



United States Army Public Health Command  
**Army Vector-borne  
 Disease Report**

02 May 2014

Data are preliminary and subject to change

**Chikungunya**

**Background**

- Chikungunya is a mosquito-borne viral disease endemic to Africa and Asia.
- Humans are the primary reservoir during epidemics; several vertebrates (rodents, non-human primates, birds, and small mammals) may be potential reservoirs during non-epidemic periods.
- Over the past several years, the mosquito vectors of chikungunya (*Aedes aegypti* and *A. albopictus*) spread to the Americas and Europe.
- Italy reported its first localized chikungunya outbreak of 197 cases in 2007.

**Current Situation**

- On 5 December 2013, the Caribbean island of St. Martin reported 2 lab-confirmed cases, marking the first local acquisition of the virus in the Americas.
- In total, 14 Caribbean countries and 1 continental South American country (French Guiana) have reported locally acquired cases.
- As of 25 APR 2014, 35,562 total suspect and confirmed cases of chikungunya infection have been reported in the Americas.

**Diagnostics and Treatment**

- Symptom onset generally occurs 4-8 days after being bitten by an infected mosquito but can range 2-12 days.
- Clinical signs are usually self-limited and similar to dengue, including fever, severe joint/muscle pain, headache, nausea, fatigue, and rash.
- Chikungunya may be misdiagnosed as dengue and present as mild or asymptomatic infection.
- Diagnoses can be confirmed via viral isolation during the first few days of infection or by detecting antibodies. IgM levels peak 3 to 5 weeks after symptom onset.
- There is no specific treatment or vaccine for chikungunya; care is palliative and infection rarely causes death.

**Army Surveillance**

- No chikungunya cases have been reported among Army beneficiaries in 2014.
- The mosquitoes that transmit the virus are found throughout much of the Americas, including parts of the U.S.; it will likely continue to spread to new areas by travelers and mosquitoes.
- Labs at Public Health Command Regions Europe, North, Pacific, and South can detect chikungunya in mosquito samples.

Chikungunya Infections in the Americas			
Location	Total Cases <sup>¥</sup>	Lab Confirmed Cases	Deaths <sup>β</sup>
Caribbean Islands <sup>†</sup>	35,510	4,065	6
South America <sup>±</sup>	52	52	0
Total	35,562	4,117	6

Source: Pan American Health Organization / World Health Organization and ProMED

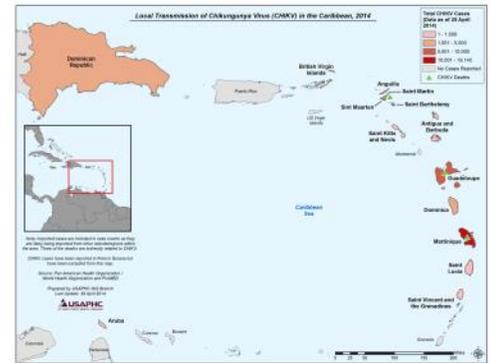
Data from 5 DEC 2013 - 25 APR 2014

¥ Includes suspect and lab-confirmed cases

β 3 of 6 deaths are indirectly related to chikungunya infection

† Anguilla, Antigua & Barbuda, Aruba, Dominica, Dominican Republic, Guadeloupe, Martinique, St. Barthelemy, St. Martin, Sint Maarten, St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines, Virgin Islands (UK)

± French Guiana



**Trap-N-Kill Mosquito Control Tool**

- A new mosquito control device (pictured on the right) developed by Walter Reed Army Institute of Research and U.S. Army Public Health Command has been added to the DoD Supply System.
- The trap, branded as the "Trap-N-Kill", is a reusable, lethal ovitrap which targets day-time biting mosquitoes which breed in containers.
- *A. aegypti* and *A. albopictus* can both be trapped with this device; it is now available for integration into military installation mosquito control programs as an effective and pesticide free tool.
- For more information on the trap, please refer to page 4 of this [document](#).



**Army-specific Resources**

- Information on Permethrin Factory Treated (PFT) Army Combat Uniforms (ACUs) can be found [here](#).
- Guidance on the use of PFT ACUs by women who are pregnant, nursing or attempting to become pregnant are outlined [here](#).
- The DOD Human Tick Test Program is a free service for military health care providers that tests for pathogens in ticks removed from patients. Tick testing is species-specific; different tick species transmit different pathogens. Contact information can be found [here](#).

**Vector-borne Disease Prevention**

- Ensure screens on windows and doors are in good repair. If no screens exist, install them or use air conditioning if possible.
- Empty water from objects that might hold standing water. For those objects that are meant to hold water, be sure to change the water in them regularly.
- When outdoors, use insect repellants (recommended to have 20-50% DEET) to prevent bites. Take extra care to use repellant during peak mosquito biting times from dusk to dawn. Information on safe application of repellant can be found at [this EPA website](#).
- When a tick is found attached to a human or animal, promptly remove it to limit potential disease transmission. The CDC outlines the best tick removal techniques [here](#).

