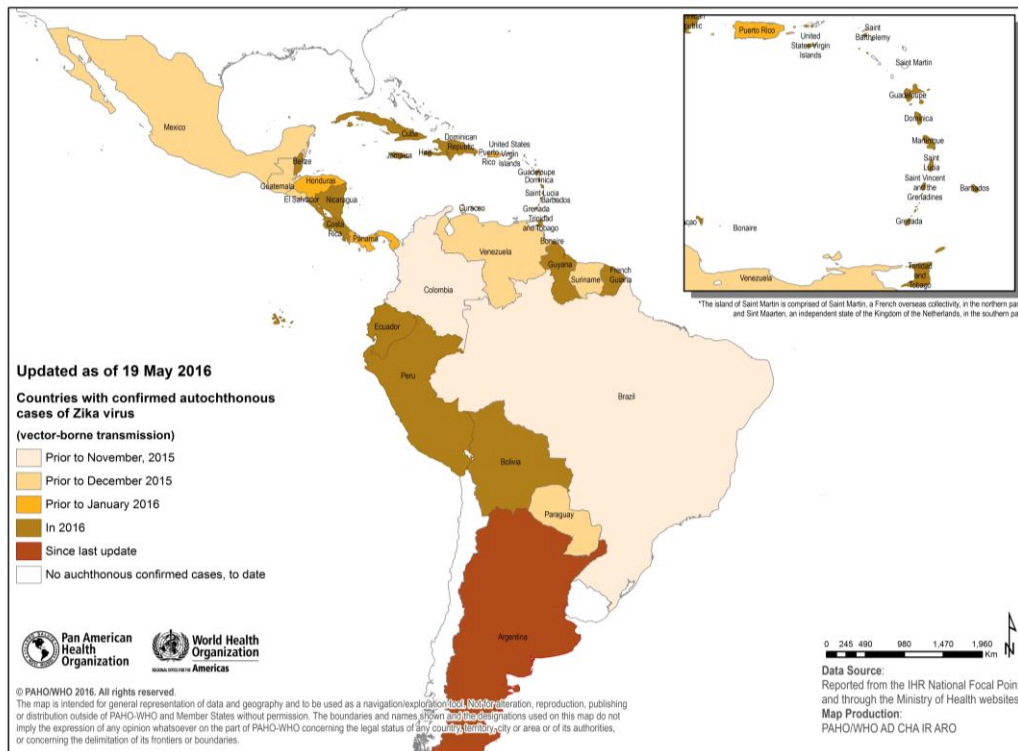


## Zika virus – Incidence and trends

To date, 39 countries and territories have confirmed local, vector-borne transmission of Zika virus in the Region of the Americas since 2015 (**Figure 1**). Since the last Pan American Health Organization/ World Health Organization (PAHO/WHO) [Zika Epidemiological Update on 12 May 2016](#), Argentina has confirmed vector-borne autochthonous transmission of Zika virus.

**Figure 1.** Countries and territories in the Americas with confirmed autochthonous (vector-borne) Zika virus cases, 2015-2016.



