



## **Strategy for Enhancing National Capacity to Respond to Zika virus Epidemic in the Americas**

**June 2016**

## Introduction

This document outlines the strategy of the Pan American Health Organization, Regional Office of the World Health Organization (PAHO/WHO) for the enhancement of technical cooperation to Member States in light of the rapid regional dissemination of Zika virus since November 2015. This technical cooperation builds on ongoing efforts to strengthen the detection, prevention, and response to arboviral illnesses.

## Background

Zika virus is an emerging viral disease that is transmitted through the bite of an infected mosquito, primarily *Aedes aegypti* that also transmits chikungunya, dengue and yellow fever. *Aedes* mosquitoes are present in all Member States of the Americas except Canada and continental Chile.

Autochthonous circulation of Zika virus (ZIKV) in the Americas was first confirmed in February of 2014 on Easter Island, Chile. In May 2015, the first autochthonous cases of Zika virus in Brazil were confirmed.

As of 29 January 2016, 25 countries and territories in the Americas were reporting local transmission of Zika virus, including Barbados, Bolivia, Brazil, Colombia, Costa Rica, Curacao, Dominican Republic, Ecuador, El Salvador, French Guiana, Guatemala, Guadeloupe, Guyana, Haiti, Honduras, Martinique, Nicaragua, Mexico, Panama, Paraguay, Puerto Rico, Saint Martin, Suriname, US Virgin Islands, and Venezuela.

It is likely that Zika virus will continue to spread and will likely reach all countries and territories of the Americas where *Aedes* mosquitoes are found.

In October 2015, Brazil public health authorities detected an unusual increase in microcephaly cases in public and private healthcare facilities in Pernambuco state, Northeast Brazil. As of 23 January, 4,180 suspected cases of microcephaly potentially linked to Zika virus have been reported.

In addition, an increase in Guillain-Barré Syndrome (GBS) has been observed in Brazil, Colombia, El Salvador, Martinique and Suriname.

## PAHO Incident Management System for Zika Virus

Given the rapid dissemination of Zika virus in the Region of the Americas as well as the detection of severe outcomes potentially related to Zika virus infection, PAHO Director, Dr. Carissa Etienne activated PAHO/WHO's Incident Management System on 8 December 2015 in order to make the best possible use of the expertise of the PAHO Secretariat in expediting the support to Member States.

Dr. Sylvain Aldighieri, Unit Chief, IHR, Epidemic Alert and Response unit within the Department of Communicable Diseases and Health Analysis has been appointed the Incident Manager (IM) for the response to the Zika virus. Dr. Marcos Espinal, Director of Department of Communicable Diseases and Health Analysis, continues his role as spokesperson for the event. In addition, the incident management structure includes the following areas and roles:

### **Communicable Diseases and Health Analysis Department:**

- Information sharing and development of information products such as technical documents (fact sheets, situation reports) and the *Epidemiological Alerts*;
- Providing guidance on matters related to *Travel & Health*, mass gatherings, and functioning of IHR-related structures such as the Emergency Committee;
- Providing technical cooperation on Event Based Surveillance;
- Surveillance of microcephaly and other congenital anomalies possibly associated with ZIKV infection during pregnancy;
- Development of clinical case definition for Zika virus, chikungunya and dengue infections, to allow adequate clinical management and, secondarily, proper case notification;
- Clinical surveillance of severe neurological syndromes;
- Coordination of WHO Collaborating Centers network for laboratory training and provision of reagents;
- Technical support to vector control activities and insecticide resistance monitoring;
- Technical support to country requisitions for procurement of insecticides done through PAHO's Strategic Fund;
- Technical cooperation on risk communication to Ministries of Health;
- Development of a research agenda and direct technical support to studies;
- Provision of a stock of immunoglobulin for treatment of Guillain-Barre Syndrome for emergency requirements.

### **Family, Gender, and Life Course Department:**

- Considerations and recommendations for pregnant women;
- Guidance for microcephaly and other congenital anomalies surveillance';
- Recommendations for clinical management and follow-up for infants with microcephaly.

