Pan American Health Organization

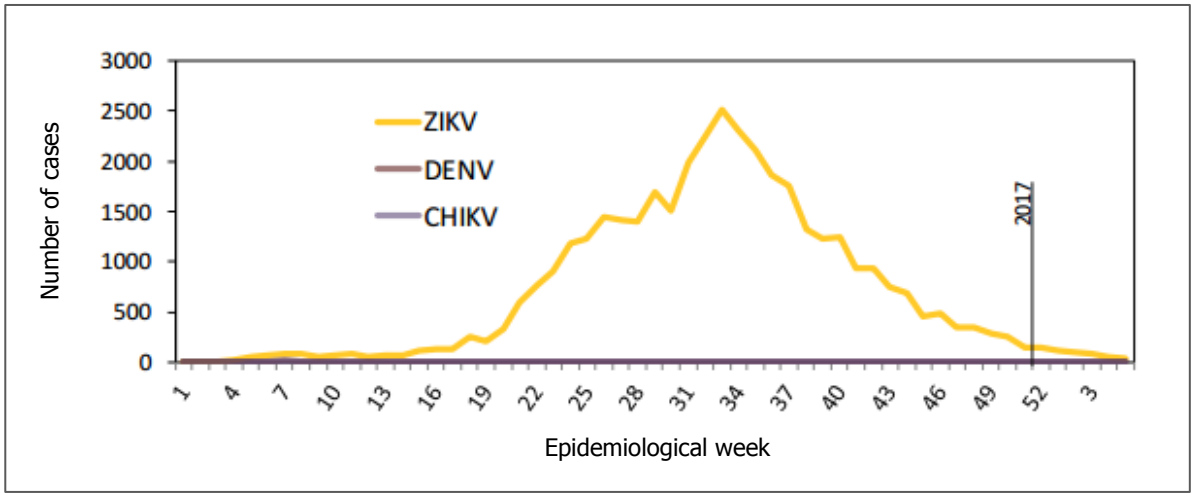
World Health Organization
REGIONAL OFFICE FOR THE Americas

Zika-Epidemiological Report

Puerto Rico

2 March 2017

Figure 1. Confirmed cases of chikungunya, dengue and Zika by epidemiological week. Puerto Rico. EW 1 to EW 5 of 2017.



Source: Puerto Rico Department of Health. Arboviruses Weekly Report [1]

FIRST AUTOCHTHONOUS VECTOR-BORNE CASES

In epidemiological week (EW) 52 of 2015, the United States International Health Regulations (IHR) National Focal Point (NFP) notified PAHO/WHO of the detection of the first laboratory-confirmed case of Zika virus infection in the Commonwealth of Puerto Rico, an unincorporated territory of the United States.

