



Epidemiological Alert: Update on Dengue Situation in the Americas

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DENGUE SITUATION 2010-2011/ DENGUE ALERT 2011

PRESENTATION

The purpose of this alert is to inform about the current dengue situation in the Region and to alert the countries to actively implement their local and regional plans in complying with the Integrated Management Strategies for the prevention and control of dengue.

The information that is given 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 by updates in their web pages.

During the year 2010 more than 1.8 million cases were notified, of which 44,656 correspond to the severe form and 1,167 died. The Region dengue case fatality rate for 2010 was 2.6%. In this year, several countries of the Region have registered dengue outbreaks with a total number of cases that have exceeded the historic data registered. Among the countries that registered outbreaks are Brazil, Colombia, Guatemala, Honduras, Nicaragua, México, Puerto Rico, Dominican Republic, Venezuela, and several other countries and territories in the English and French Caribbean, as well as the introduction of Dengue to Florida (Key West).

**Table 1. Cases of dengue, severe and deaths in the Regions of the Americas.
As of EW 52, 2010 (Preliminary data)**

Sub regions	Dengue*	Incidence Rate	Severe Dengue**	Deaths	Case Fatality Rate
North America, Central America & Mexico	204.514	139,2	6.317	149	2,36
Andean Region	300.575	293,4	19.655	217	1,10
Southern Cone	1.214.951	501,0	16.577	688	4,15
Hispanic Caribbean	32.817	138,5	1.058	84	7,94
Non-Hispanic Caribbean	99.284	1.250,0	1.049	25	2,38
TOTAL	1.852.141	353,8	44.656	1.163	2,60

* DF + DHF, DSS and/or Severe Dengue

**Include DHF, DSS and/or Severe Dengue

At the beginning of 2011, Peru and Bolivia, in the department of Loreto and Beni respectively, reported a dengue outbreak that has required high mobilization, both, financial and human of resources. Also in Brazil in the last weeks, an important social campaign of mobilization lead by the highest government authorities has been put in motion as a response to the high risk of dengue outbreaks that 16 of its states are presenting.

In the Southern hemisphere, the first semester of the year is considered the period of the highest dengue transmission. Even though outbreaks have been registered in three countries

mentioned beforehand, other countries such as Argentina, Chile (Isle of Pascua), Ecuador, Paraguay and Uruguay are not out of risk.

Table 2. Cases of dengue, severe and deaths in the Region of the Americas, as of EW 03, 2011 (Data by countries)

Sub-regions	Dengue*	Incidence Rate	Severe Dengue**	Deaths	Case Fatality Rate
North America Central America & México	479	0,3	14	0	0.0
Andean Region	3,344	3,3	125	26	20,8
Southern Cone	634	0,3	0	0	0
Hispanic Caribbean	90	0,4	0	0	0
Non-Hispanic Caribbean	0	0	0	0	0
TOTAL	4,547	0,9	139	26	18,71

