

# **Epidemiological Alert:**

# **Update on Dengue Situation in the Americas**

19 August 2011

# **INTRODUCTION**

The purpose of this alert is to provide an update on the 2011 dengue situation in the Region and to call upon national authorities from the countries which at the beginning of this year's second semester could be in a greater risk of dengue (Central America, Mexico and the Caribbean) to prepare their integrated response mechanisms to prevent deaths from dengue.

The information provided in this update has been obtained from the data provided by the Ministries of Health of the Member States through reports sent to the Pan American Health Organization/World Health Organization (PAHO/WHO) or from updates on their web pages.

As of epidemiological week (EW) 31 of 2011, a total of 890,756 dengue cases, including 10,840 severe dengue cases and 488 dengue caused deaths, had been reported in the Region of the Americas.

Table 1.	The 2011 total of dengue cases, severe dengue cases and deaths by sub regions as of epidemiological
week 310	of 2011.

Sub-regions	Dengue*	Incidence Rate (per 100,000)	Severe Dengue**	Deaths	Case Fatality Rate
North America, Central America and Mexico	40,098	27.3	773	17	2.20
Andean Region	95,361	93.1	1,821	97	5.33
Sourthern Cone	750,946	309.7	8,199	372	4.54
Hispanic Caribbean	2,723	11.5	35	1	2.86
Non-Hispanic Caribbean	1,637	20.6	12	1	8.33
TOTAL	890,756	170.1	10,840	488	4.50

\* Total number of dengue cases including severe dengue.

\*\* Includes dengue shock syndrome and/or all forms of severe dengue.
Source: Data from Member State Ministries of Health and website updates.

# NORTH AMERICA, CENTRAL AMERICA AND MEXICO

# **UNITED STATES**

During 2011, transmission of the dengue virus has been identified in Hawaii and Florida. The Center for Disease Control and Prevention (CDC) has declared dengue as a notifiable disease in the United States, as an increase in imported dengue cases is expected.

# **EL SALVADOR**

As of EW 30 of 2011, 5,644 dengue cases were reported, 2,195 of which had been laboratoryconfirmed. Two deaths and 17 cases of severe dengue were reported. The national incidence rate is 88.23 per 100,000 inhabitants. The most affected departments are La Libertad, La Paz, San Salvador, San Miguel and Santa Ana.

The Intersectoral Health Commission (CISALUD) manages and systematically analyzes the dengue situation for decision-making. CISALUD is an inter-institutional organism of 38 governmental and nongovernmental institutions including the Pan American Health Organization/World Health Organization (PAHO/WHO). The Cuban medical brigade is also providing support.

### PANAMA

As of EW 30 of 2011, 390 dengue cases were recorded, of which 249 had been laboratoryconfirmed and 141 were confirmed by epidemiological link. The national incidence rate is 10.96 per 100,000 inhabitants. To date 2 dengue caused deaths, both within the health Metropolitan Region, have been confirmed. Currently serotypes DEN 1, DEN 2 y DEN 3 are simultaneously circulating there.

Control measures are focused on eliminating vector breeding sites and fumigating affected areas. The Situation Room was activated and the EGI-dengue national committee is actively working on inter-institutional and intersectoral coordination. The country underwent an external evaluation by the GT-dengue international working group and is working in accordance with the recommendations made.

## MEXICO

As of EW 29 of 2011, 25,307 dengue cases were reported, of which 2,476 had been laboratoryconfirmed. The national incidence rate is 22.88 per 100,000 inhabitants. As of EW 29, there were 382 severe dengue cases and 10 deaths confirmed in Veracruz (4), Guerrero (2), Sinaloa (1), Sonora (1), Oaxaca (1) and Morelos(1). The highest numbers of dengue cases are reported in the states of Chiapas, Guerrero, Nuevo León and Oaxaca. Currently the serotypes DEN 1, DEN 2 y DEN 4 are circulating there.

# **THE CARIBBEAN**

# ARUBA

During 2011 and up to EW 15, 1,573 dengue cases were reported at the national level, of which 674 were laboratory-confirmed and one DEN-4 caused death was confirmed. The age range of those most affected is between 25 and 64 years old.

The outbreak on the island which was initially reported in EW 32 of 2010 and has lasted through EW 11 of 2011 is now considered over. The four dengue serotypes have been isolated during this outbreak, a fact that had not occurred in any previous outbreaks in Aruba.

# BAHAMAS (THE)

Between EW 27 and EW 30 2011, the Bahamas Ministry of Health reported 30 laboratoryconfirmed dengue cases. The serotype found in all cases corresponds to DEN-1. The age range is between 11 to 74 years old (median = 35 years) and 60% of the cases are men.

Previous outbreaks in the Bahamas identified the DEN-1 serotype as primarily causing mild cases. However, this does not preclude the existence of severe cases in primary infections. The Ministry of Health is investigating the cases and the control measures have been implemented. Likewise, PAHO/WHO has been providing Integrated Vector Control technical support.

#### SANTA LUCIA

During the EW 30 of 2011, the government requested PAHO/WHO's assistance due to the increase in dengue cases and their severity; more than 150 cases of severe dengue had been diagnosed. The epidemic appears to have been aggravated by the unexpected quantity of rain caused by hurricane Thomas. In the cited week, Saint Lucia was barely entering the rainy season. The cases are mainly affecting children under 10 years old. By EW 30, The death of a 7 year old girl had been confirmed.