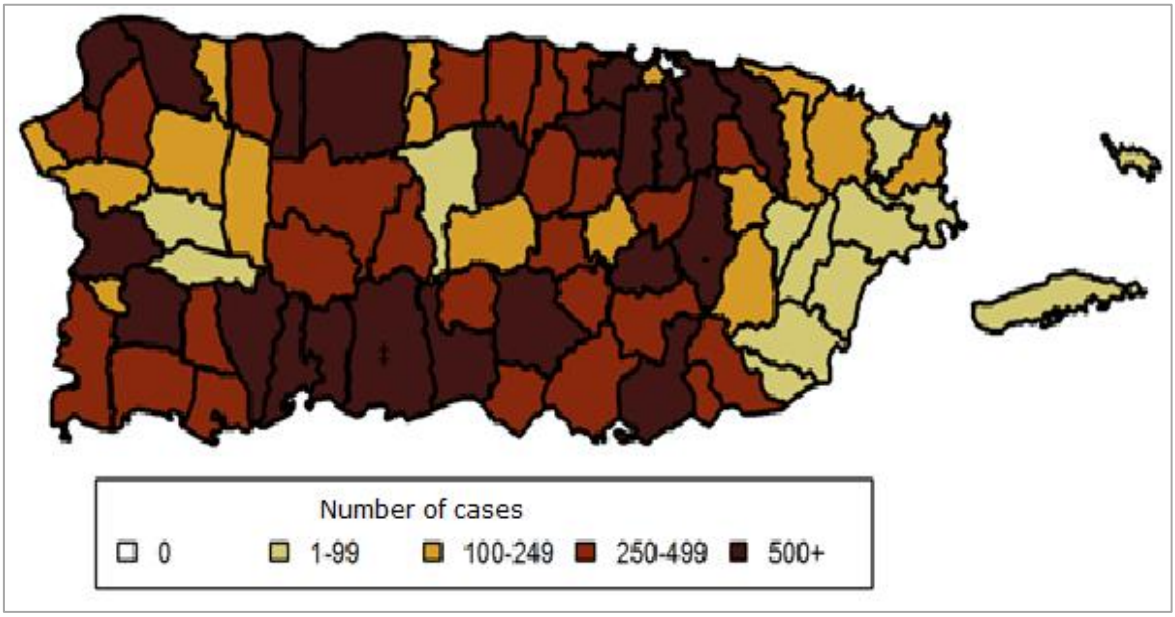
GEOGRAPHIC DISTRIBUTION

The first Zika cases in Puerto Rico were detected in Humacao, on the eastern coast of the island. Since then, cases have been reported in all municipalities of Puerto Rico, for a total of 38,733 confirmed cases as of EW 5 of 2017 (**Figure 2**).

[1] Puerto Rico Department of Health. Arboviruses Weekly Report. EW 5 of 2017. Available at: http://www.salud.gov.pr/Estadisticas-Registros-y-Publicaciones/Informes%20Arbovirales/Reporte%20ArboV%20semana%205-2017.pdf

Suggested citation: Pan American Health Organization / World Health Organization. Zika Epidemiological Report Puerto Rico. March 2017. Washington, D.C.: PAHO/WHO; 2017

Figure 2. Confirmed Zika cases by municipality. Puerto Rico. 2015 to 2017 (up to EW 5).



Source: Puerto Rico Department of Health. Arboviruses Weekly Report[1]

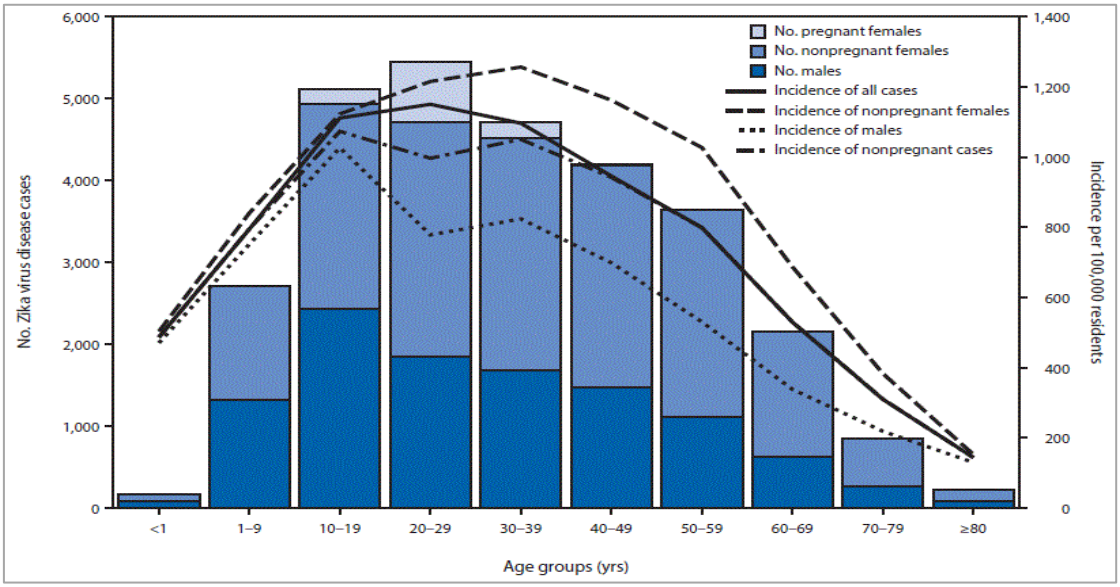
TREND

Weekly numbers of Zika cases in Puerto Rico increased steadily from EW 3 up to EW 33 of 2016, after which a decreasing trend has been observed (**Figure 1**).