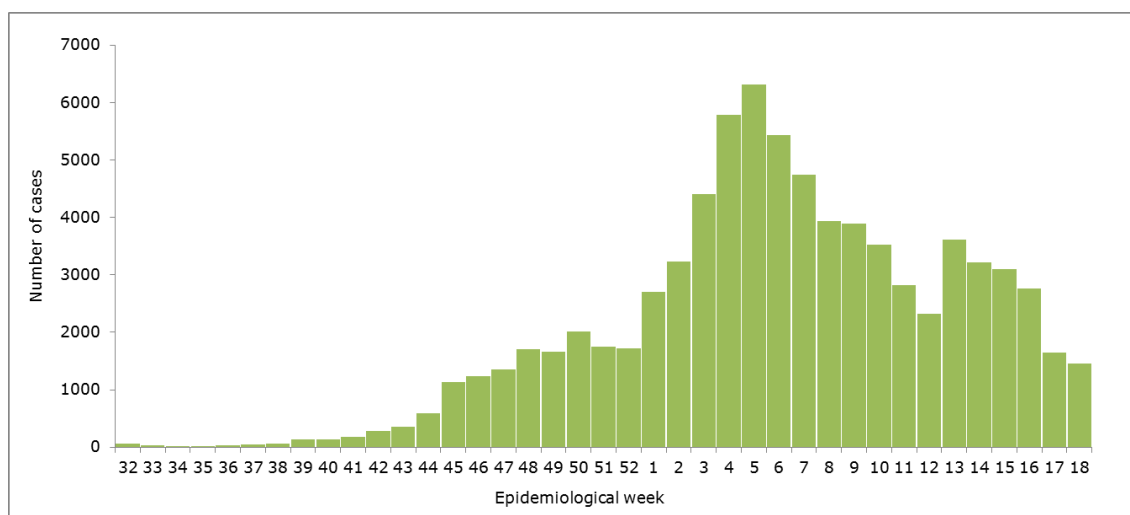
As mentioned in previous Zika Epidemiological Updates, trends observed in the Region of the Americas vary depending on the timing of the epidemic onset and timing of the seasonal period of mosquito-borne diseases. In general, countries and territories where the epidemic started later have exhibited upward trends.

As an example of the decreasing trend of Zika virus disease cases, the epidemic curve in Colombia is highlighted below.

## Colombia

Following Brazil, Colombia was the second country to report circulation of Zika virus in the Americas in 2015. Cases were initially reported in the Department of Bolivar and then spread to the rest of the country; as of epidemiological week (EW) 18 of 2016, 747 municipalities in the country have reported cases. Between EW 32 of 2015 and to EW 18 of 2016, a bimodal epidemic curve of Zika virus disease cases (suspected and confirmed) was observed. The peaks of the cases occurred in EW 5 of 2016 (6,309 cases) and EW 13, 2016 (3,609 cases) and have since demonstrated a downward trend (**Figure 2**).

**Figure 2.** Suspected cases of Zika virus disease reported in Colombia, between EW 32 of 2015 and EW 18 of 2016.



**Source:** Surveillance data provided to PAHO/WHO from the Colombia Ministry of Health

## Zika virus disease in pregnant women

Detection of Zika virus disease in pregnant women is being heightened in countries in the Region due to risk of congenital syndrome associated with Zika virus infection. There are 21 countries and territories in the Americas reporting confirmed and suspected cases of Zika virus disease in pregnant women (**Table 1**); this number remains the same since the last PAHO/WHO [Zika Epidemiological Update on 12 May 2016](#).

**Table 1.** Countries and territories in the Americas reporting confirmed and suspected cases of Zika virus disease in pregnant women.

| Countries and territories reporting Zika virus disease in pregnant women |                    |            |              |
|--|--------------------|------------|--------------|
| Barbados   | Dominican Republic | Honduras   | Puerto Rico  |
| Brazil   | Ecuador            | Martinique | Saint Martin |
| Bolivia  | El Salvador        | Mexico     | Venezuela    |
| Colombia   | French Guiana      | Nicaragua  |              |
| Costa Rica   | Guadeloupe         | Panama     |              |
| Dominica   | Guatemala          | Paraguay   |              |

Highlighted below are the surveillance results of pregnant women with Zika virus disease in Ecuador and Panama.

### Ecuador

Between EW 52 of 2015 and EW 17 of 2016, Zika virus disease has been laboratory confirmed in 8 pregnant women in Ecuador. Four of the women are in the second trimester of their pregnancy and two are in the third trimester. To date, no occurrences of congenital syndrome associated with Zika virus disease have been registered. [See full report.](#)

### Panama

Since the beginning of the outbreak in Panama in EW 48 of 2015 until EW 18 of 2016, 31 pregnant women with suspected Zika virus disease have been detected, of those 16 were laboratory confirmed and 15 were negative for Zika virus.

