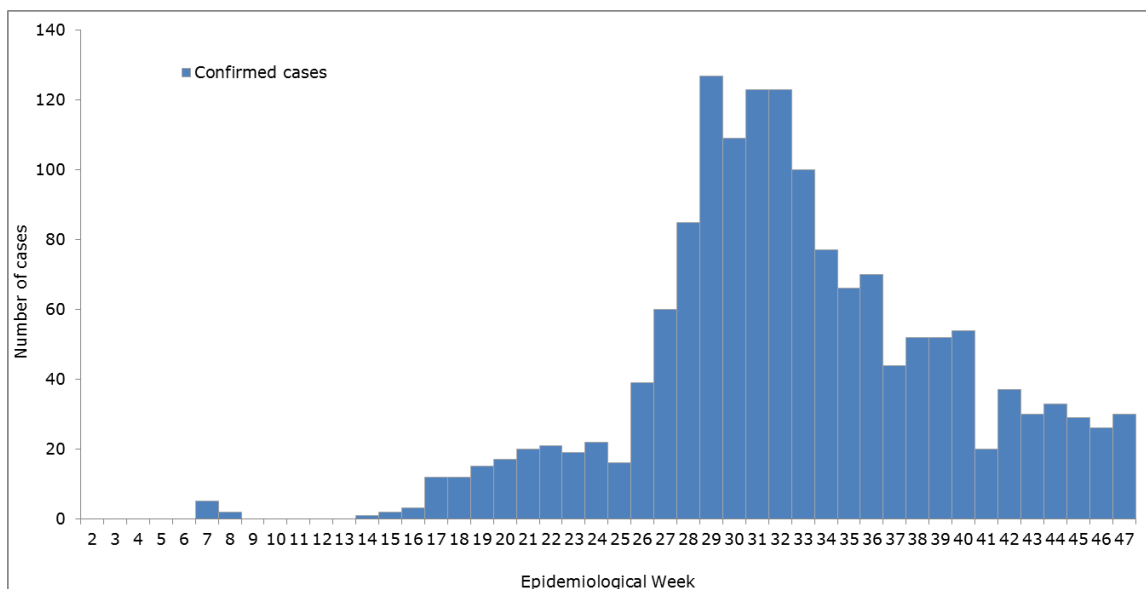


# Zika-Epidemiological Report Costa Rica

20 December 2016

**Figure 1.** Confirmed Zika cases. Costa Rica. EW 2 to EW 47 of 2016.



Source: Data published by the Costa Rica Ministry of Health and reproduced by PAHO/WHO

## FIRST AUTOCHTHONOUS VECTOR-BORNE CASES

In epidemiological week (EW) 4 of 2016, the detection of the first autochthonous vector-borne transmission of Zika virus was reported in Costa Rica. The first confirmed autochthonous cases of Zika virus disease was in a pregnant woman, resident of Guanacaste province. The sample was confirmed by the national reference laboratory on EW 8 of 2016.<sup>1</sup>

## GEOGRAPHIC DISTRIBUTION

As of EW 47 of 2016, 1,553 confirmed cases of Zika have been reported in Costa Rica. The cantons reporting the most cases have been Puntarenas (213), Garabito (164), Orotina (108), and (Esparza 102).<sup>2</sup>

<sup>1</sup> Official Website of the President of the Republic of Costa Rica. Health Declares Sanitary Emergency in Nicoya for Zika virus. 22 February 2016. Available at: <http://presidencia.go.cr/prensa/comunicados/salud-declara-emergencia-sanitaria-en-nicoya-por-virus-del-zika/>

<sup>2</sup> Costa Rica Ministry of Health. Epidemiological Bulletin. EW 48 of 2016. Available at: <https://www.ministeriodesalud.go.cr/index.php/biblioteca-de-archivos/vigilancia-de-la-salud/analisis-de-situacion-de-salud/3160-boletin-epidemiologico-no-41-2016-zika-chikungunya-y-dengue/file>