According to a report published at the Morbidity and Mortality Weekly report in October 2016, between 1 November 2015 and 20 October 2016 a total of 28,341 Zika cases were laboratory confirmed and an additional 1,004 were presumptively diagnosed based on serological testing in Puerto Rico.[2] Among all the confirmed and presumptive Zika cases, the median age was 32 years (range = 16 days–100 years) and 18,384 (63%) of them were female. The highest incidence rate was reported in the group of age of 20-29 years (1,150 per 100,000 population) followed by 10-19 years (1,111 per 100,000 population) (**Figure 3**). Of the total cases (confirmed and presumptive), 1,117 were in pregnant women. Among the 28,219 non-pregnant persons, the highest incidence was among females aged 20-49 years.

[2] Lozier M, Adams L, Febo MF, et al. Incidence of Zika Virus Disease by Age and Sex — Puerto Rico, November 1, 2015–October 20, 2016. MMWR Morb Mortal Wkly Rep 2016;65:1219–1223. DOI: http://dx.doi.org/10.15585/mmwr.mm6544a4

Figure 3. Age group, sex, and incidence of laboratory-positive Zika virus disease cases. Puerto Rico, November 1, 2015–October 20, 2016.



Source: Lozier M, Adams L, Febo MF, et al. Incidence of Zika Virus Disease by Age and Sex — Puerto Rico, November 1, 2015–October 20, 2016. MMWR Morb Mortal Wkly Rep 2016;65:1219–1223.

CIRCULATION OF OTHER ARBOVIRUSES

As of EW 5 of 2017, significantly fewer cases of dengue and chikungunya have been reported in Puerto Rico compared with Zika (**Figure 1**). In 2016, 169 laboratory-confirmed cases of dengue were reported.[1] During the same period, 178 cases of chikungunya were detected.

ZIKA VIRUS DISEASE IN PREGNANT WOMEN

As of EW 5 of 2017, a total of 3,076 pregnant women have been laboratory-confirmed for Zika virus infection in Puerto Rico.[1] Of these, 1,766 (57%) were symptomatic and 1,310 (43%) were asymptomatic.