**Emergency, Preparedness and Disaster Relief Department:**

- Management of Emergency Operations Center, human resources' mobilization;
- Health cluster and inter-cluster coordination, facilitating information-sharing and coordinating activities;
- Logistics – acquisition, storage and distribution of essential products for Zika virus outbreak response.

**Health Systems and Services Department:**

- Preparedness of health facilities for triage and management of ZIKV infected patients (mild disease);
- Ensure availability of health products / medicines for treatment of severe cases or autoimmune complications of Zika virus infections;
- Develop country guidance to provide adequate and integral care to an unexpected increase of microcephaly infants;

**Communications Department:**

- Coordination with media, website and other communication materials.

**External Relations, Partnerships, and Resource Mobilization Department**

- Resource mobilization.

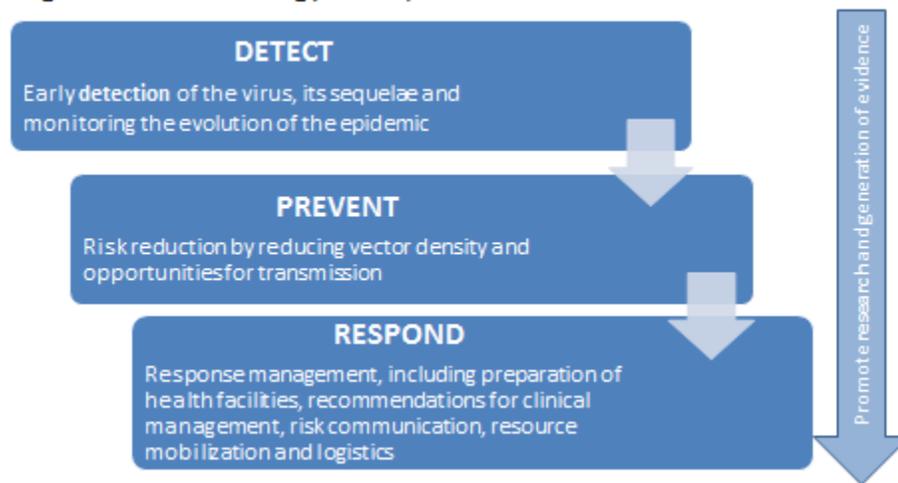
**PAHO Strategy for Enhancing National Capacity to Respond to Zika virus Epidemic in the Americas**

As described in figure 1, PAHO strategy is based on three objectives:

1. Detect introduction of the virus in a timely manner and monitor the evolving epidemic including the detection of rare and severe outcomes associated with the virus.
2. Reduce the risk posed by high vector density thus minimizing opportunities for transmission.
3. Provide tools and guidance for adequate response management, including appropriate handling of cases, preparing facilities and healthcare workers for surges in demand of specialized care, minimize the risk for atypical / severe ZIKV infection related consequences, building on existing capacity in risk communication and mass gatherings.

In addition, there is a cross cutting objective to develop a regional research agenda on ZIKV that identifies and prioritizes current gaps in knowledge that should be addressed to guide evidence-based, public health interventions.

Figure 1: PAHO Strategy to respond to Zika virus



### Key activities by objectives

**Objective 1:** Detect introduction of the virus in a timely manner and monitor the evolving epidemic including the detection of rare and severe outcomes associated with the virus.

**Key activities**

- Provide guidance to Member States on surveillance of complications of Zika virus infection and sequelae;
- Support Member States in the implementation of an integrated arbovirus surveillance;
- Disseminate information of the evolving epidemic and its consequences and sequelae in the Region through IHR channels and dedicated PAHO Zika virus website;
- Enhance laboratory capacity in Member States, including novel serological methods for detection of non-acute infections;
- Support the implementation of event based surveillance as a complement to indicator based surveillance.

