If you use both sunscreen and insect repellent, apply the sunscreen first and then the repellent.
- When weather permits, wear long-sleeved shirts and long pants.
- Use air conditioning or window/door screens to keep mosquitoes outside. If you are not able to protect yourself from mosquitoes inside your home or hotel, sleep under a mosquito bed net.
- Help reduce the number of mosquitoes outside your home or hotel room by emptying standing water from containers such as flowerpots or buckets.

### **Additional Resources**

What you can do to reduce the risk of **chikungunya** infection:

<http://wwwnc.cdc.gov/travel/diseases/chikungunya>

<http://wwwnc.cdc.gov/travel/notices/watch/chikungunya-mexico>

What you can do to reduce the risk of **dengue** infection:

<http://www.cdc.gov/dengue/prevention/index.html>

<http://www.cdc.gov/Dengue/faqFacts/fact.html>

How to protect yourself from mosquito bites:

<http://wwwnc.cdc.gov/travel/yellowbook/2016/the-pre-travel-consultation/protection-against-mosquitoes-ticks-other-arthropods>

Information on invasive *Aedes* mosquitoes in California:

<https://www.cdph.ca.gov/HEALTHINFO/DISCOND/Pages/Aedes-albopictus-and-Aedes-aegypti-Mosquitoes.aspx>