As of EW 18 of 2016, Panama has reported three cases of laboratory confirmed congenital syndrome associated with Zika virus infection. The three mothers were asymptomatic, and one additional case of fetal death at 32 gestational weeks, all had positive laboratory samples for Zika virus. [See full report.](#)

## Congenital syndrome associated with Zika virus infection<sup>1</sup>

Since the last PAHO/WHO [Zika Epidemiological Update on 12 May 2016](#), a case of congenital syndrome associated with Zika virus infection has been reported in Puerto Rico (**Table 2**).

**Table 2.** Countries and territories in the Americas with reported congenital syndrome associated with Zika virus infection.

| Countries reporting congenital syndrome associated with Zika virus | Number of confirmed cases to date |
|--|-----------------------------------|
| Brazil   | 1,384                             |
| Colombia   | 7                                 |
| Martinique <sup>2</sup>  | 3                                 |
| Panama <sup>3</sup>  | 4                                 |
| Puerto Rico <sup>4</sup>   | 1                                 |
| United States <sup>5</sup>   | 2                                 |

<sup>1</sup> Case definition available at: <http://bit.ly/1TpcVIS>

<sup>2</sup> Two microcephaly cases and one other fetal anomaly; these were detected by ultrasound in mothers with laboratory confirmed Zika virus infection. Note the 28 April 2016 report indicated that one previously detected microcephaly case (by ultrasound) was discarded after birth. This data does not include that case. [See full report.](#)

<sup>3</sup> There is one additional suspected case of congenital malformations in a fetus diagnosed by ultrasonography under investigation.

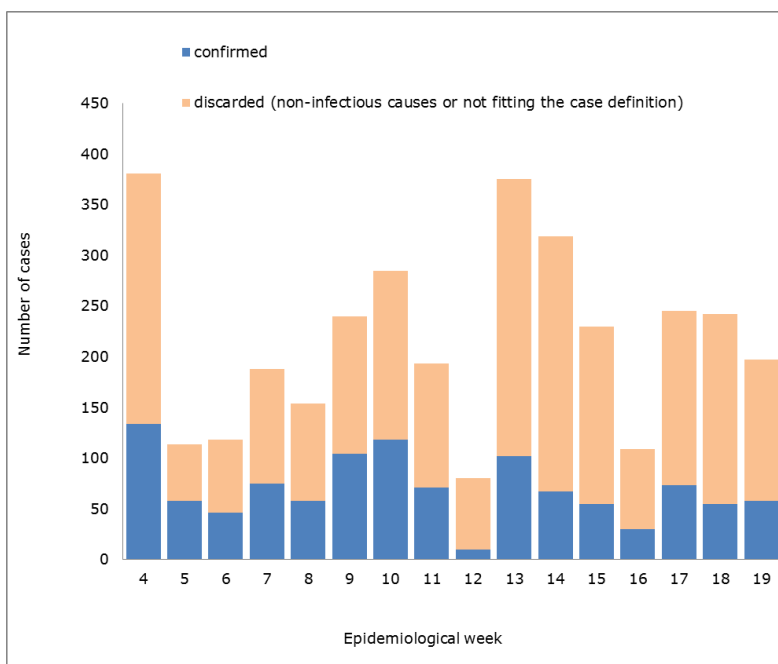
<sup>4</sup> This is a congenital anomaly case. [See full report.](#)

## Brazil

According to the Ministry of Health of Brazil, between 22 October 2015 and 14 May 2016, a total of 7,534 suspected cases of microcephaly and other congenital malformation of the central nervous system (CNS) have been reported as per Brazil's Surveillance and Response Protocol.<sup>6</sup> Of these, the Brazil Ministry of Health confirmed 1,384 cases of microcephaly by clinical, radiological and/or laboratory methods (207 have been confirmed by laboratory criteria). Out of the total reported cases, 2,818 cases were discarded as being due to non-infectious causes or not fitting the case definition, and 3,332 remain under investigation. The confirmed cases occurred in 499 municipalities, located in 26 out of 27 Federal Units.

