# Regional Update on Dengue in the Americas

(3 April 2009)

## Epidemiological Status, January to March 2009

Dengue is an endemic disease in most of the countries of the Americas and, over the past 20 years, has shown sustained cycles of outbreaks every 3 to 5 years.

From the first of January up to Epidemiological Week (EW) 13, 2009 (2 April 2009), a total of 215,824 cases of dengue have been reported, including 3,022 cases of severe dengue (dengue hemorrhagic fever, dengue shock syndrome, and complicated dengue) and 69 deaths, with a Regional fatality rate of 2.28%. To date, 36% (n = 25) of the total number of deaths have been concentrated in Bolivia, followed by Brazil, where 33% of the deaths occurred (n = 23). Table 1 shows the data reported by subregion.

**Table 1:**
**Rates and Number of Dengue Cases Reported to Epidemiological Week 13, 2009, by subregion of the Americas***

| Subregion of the Americas | Cases of Dengue and Severe Dengue | Incidence Rate per 100,000 pop.** | Cases of Severe Dengue | Deaths | Fatality Rate (%) |
|---|---|---|---|---|---|
| Central America & Mexico | 4,746 | 3.2 | 495 | 3 | 0.6 |
| Andean | 71,943 | 70.2 | 1,822 | 33 | 1.8 |
| Southern Cone | 133,580 | 59.8 | 607 | 25 | 4.1 |
| Hispanic Caribbean | 1,563 | 6.6 | 55 | 2 | 10.9 |
| Non-Hispanic Caribbean | 3,992 | 50.4 | 43 | 2 | 4.6 |
| **TOTAL** | **215,824** | **42.8** | **3,022** | **69** | **2.3** |

* According to the date reported to date by the Ministries of Health of the countries to the PAHO/WHO Regional Program on Dengue.
** Rates calculated based on the population at risk in each country.

# Southern Cone[1]

For 2009, 62% (n = 133,580) of all dengue cases have been reported in this subregion, with a reporting rate of 59.8 per 100,000 inhabitants. Cases of severe dengue represent 209% of the Regional total (n = 607) and deaths represent 36% (n = 25).

## Outbreaks in the Southern Cone, 2009

Outbreaks are currently being reported in the Southern Cone in Argentina, Brazil, and Paraguay.

- **Argentina:** Up to 1 April 2009 (EW 13), the Ministry of Health of Argentina reported 5,164 dengue cases confirmed by either laboratory or epidemiological link. The provinces most affected have been Chaco (2,900 cases), Salta (1,040 cases), Catamarca (939 cases), and Jujuy (283 cases). Reports show 3 cases of dengue hemorrhagic fever (DHF) and 2 deaths from dengue (with the fatality rate at 66%). The main serotype in circulation is DEN-1.

- **Brazil:** Up to 31 March 2009 (EW 10), a total of 126,139 suspected dengue cases have been reported, including 603 cases of severe dengue. There have been 23 confirmed deaths from dengue (with the fatality rate at 3.8%). The serotypes currently in circulation are DEN-2 and DEN-3. The highest incidence has been observed in the states of Acre, Roraima, and Espíritu Santo. Regarding confirmed DHF cases, 72% have been concentrated in 5 states: Bahia (30%), Espíritu Santo (15.8%), Mato Grosso (11.5%), Roraima (9%), and Minas Gerais (6%).

    - The state of **Bahia** has reported 32,306 dengue cases, with an incidence of 186.7 cases per 100,000 inhabitants. Of the cases reported in this state, 25.2% of them (n = 8,132) have been concentrated in the municipality of Jequié, with an estimated population of 150,541 inhabitants, followed by the municipalities of Itabuna (with 4,543 cass) and Puerto Seguro (with 1,955 cases). Reports show 248 cases of severe dengue, of which 70 have been classified as dengue hemorrhagic fever, 17 as complicated dengue, and 161 as under investigation with final classification pending.
    - With regard to **fatalities**, 29 deaths have been reported, of which 4 have been classified as dengue hemorrhagic fever, 4 as complicated dengue, and 21 as under investigation with final classification pending.