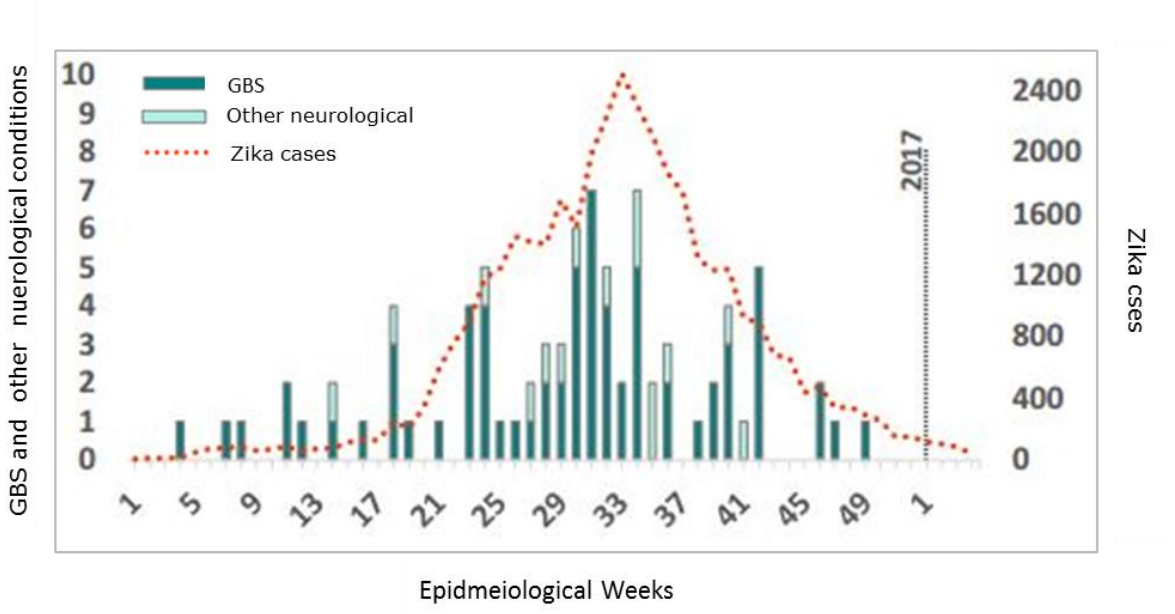
ZIKA COMPLICATIONS

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

Between EW 1 of 2016 and EW 4 of 2017, 182 cases of suspected Guillain-Barré syndrome (GBS) and other neurological syndromes were reported.[3] Of the total cases, 83 have evidence of Zika or other flavivirus infection. Of the 83 cases, 68 are cases of GBS and 15 are cases of other neurological syndromes. The median age of the 68 GBS cases is 55 years (age range=21-88 years). There is an equal number (n=34 of male and female cases). The deaths of two GBS cases and one case of other neurological syndromes, all with evidence of Zika or other flavivirus infection, have also been reported.[3] Comparing the distribution of Zika cases with distribution of GBS and other

neurological syndrome associated with Zika virus (**Figure 4**), both picked between EW 31 and 34 of 2016 after which a gradual decline in the number of cases is observed.

Figure 4. Cases of GBS with evidence of Zika virus or flavivirus infection by public health region. Puerto Rico. EW 1 of 2016 to EW 4 of 2017.



Source: Puerto Rico Department of Health. Arboviruses Weekly Report [3]

CONGENITAL SYNDROME ASSOCIATED WITH ZIKA VIRUS INFECTION

As of EW 27 of 2016, 65 infants were born to women with evidence of Zika virus infection in pregnancy, and two pregnancy losses were identified. Zika virus was identified in neural tissue by immunohistochemistry in one case of pregnancy loss.[2] As of EW 5 of 2017, a total of 12 cases of congenital syndrome associated with Zika virus infection among live births in Puerto Rico have been identified.[1]

DEATHS AMONG ZIKA CASES

As of EW 5 of 2017, five deaths of confirmed Zika virus cases (not associated with GBS) have been reported from Puerto Rico.[1] The first patient died of complications related to severe thrombocytopenia.[2] No additional information is available regarding the other four deaths.

NATIONAL ZIKA SURVEILLANCE GUIDELINES

The Surveillance guidelines for clinicians issued by the Puerto Rico Department of Health were updated as of EW 13 of 2016.[4]

[3] Puerto Rico Department of Health. GBS weekly report. EW 4 of 2017. Available at: http://www.salud.gov.pr/Estadisticas-Registros-y-Publicaciones/Informe%20Sndrome%20GillainBarr/Informe%20de%20Casos%20del%20S%C3%ADndrome%20de%20Guillain-Barr%C3%A9_10febrero2017.pdf

[4] Puerto Rico Department of Health. Arbovirus Case Investigation Form. Available at: http://www.salud.gov.pr/Sobre-tu-Salud/Documents/NEW%20Arbovirus%20Case%20Investigation%20Form%20-%20March%2029%202016.pdf

Newborn screening guidelines for obstetric health care workers were issued in EW 3 of 2016.[5]

LABORATORY CAPACITY

The Public Health Laboratory from the Puerto Rico Department of Health is responsible for laboratory surveillance. Currently, they use the PCR multiplex system, Trioplex, from the United States Centers for Disease Control and Prevention (CDC). The U.S. CDC, Dengue Branch also provides support for laboratory confirmation by molecular detection (real-time RT-PCR) and serology (ELISA IgM detection and Plaque Reduction Neutralization Test - PRNT).

INFORMATION-SHARING

The first autochthonous confirmed Zika case was reported by the U.S. International Health Regulations (IHR) National Focal Point (NFP) to PAHO/WHO on EW 2 of 2016. At the time of this report, the latest Puerto Rico Department of Health epidemiological bulletin was from EW 5 of 2017.

[5] Puerto Rico Department of Health. Interim Guidelines ZIKA and Pregnant Women. Available at: http://www.salud.gov.pr/Sobre-tu-Salud/Documents/Interim%20Guidelines%20ZIKA%20and%20Pregnant%20Women.pdf