Between EW 3 and EW 19 of 2016, the greatest number of microcephaly cases were confirmed in EW 4 (134 cases). During the same period the range of cases investigated (confirmed and discarded) were between 80 and 381 (EW 12 and 4, respectively) (**Figure 3**).

**Figure 3.** Number of investigated cases of microcephaly and other congenital malformation of the CNS by epidemiological week, Brazil, EW 3 – EW 19 of 2016.



**Source:** Data published by the Brazil Ministry of Health and reproduced by PAHO/WHO

## Guillain-Barré syndrome (GBS) and other neurological disorders

To date, 7 countries in the Region have reported an increase in cases of Guillain-Barré syndrome (GBS) with at least one case laboratory confirmed for Zika virus. Paraguay continues to report an increase in GBS cases, none of which have laboratory results confirming Zika virus infection. Five other countries and territories have not recorded increases but identified Zika virus-associated cases of GBS (**Table 3**).

<sup>5</sup> Imported cases; one case linked to a stay in Brazil ([see full report](#)) and one case is linked to a brief stay of the mother in Belize, Guatemala and Mexico ([see full report](#)).

<sup>6</sup> Surveillance and Response Protocol. [See Protocol](#).

**Table 3.** Countries and territories in the Americas with GBS in the context of Zika virus circulation.

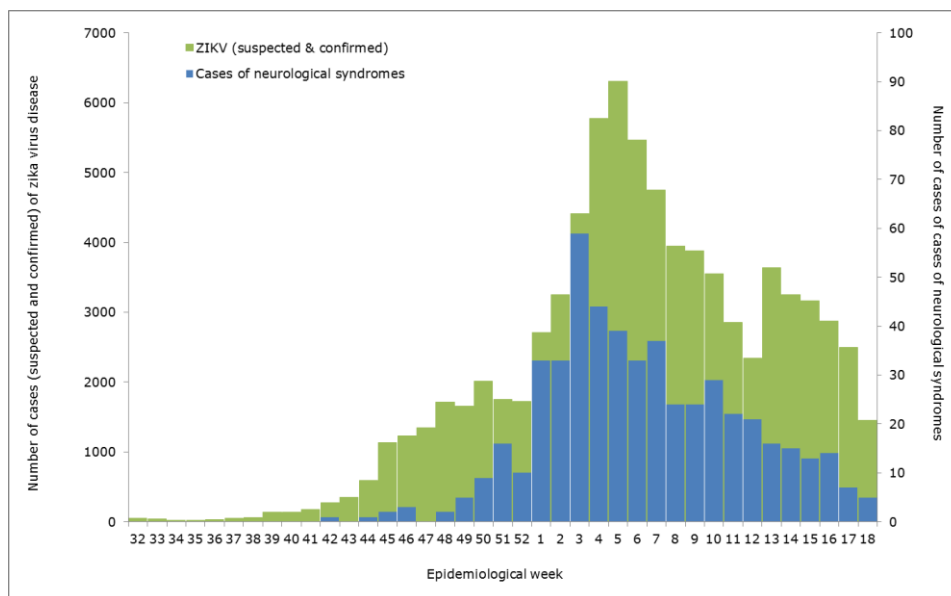
| Increase in GBS plus Zika virus lab confirmation in at least one case of GBS | Zika virus lab confirmation in at least one case of GBS | Increase in GBS with no Zika virus lab confirmation in any of the cases |
|--|---|---|
| Brazil   | French Guiana   | Paraguay  |
| Colombia   | Haiti   |   |
| Dominican Republic   | Panama  |   |
| El Salvador  | Puerto Rico   |   |
| Honduras   | Martinique  |   |
| Suriname   |   |   |
| Venezuela  |   |   |

Highlighted below is the trend of neurological syndromes registered in Colombia and the increase in reported acute flaccid paralysis (AFP) in children under 15 years of age in Bolivia.