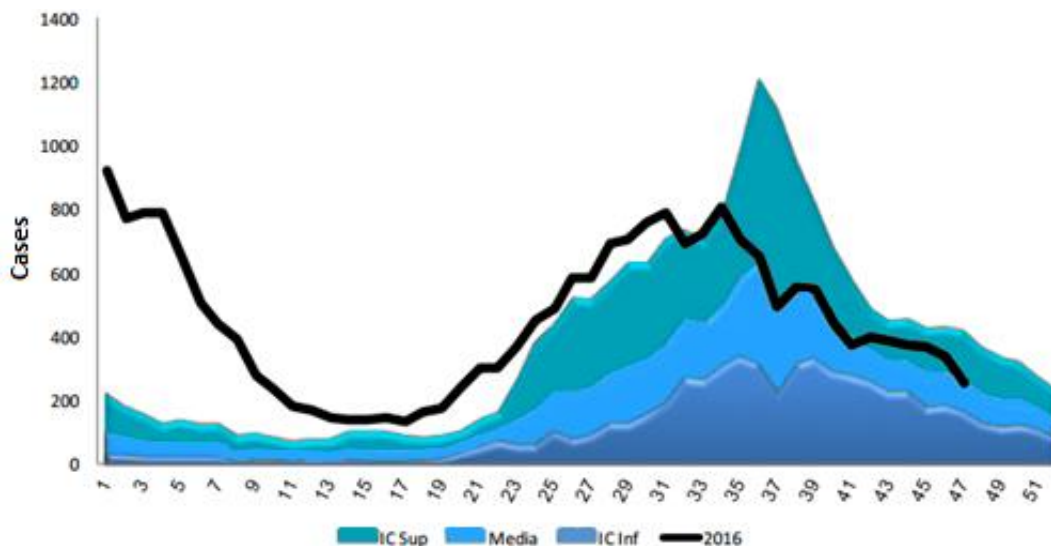
## TREND

Since the emergence of Zika in Costa Rica, weekly numbers of cases increased steadily up to EW 32 of 2016, after which a decreasing trend has been observed (**Figure 1**). The epidemic curve for Costa Rica is based only on confirmed Zika cases, which may not provide an accurate representation of the dynamics of the epidemic.

## CIRCULATION OF OTHER ARBOVIRUSES

Between EW 1 and EW 47 of 2016, a total of 21,439 cases of dengue have been reported in Costa Rica (incidence rate of 439 per 100,000 population).<sup>2</sup> By contrast, in 2015, a total of 17,258 cases were detected in the country (357 cases per 100,000).<sup>3</sup> Since the beginning of the year and up to EW 31 of 2016, reported dengue cases have been above the national threshold. From EW 32 up to EW 48, a decreasing trend of dengue cases is observed (**Figure 2**). DENV-1, DENV-2 and DENV-3 have circulated during in Costa Rica this year.

**Figure 2.** Dengue endemic channel. Cost Rica. EW 1 to EW 47 of 2016.



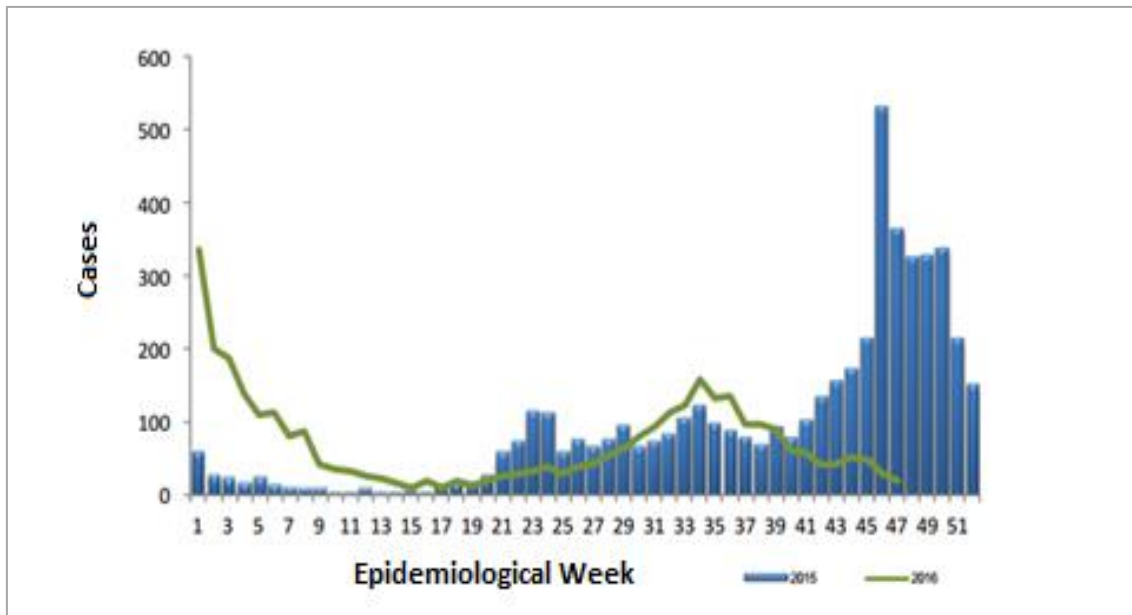
Source: Data published by the Costa Rica Ministry of Health and reproduced by PAHO/WHO

