

Zika-Epidemiological Report

The United States of America

28 June 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

In 2016, the U.S. CDC reported 4,830 travel-associated Zika cases in 49 states and Washington, D.C.^{1,2} However, confirmed autochthonous vector borne transmission of Zika virus was reported only in the states of Florida (285)³ and Texas (6)⁴. In Florida, vector-borne transmission was originally detected in the counties of Miami-Dade⁵ and Pinellas.⁶ In Texas, local cases of Zika virus were detected in Brownsville County.⁷

In 2017, the U.S. CDC has reported 140 Zika cases, including 139 travel-associated cases and one case acquired through sexual transmission, in 36 states up to EW 25. **Figure 1** includes all symptomatic Zika cases, including cases in travelers returning from affected areas, vector-borne cases, cases acquired through other routes of transmission.⁸ In Florida, as of EW 25, four cases of locally acquired Zika virus infection have been reported.³ In Texas, as of EW 24, a total of 14 Zika cases have been reported,⁹ including 6 vector-borne cases reported in Brownsville.¹⁰

¹ Centers for Disease Control and Prevention (CDC). 2016 Case Counts in the US. 10 May 2017. Available at: <https://www.cdc.gov/zika/reporting/2016-case-counts.html>

² 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)

³ Florida Department of Health. Zika Virus. 22 June 2017. Available at: <http://www.floridahealth.gov/diseases-and-conditions/zika-virus/index.html>

⁴ Texas Department of State Health Services. Zika in Texas - 2015-2016 reported Zika cases. Available at: <http://www.texaszika.org/2016cases.htm>

⁵ 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>

⁶ Florida Department of Health Daily Zika Update. 23 August 2016. Available at: <http://www.floridahealth.gov/newsroom/2016/08/082316-zika-update.html>

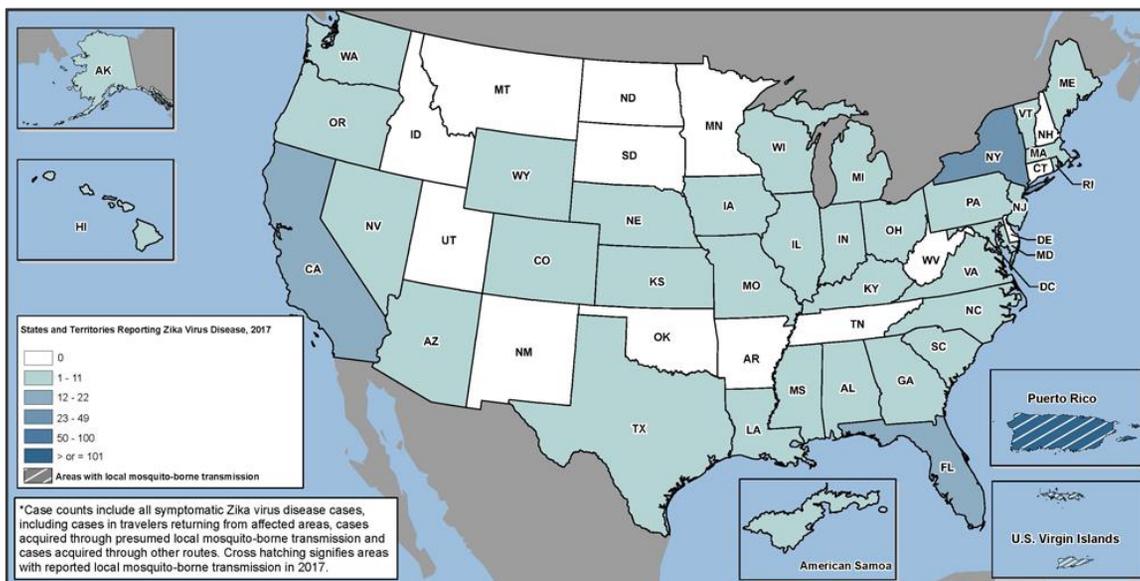
⁷ Texas Department of State Health Services. Texas Announces Additional Local Zika Cases in Cameron County. 9 December 2016. Available at: <http://dshs.texas.gov/news/releases/2016/20161209.aspx>

