Pan American Health Organization

World Health Organization
REGIONAL OFFICE FOR THE Americas

Zika-Epidemiological Report

The United States of America

3 March 2017

FIRST AUTOCHTHONOUS VECTOR-BORNE CASES

In epidemiological week (EW) 30 of 2016, the United States International Health Regulations (IHR) National Focal Point (NFP) and the U.S. Centers for Disease Control and Prevention (CDC) reported the first four autochthonous cases of Zika virus in the state of Florida.

GEOGRAPHIC DISTRIBUTION

As of EW 8 of 2017, the U.S. CDC has reported a total of 221 confirmed autochthonous cases of Zika; 215 in the state of Florida and 6 in Texas.[1,2] There was one laboratory acquired case, and 4,747 travel-associated cases in 49 states and Washington, D.C (**Figure 1**).[2] In Florida, vector-borne transmission was originally detected in the counties of Miami-Dade[3] and Pinellas.[4] In Texas, instead, autochthonous cases of Zika virus were detected in Brownsville.[5] No cases of locally acquired infection have been reported in Florida and Texas in 2017.

[1] Epidemiological Report on Puerto Rico and US Virgin Island is presented separately and is available at: Puerto Rico (http://www.paho.org/hq/index.php?option=com_docman&task=doc_view&gid=35231&Itemid=270&lang=en) and US Virgin island (http://www.paho.org/hq/index.php?option=com_docman&task=doc_view&gid=35331&Itemid=270&lang=en)
[2] Centers for Disease Control and Prevention (CDC). Case Counts in the US. 22 February 2017. Available at: http://www.cdc.gov/zika/geo/united-states.html
[3] Centers for Disease Control and Prevention (CDC). Advice for people living in or traveling to South Florida as of 19 August 2016. Available at: http://www.cdc.gov/zika/intheus/florida-update.html
[4] Florida Department of Health Daily Zika Update. 23 August 2016. Available at: http://www.floridahealth.gov/newsroom/2016/08/082316-zika-update.html
[5] Texas Department of State Health Services. Texas Announces Additional Local Zika Cases in Cameron County. 9 December 2016. Available at: http://dshs.texas.gov/news/releases/2016/20161209.aspx

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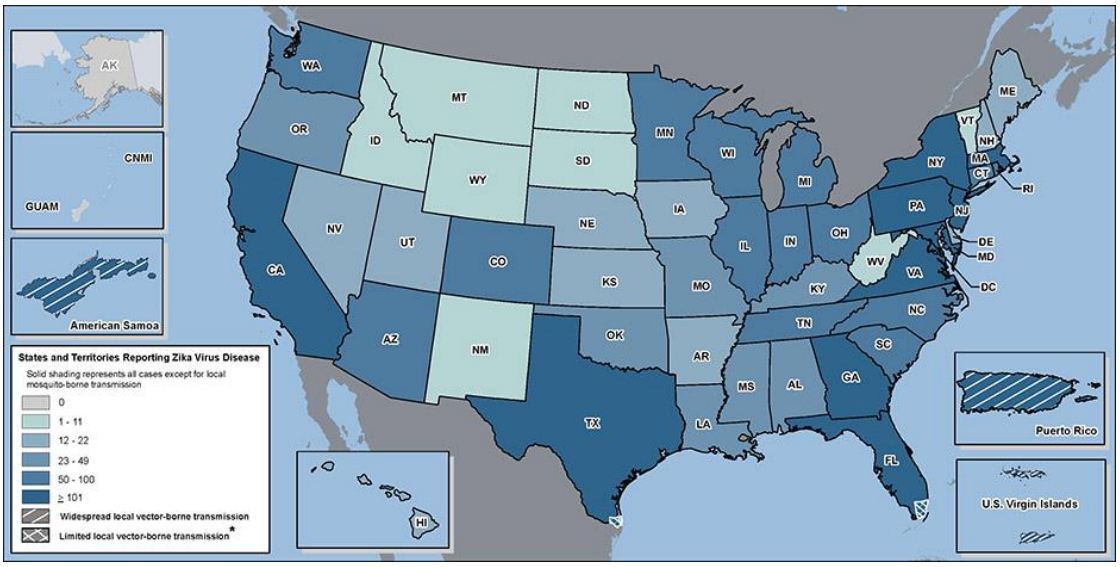
Figure 1. Imported and local Zika cases in states and territories of the U.S. As of 22 February 2017.