### Trend of neurological syndromes in Colombia

Since 15 December 2015 until EW 18 of 2016, there were 517 cases of neurological syndromes reported in Colombia with history of febrile illness consistent with Zika virus infection. Of the total number of neurological syndromes, 65% (335 cases) correspond to GBS. The epidemic curve of neurological syndromes shows a similar distribution to the Zika virus disease cases even though the neurological syndromes began 10 epidemiological weeks later and an elevation two weeks prior to the peak of Zika virus disease cases which occurred in EW 5 of 2016. (Figure 4).

**Figure 4.** Reported cases of Zika virus disease (suspected and confirmed) and neurological syndromes between EW 32 of 2015 and EW 18 of 2016 in Colombia.



**Source:** Surveillance data provided to PAHO/WHO from the Colombia Ministry of Health

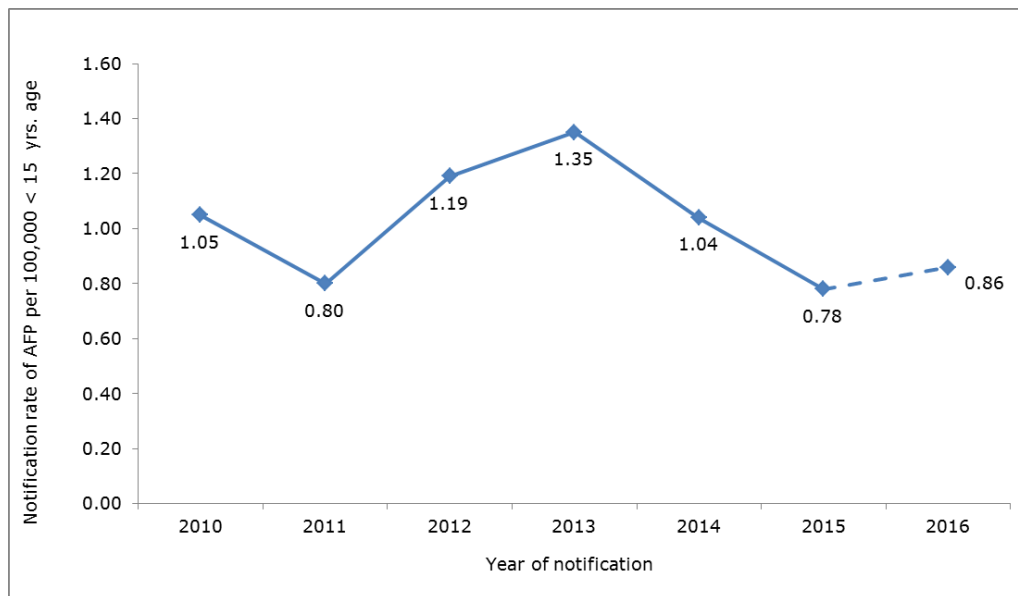
## Acute flaccid paralysis trends in Bolivia

Following the description of historical trends in increasing reports of acute flaccid paralysis (AFP) in children <15 years of age, as seen with Colombia, Ecuador, Guatemala, and Venezuela, the current situation in Bolivia is highlighted below (**Figure 5**).

Compared to 2015, a slight increase in reported AFP is noted in Bolivia for 2016 as of EW 18. If the notifications continue at the same rate in 2016 a bigger increase in comparison to 2015 can be expected by the end of the year. While AFP is the manifestation of a wide spectrum of diseases, this situation highlights the importance for countries and territories with Zika virus circulation to analyze the trends in reports of AFP and investigate any unusual increase of cases.

Of note, Bolivia, has not reported an increase of GBS cases to date.

**Figure 5.** AFP rates per 100,000 in children < 15 years old in Bolivia, 2010-2016\*



\* 2016 corresponds to EW 19 of 2015 to EW 18 of 2016

**Source:** Data published in the PAHO/WHO Polio Weekly Bulletin. [See Bulletin.](#)