⁸ Centers for Disease Control and Prevention (CDC). 2017 Case Counts in the US. 21 June 2017. Available at: <https://www.cdc.gov/zika/reporting/2017-case-counts.html>

⁹ Texas Department of State Health Services. Zika in Texas – Reported cases. Available at: <http://www.texaszika.org/index.htm>

¹⁰ Texas Department of State Health Services. First West Nile Case Highlights Precautions for Mosquito-borne Diseases. Available at: <http://www.dshs.texas.gov/news/releases/2017/20170516.aspx>

Figure 1. Travel-associated and autochthonous Zika cases in states and territories of the U.S. As of 21 June 2017.



Source: Published by the U.S. Centers for Disease Control and Prevention (CDC)⁸

TRANSMISSION

In addition to the 224 confirmed Zika cases acquired through local mosquito-borne transmission, the U.S. CDC has reported autochthonous non-vector-borne cases of Zika virus infection.² Between 2016 and EW 24 of 2017, a total of 47 sexually transmitted Zika cases have been confirmed,^{1, 6} including one case of female-to-male sexual transmission of Zika in New York City,¹¹ and one laboratory-acquired case of Zika virus.⁶ The U.S. CDC has also reported a Zika case from with an unknown route of person-to-person transmission.¹ The case is a family contact of an elderly Utah resident who contracted Zika abroad and died in Utah.¹² 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 of 2016, none of their contacts had tested positive for Zika.

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.¹³ In 2005, the state of Texas experienced a dengue outbreak.¹⁴

¹¹ 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>

¹² 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>

¹³ Centers for Disease Control and Prevention (CDC). Local Dengue Transmission in Key West, Florida. 27 September 2012. Available at: http://www.cdc.gov/dengue/epidemiology/local_dengue.html

¹⁴ Centers for Disease Control and Prevention (CDC). MMWR. Dengue Hemorrhagic Fever -U.S.-Mexico Border, 2005. 10 August 2007. Available at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5631a1.htm>

In late 2014, a total of 2,811 chikungunya cases were reported, of which 12 were autochthonous cases from Florida.^{15, 16} 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

Between 2016 and EW 24 of 2017, the U.S. CDC has reported 1,963 pregnant women in the United States and the District of Columbia, and an additional 4,107 pregnant women in the US territories with laboratory evidence of possible Zika virus infection, with or without symptoms.¹⁷ Of these, 1,654 completed pregnancies with or without birth defects.¹⁸

ZIKA COMPLICATIONS

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

As of EW 21 of 2017, U.S. CDC reported 15 cases of Guillain-Barré syndrome (GBS) associated with Zika in the U.S. States and 52 GBS cases in the U.S. territories.¹⁹

CONGENITAL SYNDROME ASSOCIATED WITH ZIKA VIRUS INFECTION

Between 2016 and EW 21 of 2017, a total of 80 live-born infants with birth defects and 8 pregnancy losses with birth defects have been reported.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 Zika cases in Utah, one of which passed away.⁸

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>

¹⁵ 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>

¹⁶ 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>

¹⁷ 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. 23 May 2017. Available at: <http://www.cdc.gov/zika/geo/pregwomen-uscases.html>

¹⁸ 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>

¹⁹ Reported to PAHO/WHO by the US IHR NFP on 2 June 2017.

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.²⁰ 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.²¹

INFORMATION SHARING

The U.S CDC publishes Zika updates on a weekly basis. At the time of this report, the latest information available from the U.S. CDC for Zika was from EW 25 of 2017. In addition, the US IHR NFP provides PAHO/WHO epidemiological report on Zika periodically, and the latest available information was from EW 21 of 2017.

²⁰ Centers for Disease Control and Prevention (CDC). Guidance for U.S. Laboratories Testing for Zika Virus Infection. 28 July 2016. Available at: <https://www.cdc.gov/zika/laboratories/lab-guidance.html>

²¹ 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>