Source: Published by the U.S. Centers for Disease Control and Prevention (CDC)[6]

TRANSMISSION

In addition to the 221 confirmed autochthonous cases of Zika, in the U.S. CDC has reported Zika cases that were acquired through non–vector-borne transmission.[2] As of EW 8 of 2017, 44 sexually transmitted Zika cases have been confirmed, including one case of female-to-male sexual transmission of Zika in New York City,[7] and one laboratory-acquired case of Zika virus.[2] The U.S. CDC has also reported a Zika case from the state of Utah with an unknown route of person-to-person transmission.[2] The case is a family contact of an elderly Utah resident who contracted Zika abroad and died in Utah. The two cases had direct contact while the deceased case had a high level of viremia – more than 100,000 times higher than the average level seen in other infected persons. As of EW 34, none of their contacts had tested positive for Zika. [8]

CIRCULATION OF OTHER ARBOVIRUSES

The last reported dengue outbreak in the continental United States occurred between 2009 and 2010 in Key West, Florida with 22 confirmed cases of locally-acquired dengue infections.[9] In 2005, the state of Texas experienced a dengue outbreak.[10] Outbreaks of dengue have been occasionally reported in the Hawaiian Islands; the most recent outbreak was reported in 2015 when the Hawaii

[6] Centers for Disease Control and Prevention (CDC). Maps of Zika in the United States. 22 February 2017. Available at: http://www.cdc.gov/zika/intheus/maps-zika-us.html
[7] Centers for Disease Control and Prevention (CDC). First female-to-male sexual transmission of Zika virus infection reported in New York City. 15 July 2016. Available at: http://www.cdc.gov/zika/intheus/maps-zika-us.html
[8] Brent C, Dunn A, Savage H, et al. Preliminary Findings from an Investigation of Zika Virus Infection in a Patient with No Known Risk Factors — Utah, 2016. MMWR Morb Mortal Wkly Rep 2016;65:981-982. DOI: http://dx.doi.org/10.15585/mmwr.mm6536e4
[9] Centers for Disease Control and Prevention (CDC). Local Dengue Transmission in Key West, Florida. 27 September 2012. Full report available at: http://www.cdc.gov/dengue/epidemiology/local_dengue.html
[10] Centers for Disease Control and Prevention (CDC). MMWR. Dengue Hemorrhagic Fever -U.S.-Mexico Border, 2005. 10 August 2007. Full report available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5631a1.htm

Department of Health (HDOH) laboratory-confirmed 107 cases of dengue fever with dates of onset ranging from 11 September to 18 November 2015.[11]

In late 2014, a total of 2,811 chikungunya cases were reported, of which 12 were autochthonous cases from Florida.[12,13] In 2016, the United States IHR NFP notified PAHO/WHO of the first laboratory-confirmed case of locally-acquired chikungunya virus in the state of Texas. The patient, who is from Cameron County, became ill in November 2015 and tested positive for the chikungunya virus by polymerase chain reaction (PCR) in January 2016. The diagnosis was confirmed by the U.S. CDC in May 2016.

ZIKA VIRUS DISEASE IN PREGNANT WOMEN

As of EW 6 of 2017, the U.S. CDC has reported 1,455 pregnant women, in the United States and the District of Columbia, and an additional 3,156 pregnant women in the US territories with laboratory evidence of possible Zika virus infection, with or without symptoms.[14] Of these, 1,047 completed pregnancies with or without birth defects.[15]

ZIKA COMPLICATIONS

ZIKA-VIRUS-ASSOCIATED GUILLAIN-BARRÉ SYNDROME (GBS)

As of EW 50 of 2016, U.S. CDC reported 13 cases of Guillain-Barré syndrome (GBS) associated with Zika in the U.S. States and 51 GBS cases in the U.S. territories.[16] Since EW 51 of 2016 no further information is available on the U.S. CDC website regarding GBS with laboratory evidence of possible Zika infection.