**Objective 2:** Reduce the risk posed by high vector density thus minimizing opportunities for transmission.

**Key activities**

- Expansion of integrated vector management strategy to improve effectiveness and efficiency of current vector control programs;
- Continue to strengthen surveillance of insecticide resistance and vector infestation to guide evidence based vector control activities;
- Communicate timely, accurate information on Zika virus, addressing public health concerns,

and providing information that the population needs regarding possible health problems related to this disease;

- Continue encouraging changes in individual behavior and community participation, in order to control the vector and its domestic breeding sites. Improve collaboration within the health sector and with other sectors to promote a coordinated response and strengthen vector control activities;
- Support the purchase of insecticides (larvicides/adulticides) and personal protective equipment for vector control officers.

**Objective 3:** Support the response to the event, providing tools and guidance for adequate response management, including appropriate handling of cases, preparing facilities and healthcare workers for surges in demand of specialized care, resource mobilization and building on existing capacity in risk communication.

**Key activities**

- Provide guidance to Member States on case management of GBS, Zika virus infection among pregnant women, and cases of microcephaly or other neurological anomalies;
- Develop tools for triage of suspected Zika, chikungunya and dengue cases;
- Support Member States in the preparation of healthcare network and facilities to assist in the provision of specialized care;
- In close collaboration with relevant international agencies and partners, provide advice to Member States on measures related to travelers, conveyances, points of entry, trade, etc.
- Provide support to Member States, and Brazil in particular, regarding the measures to be adopted in relation to the Rio 2016 Olympics;
- Support Member States in the strengthening of birth defects surveillance (focused in microcephaly) and to design and implement comprehensive health services for the affected infants;
- Provide guidance to Member States in order to strengthen antenatal care services for ensuring adequate clinical management / support of pregnant women with rash??
- Support the provision of essential medicines and products for management of complicated Zika cases;
- Create and maintain an emergency stock of essential products for complicated cases;
- Integration of vector control activities in the context of response to other emergencies, such as floods;
- Capacity building on risk communication, developing tools and providing training.

**Cross-cutting objective:** Promote the development of a **research** and generation of evidence

**Key activities**

- Convene key researchers and public health practitioners working on ZIKV to define a *Regional Research Agenda* that identifies and prioritizes current gaps in research to address the public health threat posed by Zika virus;
- Develop a Regional Research Agenda as a call for action on priority issues and to be used as a tool to mobilize the required resources;
- Facilitate the revision and implementation of epidemiological and entomological studies based on identified needs;
- Facilitate the development of material transfer agreements to expedite sharing of biological specimen in a transparent and equitable manner;
- Establish mechanisms for expedited information-sharing related to the research agenda, including addressing issues around data ownership and intellectual property;
- Promote South-South research collaborative projects and transfer of technology;
- Develop an inventory / data base of ongoing research projects to monitor the coverage of relevant public health topics (i.e. risk of development of congenital Zika, risks and prognosis factors for GBS).

## Estimated Budget by Objective

| Objectives   | Estimated Cost USD |
|--|--------------------|
| <b>Objective 1:</b> Detect introduction of the virus in a timely manner and monitor the evolving epidemic  | <b>4,000,000</b>   |
| <b>Objective 2:</b> Reduce the risk posed by high vector density thus minimizing opportunities for transmission  | <b>5,640,000</b>   |
| <b>Objective 3:</b> Support the response to the event, providing tools and guidance for adequate response management, including appropriate handling of cases, preparing facilities and healthcare workers for surges in demand of specialized care, resource-mobilization and building on existing capacity in risk communication | <b>4,500,000</b>   |
| <b>Cross cutting objective:</b> Promote the development of a research agenda   | <b>908,224</b>     |
| <b>Coordination and management</b>   | <b>1,120,000</b>   |
| <b>Sub-total</b>   | <b>16,168,224</b>  |
| <b>PSC (7%)</b>  | <b>1,131,776</b>   |
| <b>Total</b>   | <b>17,300,000</b>  |

Response includes country offices requirements to support national responses until December 2016.