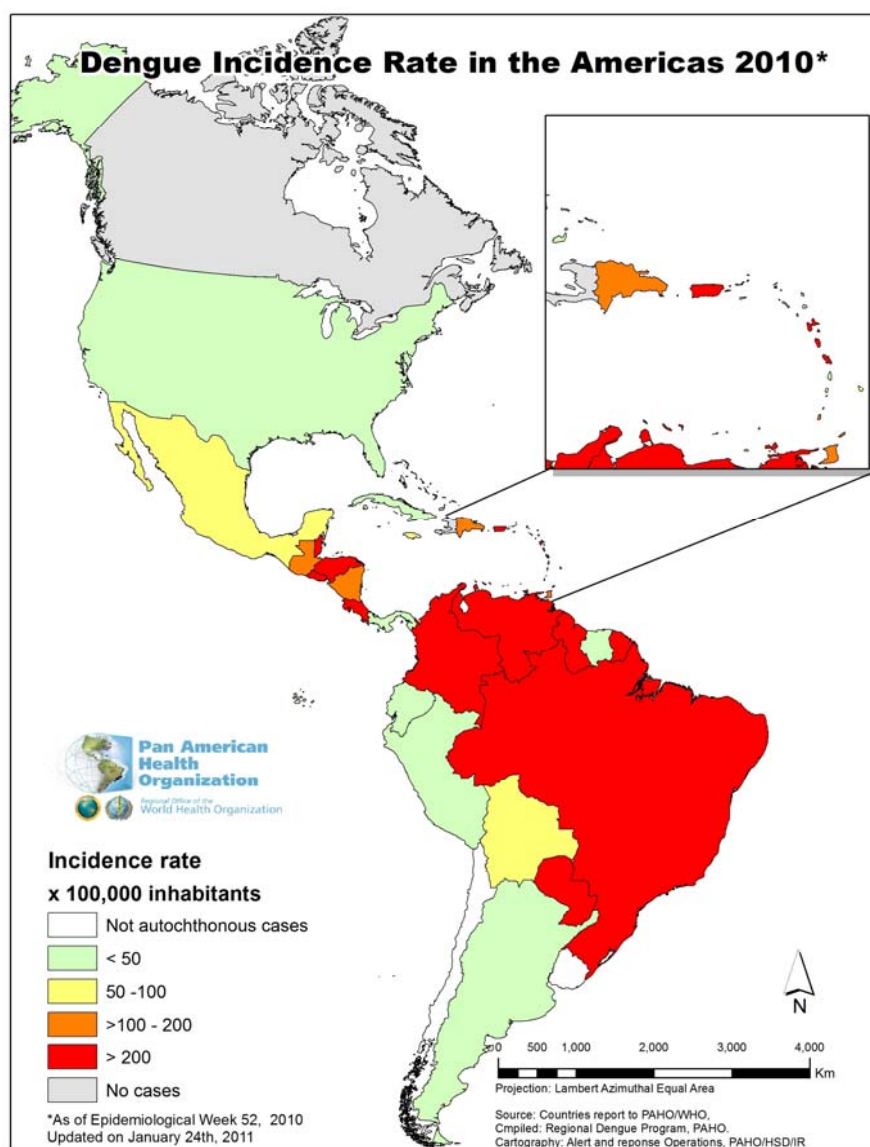
DF + DHF, DSS and/or severe dengue

**Include DHF, DSS and/or severe dengue

Dengue is endemic in the Americas and there are many factors that influence the behavior of dengue in the Region: the environment (phenomena like El Nino and La Nina), the migration, the highly population growth, the lack of investment in basic resources (potable water, sanitation) and the dispersion of various serotypes of dengue in all of the region (DEN 1, 2, 3 and 4). Also, it is important to point out that the improved notification and surveillance of the disease by Members States, also contributes to the increase in the number of registered cases.

PAHO/WHO continue to provide technical cooperation to the Member States in the areas of prevention and control of dengue driving an Integrated Management Strategy for the prevention and control, with a multidisciplinary emphasis on key areas such as epidemiology, case management, laboratory, vectors comprehensive management, risk communication and social mobilization. Also, a global response to the problem is promoted and in ways that are not only linked to the health sector. The participation of other ministries and sectors in the government and/or private sector and of society in general is considered vital. We all have some degree of responsibility to fight in our capacity the mosquito *Aedes aegypti*, the principal vector of dengue.

The approach for this year has to be principally on strengthening the patient care and prevention of the disease, by manner of distributing the new dengue guidelines. This new guidelines is focus towards *prevention* of alarm signals, with the objective of preventing deaths.



CURRENT OUTBREAK IN THE REGION

The following are the data of the outbreaks in Bolivia and Peru, of which there is updated information.

BOLIVIA

Distribution: The highest incidences of dengue were recorded in three of the 9 departments: Beni, Cochabamba and Santa Cruz.

