



COMMONWEALTH of VIRGINIA

Department of Health

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Update on Emerging Arboviral Infections: Chikungunya Virus and Dengue Fever Infections

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Dear Colleague:

In an effort to help you keep current with emerging diseases, today I want to update you on changes in the situation involving **chikungunya virus (CHIKV)** and **dengue virus (DENV)** since our [last correspondence on this topic](#). Next week, you will receive an update on Ebola hemorrhagic fever, another emerging disease in the news.

Local transmission of CHIKV virus continues in the Americas and, as of July 25, 2014, has been identified in 27 countries or territories in the Caribbean, Central America, or South America with over 469,000 reported cases. Health departments in the United States, including the Virginia Department of Health (VDH), are actively involved in investigating suspect cases among returning travelers. This year to date, **VDH has identified eleven (11) laboratory-confirmed cases of CHIKV infection in Virginia: all are linked to travel to Caribbean (10) or Asian (1) nations.**

On July 17, 2014, the Centers for Disease Control and Prevention (CDC) and the Florida Department of Health announced the **first two cases of locally acquired CHIKV infection in the United States.** Humans are the principal reservoir for both CHIKV and DENV, and travelers returning from endemic areas could be viremic and potentially be a source of local transmission. The expanding number of cases in the Americas and among returning travelers, the recent evidence of local CHIKV transmission in Florida, and the presence of a capable and common mosquito vector (the Asian tiger mosquito, *Aedes albopictus*) in Virginia **heighten the risk that local transmission could occur in the Commonwealth.**

To assist you in differentiating CHIKV infection and DENV infection please review the document entitled "[Comparison of Chikungunya Virus Infection and Dengue Fever](#)," which summarizes key information about signs and symptoms, clinical laboratory findings and laboratory testing. Key recommendations are:

- Although chikungunya and dengue infections have some of their own characteristic symptoms, they cannot always be differentiated on the basis of symptoms alone. Patients with suspected

chikungunya should be managed as if they have dengue until dengue is ruled out. It is also possible for the two diseases to occur as a coinfection.

- Laboratory testing can differentiate infections caused by CHIKV and DENV and help guide clinical management. Treatment for both generally consists of hydration and symptom relief; however, aspirin and non-steroidal anti-inflammatory agents are contraindicated in dengue fever patients.
- One commercial laboratory (Focus Diagnostics) and the CDC provide testing for CHIKV. Multiple commercial laboratories and CDC provide testing for DENV. Turnaround times vary by laboratory with quicker results (≤ 1 week) typically through commercial laboratories.
- To reduce the risk of local transmission, persons suspected to have chikungunya or dengue (i.e., those with symptoms in the absence of test results), as well as asymptomatic travelers who traveled with persons who have characteristic symptoms, should avoid further mosquito exposure during the first week of illness.
- Any suspected or confirmed arboviral infection should be reported to the local health department (<http://www.vdh.virginia.gov/LHD/index.htm>). Recent CHIKV infections have occurred in persons traveling as part of mission trips. If your patient was part of a travel group that returned from an area where these viruses are endemic, the health department may initiate illness surveillance and/or testing of other members of the group.

We appreciate your assistance with advising your patients, especially those suspected to have CHIK or DENV, about ways to avoid mosquitoes and prevent mosquitoes from breeding. Some resources you might find useful are:

- Our letter on mosquito-borne viral diseases, dated April 18, 2014, which can be found at <http://www.vdh.virginia.gov/clinicians/pdf/HealthCommissionerUpdateArboviral.pdf>
- VDH's fact sheet on how to avoid mosquitoes is located at <http://www.vdh.virginia.gov/epidemiology/dee/vectorborne/>
- CDC resources for current information and guidance about these diseases and their distribution and prevention are available through their chikungunya website (<http://www.cdc.gov/chikungunya/>), dengue website (<http://www.cdc.gov/Dengue/>) and travelers' health website (<http://wwwnc.cdc.gov/travel/>).

If you have questions or need additional information, please contact your [local health district](#). We sincerely appreciate your assistance in evaluating and caring for patients potentially affected by this evolving situation.

Sincerely,

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