CONGENITAL SYNDROME ASSOCIATED WITH ZIKA VIRUS INFECTION

As of EW 6 of 2017, there has been laboratory evidence of possible Zika virus infection in 43 live-born infants with birth defects and five pregnancy losses with birth defects.[15] The reported birth defects include microcephaly, calcium deposits in the brain indicating possible brain damage; excess fluid in the brain cavities and surrounding the brain; absent or poorly formed brain structures; abnormal eye development; or other problems resulting from damage to brain that affects nerves, muscles and bones, such as clubfoot or inflexible joints.

DEATHS AMONG ZIKA CASES

As mentioned above, the U.S. CDC assisted in the investigation of two cases of Zika in Utah, one of which passed away.[8]

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[11] Johnston D, Viray M, Ushiroda J, et al. Notes from the Field: Outbreak of Locally Acquired Cases of Dengue Fever — Hawaii, 2015. MMWR Morb Mortal Wkly Rep 2016;65place_Holder_For_Early_Release:34–35. DOI: http://dx.doi.org/10.15585/mmwr.mm6502a4

[12] Centers for Disease Control and Prevention (CDC). 2014 Final Data for the United States. 30 October 2015. Full report available at: http://www.cdc.gov/chikungunya/geo/united-states-2014.html

[13] Centers for Disease Control and Prevention (CDC). 2015 Final Data for the United States. 23 June 2016. Full report available at: http://www.cdc.gov/chikungunya/geo/united-states-2015.html

[14] Centers for Disease Control and Prevention (CDC) Pregnant Women with Any Laboratory Evidence of Possible Zika Virus Infection in the United States and Territories 2016. 7 February 2017. Available at: http://www.cdc.gov/zika/geo/pregwomen-uscases.html

[15] Centers for Disease Control and Prevention (CDC). Outcomes of Pregnancies with Laboratory Evidence of Possible Zika Virus Infection in the United States, 2016. 7 February 2017. Available at: http://www.cdc.gov/zika/geo/pregnancy-outcomes.html

[16] Information retrieved in EW 50 of 2016 from http://www.cdc.gov/zika/geo/united-states.html (no longer available on the U.S. CDC website)

NATIONAL ZIKA SURVEILLANCE GUIDELINES

Zika virus disease and Zika virus congenital infection are nationally notifiable conditions.

The United States CDC Congenital Microcephaly Case Definitions are available at: http://www.cdc.gov/zika/public-health-partners/microcephaly-case-definitions.html

The United States CDC Zika Interim Response Plan (July 2016) which includes Zika case definitions are available at: http://www.cdc.gov/zika/pdfs/zika-draft-interim-conus-plan.pdf

LABORATORY CAPACITY

The CDC Trioplex rRT-PCR and Zika MAC-ELISA (testing for anti-Zika IgM) are available to qualified laboratories in the United States. Eligible public health laboratories are those who have demonstrated proficiency with ELISA-based serological methods (for CDC Zika MAC-ELISA) or with rRT-PCR (for CDC Trioplex rRT-PCR) and who have facilities, personnel and equipment appropriate to the safe handling of specimens suspected of containing Zika, dengue, or chikungunya viruses.[17] CDC's Laboratory Response Network (LRN) is a national network of more than 150 laboratories that can process and test specimens in coordination with CDC to manage laboratory surge efforts and address increased testing requirements.[18]

INFORMATION SHARING

In EW 30 of 2016, the United States IHR NFP and the U.S. CDC reported the first autochthonous Zika cases. Additionally, the U.S CDC publishes Zika updates on a weekly basis. At the time of this report, the U.S. CDC Zika update was published on EW 8 of 2017.

[17] Centers for Disease Control and Prevention (CDC). Guidance for U.6S. Laboratories Testing for Zika Virus Infection. 28 July 2016. Available at: https://www.cdc.gov/zika/laboratories/lab-guidance.html

[18] Centers for Disease Control and Prevention. Interim CDC Zika Response Plan (CONUS and Hawaii): Initial Response to Zika Virus. Atlanta, Georgia: July 2016. Available at: http://www.cdc.gov/zika/pdfs/zika-draft-interim-conus-plan.pdf