Number of Cases: Up to the Epidemiological Week (EW) 4 of 2011, at the national level, there was notification of 1,988 cases of which 5.8% (115) were confirmed. Additionally 8 deaths were registered with suspicion of severe dengue; all of them in the department of Beni. In this department, the total number of notified cases since EW 40 to EW 3 of 2011 was of 1,513 suspected cases of which 66 were confirmed cases.

Serotypes in Circulation: DEN 1, 2 and 3.

PERU

Distribution: Starting with EW 51 of 2010, coinciding with the beginning of an intensive surveillance of dengue cases in all of the health services, a progressive increase in the number of cases was registered, especially in Iquitos, the capital of the province of Loreto.

Number of Cases: Since EW 51 of 2010 until EW 3 2011, there were reported 533 cases without signs of alarm, 209 with signs of alarm and 13 severe dengue cases. The deaths of 13 severe dengue cases have been confirmed, most of them were child under 5 years old, following by pregnant women and elderly.

Serotypes in Circulation: DEN 1, 2, 3 and 4. The circulation of all of the serotypes increases the risk for appearance of severe dengue.

RECOMMENDATIONS FOR DENGUE PREVENTION AND CONTROL

Considering the risk that this year 2011 represents in the persistence of the meteorological phenomenon of La Nina- with periods of intense rains- and the continuation of the macro-factors generators of dengue in the Region, the Pan American Health Organization recommends to its Member States to continue and reinforce the actions of prevention and control that involve all government actors and/or non governmental and above all, the community.

The following are key recommendations to prevent and control dengue outbreaks. Members States should maintain:

- A high clinical epidemiologically and entomologically surveillance, sharing information on an timely basis on any increase in the number of cases and the presence of the vectors, to try to give an anticipated and effective response, not only at a local level but also globally.
- Actions aimed to eliminate the vector in an organized and coordinated manner.
- A surge response capacity of the health system to response to a possible increase in the severe forms of dengue, above all in those countries and territories where it is detected by laboratory the introduction of new serotypes of the disease.
- Training activities for all health personnel, overall in in the primary care sector. Avoiding deaths has to be the first priority in the health sector.
- The adequate operation of fumigation equipment and reserves of pesticides to respond in an adequate manner.
- Monitoring actions (quality control) and field work of the staff, not only during the focal treatment but also during the fumigation treatment (adulticide). In the manner that the actions for vector control, in time and space, are made to coincide with one another. Through this, the highest impact will be made less time.
- The social communication strategy for change behaviors, that has to be addressed to eliminate natural larval habitats that produce the greatest number of adult *Aedes* mosquitos.

Practical Advice to the Population

Maintain your home and surrounding, as well as your area of work and/or study, clean and free of natural larval habitats of the mosquito *Aedes aegypti*. This applies to all receptacles that contain or can contain water that are not properly covered and therefore, give the mosquito the opportunity to lay their eggs and generated new adult mosquitoes that can later transmit the disease.

The following are advices on how to put in practice what was signaled beforehand:

- Eliminate cans, bottles, tires, and other receptacles that can contain rain water.
- Clean and repair the gutters in your home.
- Do not use flower vases, or flower pots with water. Instead, fill them with water or dirt. If you decide to leave in the water, clean the water in less than 7 days to prevent the larvae to get to adulthood.
- Clean the water bowls of pets with a brush.
- Maintain the yard of your home clean. Eliminate dumpsters where there area always receptacles that can fill with rain water.
- Avoid the accumulation of stagnant water in your house or neighborhood.
- Cover in a secure manner the receptacles in which water for human and domestic use is stored.
- Maintain trash receptacles covered and under a roof.

Good practices in the Dengue Prevention and Control

Most of the countries have incorporated to their daily routine the objectives and activities proposed in the document *Integrated Management Strategies for the prevention and control of dengue* (IMS-dengue), with national plans at different levels of implementation.