In regard to chikungunya, from EW 1 to EW 47 of 2016, a total of 3,298 cases have been identified in Costa Rica.<sup>2</sup> Over the same period in 2015, there were 3,566 cases of chikungunya.<sup>4</sup> From the beginning of the year up to EW 16, the number of chikungunya cases has been higher than those reported during 2015. In the past 8 weeks, the number of chikungunya cases has been lower than those reported during 2015 (**Figure 3**).

<sup>3</sup> Costa Rica Ministry of Health. Dengue 2015. Available at: <https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/analisis-de-situacion-de-salud/2770-dengue-2015/file>

<sup>4</sup> Costa Rica Ministry of Health. Chikungunya 2015. Available at: <https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/analisis-de-situacion-de-salud/2771-chikungunya-2015/file>

**Figure 3.** Number of chikungunya cases. Costa Rica. 2015 and 2016 (up to EW 47).



Source: Data published by the Costa Rica Ministry of Health and reproduced by PAHO/WHO

## ZIKA VIRUS DISEASE IN PREGNANT WOMEN

As of EW 47 of 2016, a total of 139 confirmed cases of Zika virus infection in pregnant women have been reported by the Costa Rica Ministry of Health.<sup>2</sup>

## ZIKA COMPLICATIONS

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

As of EW 47 of 2016, one confirmed case of Guillain-Barré syndrome (GBS) associated with Zika virus infection has been reported by the Costa Rica Ministry of Health.<sup>5</sup>

### CONGENITAL SYNDROME ASSOCIATED WITH ZIKA VIRUS INFECTION

As of EW 47 of 2016, two confirmed cases of congenital syndrome associated with Zika virus infection have been reported by the Costa Rica Ministry of Health.<sup>2</sup> In the first case reported the mother reported being in Nicaragua at the beginning of her pregnancy, but did not recall symptoms compatible with Zika virus infection.<sup>6</sup>

### DEATHS AMONG ZIKA CASES

As of EW 49 of 2016, no deaths among Zika cases have been reported by the Costa Rica Ministry of Health.<sup>2</sup>

<sup>5</sup> Reported to PAHO/WHO from the Costa Rica International Health Regulation (IHR) National Focal Point (NFP) on 10 August 2016

## NATIONAL ZIKA SURVEILLANCE GUIDELINES

The Costa Rica Ministry of Health published the national guidelines for Zika disease and its complication on 6 April 2016. The Guidelines are available at:

<https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/2996-lineamientos-nacionales-para-la-enfermedad-por-virus-zika-actualizado-al-6-de-abril-2016/file>

## LABORATORY CAPACITY

The diagnosis of Zika virus by molecular detection (real time RT-PCR) is performed by the *Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud* (INCIENSA) at the Ministry of Health of Costa Rica. Currently, the laboratory is also implementing serology diagnosis based on ELISA IgM detection as well as the PCR multiplex system from the United States Centers for Disease Control and Prevention (CDC) (Trioplex).<sup>6</sup>

## INFORMATION-SHARING

Information on Zika virus is available through the epidemiological bulletin published by the Costa Rica Ministry of Health on a weekly basis. At the time of this report, the latest available information was from EW 47 of 2016.

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<sup>6</sup> Costa Rica Ministry of Health, Lineamientos Nacionales de vigilancia epidemiológica y laboratorial para la Enfermedad por Virus ZIKA y sus complicaciones principales. 6 April 2016. Available at: <https://www.ministeriodesalud.go.cr/index.php/vigilancia-de-la-salud/normas-protocolos-y-guias/2996-lineamientos-nacionales-para-la-enfermedad-por-virus-zika-actualizado-al-6-de-abril-2016/file>