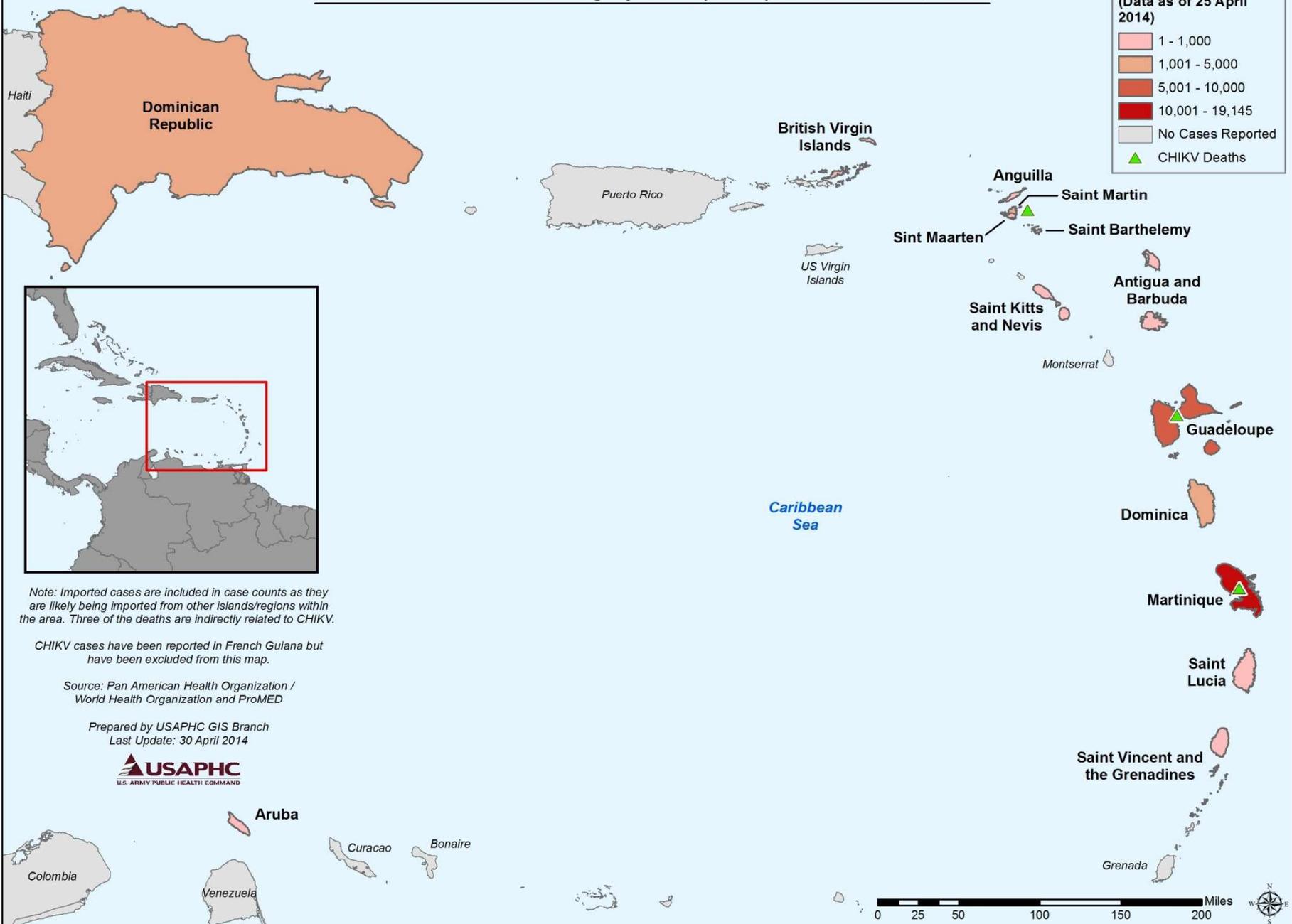
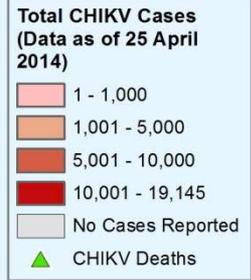
**Resources:** PAHO CHIKV • CDC Tickborne Diseases • Human Tick Test Program • USAPHC WNV Fact Sheet • Army Vector-borne Disease Reports • USAPHC

**Key:** CDC Centers for Disease Control and Prevention; DRISi Disease Reporting System Internet; Mosquito pool 1 to 50 mosquitoes; AD Active Duty

Contact us: USAPHC Disease Epidemiology or 410-417-2377

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## Local Transmission of Chikungunya Virus (CHIKV) in the Caribbean, 2014



*Note: Imported cases are included in case counts as they are likely being imported from other islands/regions within the area. Three of the deaths are indirectly related to CHIKV.*

*CHIKV cases have been reported in French Guiana but have been excluded from this map.*

*Source: Pan American Health Organization / World Health Organization and ProMED*

*Prepared by USAPHC GIS Branch  
Last Update: 30 April 2014*