- **Paraguay:** Up to 1 April 2009 (EW 13), Paraguay has reported 2,277 cases of dengue confirmed by either laboratory or epidemiological link. The department where 33.3% of the cases have been concentrated is Central (with 759 cases), followed in descending order by Concepción (with 446 cases), Asunción (with 258), Alto Paraná (with 270), and Amambay (with 251). To date, there have been no reports of DHF or of any deaths. The serotypes in circulation are DEN-1 and 3.

[1] The Southern Cone includes Argentina, Brazil, Chile, Paraguay, and Uruguay.

## Andean Subregion[2]

For 2009, this subregion has reported 33% (n = 71,943) of the total number of cases in the Americas, with the highest incidence rate (70.2 per 100,000 inhabitants). Of the total number of cases reported in the Region, DHF cases in this subregion represent 60% of the total (n = 1,822); and deaths, 47% of the total (n = 33).

### Outbreaks in the Andean Subregion, 2009

An important dengue outbreak has been reported in Bolivia.

- **Bolivia:** Up to 31 March 2009 (EW 13), 54,068 suspected cases of classic dengue have been reported, including 168 cases of DHF and 25 deaths (with the fatality rate at 14.8%). The department of Santa Cruz de la Sierra is the most affected, with 39,362 suspected dengue cases reported. The serotypes in circulation are DEN-1, 2, and 3. More details are can be found on the website of the Ministry of Health and Sports of Bolivia at http://www.sns.gov.bo/snis/default.aspx or on that of the PAHO/WHO Country Office in Bolivia at http://www.ops.org.bo.

## Central America and Mexico[3]

For 2009, 4,639 cases of dengue have been reported throughout this subregion, including 304 cases of DHF and 3 deaths.

### Outbreaks in Central America and Mexico, 2009

To date, the have been no official reports of dengue outbreaks in Central America. In this subregion, most dengue transmission starts with the beginning of the rainy season, from the month of May onwards, and usually ends between October and November.

## Caribbean Subregion[4]

For 2009, a total of 1,563 cases of dengue have been reported in the Hispanic Caribbean, with 3,992 cases reported in the non-Hispanic Caribbean. In addition, there have been 55 reported cases of DHF in the Hispanic Caribbean, and 43 in the non-Hispanic Caribbean. In the Dominican Republic, 6 deaths have been reported, which accounts for all the deaths in

[2] The Andean subregion includes Bolivia, Colombia, Ecuador, Peru, and Venezuela.

[3] Central America includes Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama.

[4] The Hispanic Caribbean includes Cuba, the Dominican Republic, and Puerto Rico.
The non-Hispanic Caribbean includes Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Bermuda, British Virgin Islands, Cayman Islands, Curacao, Dominica, French Guiana, Grenada, Guadeloupe, Guyana, Haiti, Jamaica, Martinique, Montserrat, Netherlands Antilles, St. Bartholomew, St. Kitts and Nevis, St. Lucia, St. Martin, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Turks and Caicos Islands, and US Virgin Islands.

the Hispanic Caribbean, while only 2 deaths have been reported in the non-Hispanic Caribbean.

### ▪ Outbreaks in the Caribbean, 2009

Most of the epidemic activity for dengue in this subregion begins with the rainy season, which takes place during the second semester of each year. However, this year a different pattern has been observed, with continuing rain in several countries. French Guiana is currently experiencing an outbreak, and Aruba, Guyana, and Suriname have requested technical support for strengthening laboratory management, clinical management of patients with dengue, and vector control.

## ▪ North America (United States and Canada)

Most of the reported dengue cases in the United States and Canada are imported, coming from the endemic zones of Asia, the Caribbean, Central America, and South America (CDC, 2006). From 2001 to 2007, the United States reported 796 dengue cases, most of them imported. However, dengue outbreaks have been reported in Hawaii, and sporadic outbreaks with local transmission have occurred in Texas on the Mexican border. In 2008, the United States reported 100 imported cases of dengue; this figure is still being revised and is subject to final adjustments.

# PAHO Support

PAHO/WHO continues to provide technical support to prevent and control dengue outbreaks in the Region, through its International Dengue Task Force *(GT-Dengue[5]),* mainly in the areas of epidemiological surveillance, vector control, clinical patient management, and risk communication. However, dengue requires community mobilization and participation for its prevention and control.

[5] GT comes from the Spanish, *grupo técnico* or technical (working) group.