Here we reinforce some of the practices that the countries should implement, inspired in the model of integrated management, and with the objective of reducing the morbidity, fatality, and the social and economic burden generated by the disease.

Actions suggested about communication and community participation

- *Elaboration of a Communication and Social Mobilization Plan.*
- *Implementation of advocacy activities to aware politicians and organized society about the issue.*
- *Implementation of dengue prevention and control plans in risk areas aimed to modify the social determinants of dengue.*
- *Training of health personnel in health education and communication methodology.*

Some suggested actions in the Entomology area

- *Application of measures in the control of larval habitats by physical, biologic, and chemical methods that involve the community.*
- *A standard procedure for the regulation of the acceptance of used tires.*
- *Strengthening of the entomological surveillance system and the control of vectors, in an efficient and opportune manner.*

Some suggested actions for Epidemiological Surveillance

- *Strengthening of the surveillance network, incorporating community participation and others community actors (social security, Police and other Armed Forces institutions, and private clinics).*
- *Establishing an analyzed information flow including the different actors.*
- *Implementation of situation rooms at the different levels.*
- *Elaboration of contingency plans for situations of outbreaks and epidemics.*
- *Elaboration and harmonization of criteria for risk stratification at the municipal, district and local level (keeping in mind the geographic unit of the countries).*

Some suggested actions in the area of attention to the patient

- *Elaboration of training modules that contain the components of integrated management designated to health personnel.*
- *Assessment of the contingency plans for clinical processes during an outbreak.*
- *Assessment of the adequate care of patients, according to the national norms.*

Some actions suggested in the laboratory area

- *Matching and recognition of the diagnostic capacity of the infections by dengue in the laboratories of reference of the Member and Associated States.*
- *Strengthening of the response capacity of the national laboratories upon outbreaks and dengue epidemics.*
- *Strengthening of the interaction between surveillance, patient care service and the laboratory.*

The following are actions taken by the countries that currently have outbreak situations:

BOLIVIA

- Declaration of a holiday by the Trinidad Municipality for the clearing of potential larval habitats with the participation of the community.
- Creation of a medical-scientific committee for the study and classification of all deaths with suspicion of dengue.

BRASIL

- The Ministry of Health of Brazil maintains an active website called *Fight Dengue* (<http://www.combatadengue.com.br/>) with news updated on a daily basis, printed materials, as well as audio and visual material from the campaign that can be downloaded and used by diverse audiences.
- Prioritization of the topic of dengue by the president Dilma Rousseff who was the leader of the "caravan of dengue", for social conscience.
- The realization of a public gathering with businessmen of the communication, automobile, grocery, food, media, and tourist operation sectors, among others; to pledge their support in the actions.
- Presentation of a new risk map, elaborated from a new analysis launched by the Ministry of Health in September of 2010. Within it, they consider six basic criteria: four of the health sector (current case incidence, new case incidence in past years, infestation incidence of *Aedes aegypti* and serotypes in circulation). The fifth, is environmental (clean water and collection of trash) and the last, demographic (population density).

PERU

- Declaration by the Regional Government of Loreto of a day of public standstill, for cleaning by the community. The measure was well accepted by the population and 700 tons of unusable utensils that were in patios of houses and public spaces, with the risk of becoming larval habitats, were collected.
- Dissemination of the information by the media on “signals of alarm” in a patient with suspected dengue.
- Meeting with the new municipal authorities to support the different dengue task forces.
- Conducting a workshop of risks communication to the spokesmen of public institutions.
- Implementation of a situation room to monitor the outbreak in Loreto. Implementation of a surveillance site to obtain acute samples that allow the identification of the serotype involved in the severe cases and in the fatalities.
- Strengthening of the fever clinics. Distribution of case management guidelines and out- patient and in-patient flowchart.
- Strengthening the laboratory capacity at local, regional (Iquitos) and at the National Level (National Institute of Health). As a result, it was possible to obtain acute samples for viral isolation. The serotypes DENV-2 and DENV-4 were identified.