The Saint Lucia health authorities are working on vector-control and have received case management assistance from a GT-dengue international clinical area expert from Mexico.

# **ANDEAN SUB-REGION**

#### BOLIVIA

As of EW 29 of 2011, 26,019 dengue cases were reported, of which 6,270 were laboratoryconfirmed, with 36 severe dengue cases and 36 deaths. The incidence rate is 267.49 cases per 100,000 inhabitants. The DEN-1, DEN-2 and DEN-3 serotypes have circulated in Bolivia since 2010.

#### PERU

As of EW 28 of 2011, reports indicated 33,888 dengue cases in the country. Of these, 8,827 were laboratory-confirmed and reports also indicated 234 severe dengue cases and 28 deaths. The four serotypes were circulating and the incidence rate is 114.82 cases per 100,000 inhabitants.

#### COLOMBIA

As of EW 29 of 2011, 19,482 dengue cases were reported 4,070 laboratory-confirmed and 819 of which corresponded to severe dengue. The incidence rate is 84.93 cases per 100,000 inhabitants. There were 36 dengue caused deaths confirmed, representing a 4.03% case-fatality rate in severe cases. The Colombia Ministry of Health is strengthening all the components of the EGI dengue, with specific emphasis on the management of patients.

### **SOUTHERN CONE**

#### PARAGUAY

As of EW 30 of 2011, 35,027 dengue cases were recorded, of which 5,933 were confirmed by laboratory and/or epidemiological link. By the beginning of 2011, 95 severe dengue cases and 62 dengue caused deaths had been reported. The cumulative incidence rate is 542.97 per 100,000 inhabitants. Currently, dengue is endemic in Paraguay and serotypes DEN-1 and DEN-2 circulate simultaneously, with serotype DEN 2 predominating.<sup>1</sup>

#### BRAZIL

As of EW 26, Brazil reported 715,666 dengue cases, 18% less than notified at the same time in 2010. Reports indicated a total of 8,104 severe dengue cases and 310 deaths, representing 75% and 64%, respectively, of the total of cases in the Americas.

<sup>&</sup>lt;sup>1</sup> EW 29 of 2011 Epidemiological Bulletin. Paraguay Ministry of Public Health and Social Welfare of General Bureau of Health Surveillance



### **RECOMMENDATIONS FOR DENGUE PREVENTION AND CONTROL**

The countries of the region concentrate their efforts of response to this complex disease through an Integrated Management Strategy for dengue prevention and control (EGI-dengue). At these moments it is fundamental to enhance coordination among all components, in order to maximize national capabilities and not only provide a response from the health sector but to organize a global response of all, including the community.

The reduction of dengue mortality requires an organized process to guaranteeing the early recognition, the treatment, and the referral of cases to hospital health care services, as necessary.

The delivery of good clinical services at all care levels, from the primary level up to the tertiary level, is the essential component of this process. Most dengue patients recover without requiring hospitalization, while others experience the disease in severe forms and death.



• Laboratory: Increase of the hematocrit with rapid decrease of the platelets

\* Requires strict observation and medical intervention

The triage principles (selection of patients) and the management decisions applied in primary and secondary care levels, where the patients are seen and evaluated for the first time, make it possible to identify patients that are at risk of developing severe dengue and need hospital care. It is important to note that for a disease with such complex manifestations, such as dengue, the treatment to save lives is relatively simple, inexpensive, and very effective, provided that correct and timely interventions are made.

At the first level of care, activities should include:

- Recognizing that the patient usually develops high and sudden fever and that it lasts less than 7 days. Additionally, the patient usually lives or traveled to endemic areas and fever can be accompanied by two or more of the following symptoms: nausea, vomiting, exanthema, myalgia, and arthralgias, petechiae or positive tourniquet test and leukopenia.
- Reporting immediately to public health authorities when a patient is suspected of being a dengue case.
- Promoting patient care early in the febrile phase of the disease.
- Conduct early studies of plasma extravasation or critical phase in order to initiate hydration therapy.
- Identifying the patients with warning signs who need to be sent for hospitalization or for intravenous hydration therapy to the second level of care. It may be necessary and possible to start the intravenous hydration at the first level of care.
- Identifying and handle in a timely and adequate manner the severe plasma extravasation, shock, serious bleeding and organ damages for proper remission once hemodynamic stabilization is achieved.

**Primary care**: Primary and secondary care levels are responsible in ambulatory or emergency rooms for an adequate triage for appropriate treatment.

Triage is the screening and identification of patients' clinical status as soon as they reach a health facility, for the purpose of identifying severe dengue cases (those requiring immediate treatment to prevent death), cases with warning signs (those that should receive priority while waiting in line, to be evaluated and treated without delay), and the non-urgent cases (those that do not have signs of severe dengue, nor warning signs).

At the beginning of the febrile phase, it is frequently not possible to clinically predict if a dengue patient will progress to severe dengue. Various serious manifestations may develop as the disease progresses before the critical phase, but warning signs are good indicators of a greater risk of severe dengue. Thus, health unit patients treated on an outpatient basis should be evaluated daily, following the disease's evolution and paying attention to the appearance or absence of warning signs (see above figure).

It is important to provide patients and their family members with health education on the warning signs and signs of severity in the disease so that they can immediately seek medical assistance upon identifying them.

The following documents are available for more information on dengue treatment:

- <u>Care guidelines for patients in the Region of the Americas</u> (in Spanish)
- <u>Guidelines for diagnosis, treatment, prevention and control</u> (in Spanish)