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A light blue silhouette of a world map is centered in the background of the right-hand section of the cover.

# ZIKA VIRUS OUTBREAK GLOBAL RESPONSE

Interim report | May 2016

# About this report

This is an interim report on the WHO-led global response to the emerging threat posed by Zika virus. It summarises the background to the Strategic Response Framework and Joint Operations Plan published in February 2016, provides an update on some key activities conducted by WHO and its partners since, and sets out the current funding gap for critical activities until the end of June 2016, as well as the approach to setting a new strategy from July 2016 onwards.



An employee at an auto yard in Baranquilla, Colombia, checks for mosquito larvae in standing water that has accumulated in tyres. In the past, employees at the yard have come down with dengue and chikungunya viruses, which are spread by the same *Aedes Aegypti* mosquito as is Zika virus.

Photo credit | Joshua E Cogan

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## Background

Zika virus is an emerging viral disease that is transmitted through the bite of an infected mosquito, primarily *Aedes aegypti*, the same vector that transmits chikungunya, dengue and yellow fever. Zika has a similar epidemiology, clinical presentation and transmission cycle in urban environments as chikungunya and dengue, although it generally causes milder illness.

Zika virus was first identified in 1947 in a monkey in the Zika forest of Uganda, and was first isolated in humans in 1952 in Uganda and the United Republic of Tanzania. Zika virus has been causing sporadic disease in Africa and Asia. Outbreaks were reported for the first time from the Pacific in 2007 and 2013 in Yap Island (Federated States of Micronesia) and French Polynesia, respectively. There was subsequent spread of the virus to other Pacific islands, including Cook Islands, Easter Island (Chile), Fiji, New Caledonia, Samoa, Solomon Islands and Vanuatu. The geographical range of Zika virus has been steadily increasing ever since.

In February 2015, Brazil detected cases of fever and rash that were confirmed to be Zika virus in May 2015. The last official report dated 1 December 2015, indicated 56 318 suspected cases of Zika virus disease in 29 States, with localized transmission occurring since April 2015. Due to the magnitude of the outbreak, Brazil has stopped counting cases of Zika virus. Today the Brazilian national authorities estimate 500 000 to 1 500 000 cases of Zika virus disease. In October 2015, both Colombia and Cabo Verde, off the coast of Africa, reported their first outbreaks of the virus. As of 19 March 2016, Colombia had reported 56 477 suspected cases of Zika virus, while Cabo Verde reported 7499 suspected cases as of 6 March 2016.

An International Health Regulations (IHR 2005) Emergency Committee met on 1 February 2016, and WHO declared the recent clusters of microcephaly and other neurological disorders in Brazil, following a similar cluster in French Polynesia in 2014, constitutes a Public Health Emergency of International Concern. In the absence of another explanation for the clusters of microcephaly and other neurological disorders, the IHR Emergency Committee recommended enhanced surveillance and research, and aggressive measures to reduce infection with Zika virus, particularly amongst pregnant women and women of childbearing age.

## The Strategic Response Framework and Joint Operations Plan

On 14 February 2016, WHO launched a global Strategic Response Framework and Joint Operations Plan to guide the international response to the cluster of congenital malformations (microcephaly) and other neurological complications (Guillain-Barré syndrome or GBS) that appeared to be linked to Zika virus infection. The strategy focuses on mobilizing and coordinating partners to assist affected and at-risk countries across three core areas: surveillance, response and research.

WHO's Regional Office for the Americas (AMRO)/Pan American Health Organization (PAHO) has been working closely with affected countries in the Americas since mid-2015 to investigate and respond to the outbreak. AMRO/PAHO has mobilized staff and members of the Global Outbreak Alert and Response Network (GOARN) to assist Ministries of Health in strengthening detection of Zika virus through rapid reporting and laboratory testing. A GOARN international team visited health authorities in Brazil to help assess the unprecedented increase in microcephaly cases and their possible association with Zika virus infection, as well as to provide recommendations to the Ministry of Health for surveillance, disease control measures and epidemiological research. WHO has published 16 guidance [documents](http://www.who.int/csr/resources/publications/zika/en/) (<http://www.who.int/csr/resources/publications/zika/en/>) covering all aspects of the response translated into relevant languages.

As of 18 May 2016, 60 countries and territories have reported continuing mosquito-borne transmission of Zika virus—primarily in South and Central America; many of these countries and territories also reported increasing numbers of microcephaly cases, Guillain-Barré syndrome, and other neurological

complications. 46 countries are experiencing a first Zika virus outbreak since 2015. It is hard to predict where the virus will go next. The *Aedes aegypti* mosquito that carries the virus has habitats in parts of southern Europe, Africa and the southern United States; and other *Aedes* species, including those active in temperate latitudes, could also become more active vectors.

The global response to Zika is coordinated from WHO headquarters in Geneva. The agency has activated an Incident Management System (IMS) in its headquarters and regional offices as part of its new programme for outbreaks and health emergencies. The system enables a dedicated incident manager based at WHO headquarters to draw on expertise and resources from across the entire Organization.

PAHO and WHO's operational response began long before the declaration of the Zika outbreak as a Public Health Emergency of International Concern and has accelerated since. In addition to expert fact-finding and advisory missions to affected countries, including most recently to Cabo Verde, WHO has established an Emergency 4Ws Portal on its website to provide a central point of reference for partners showing in real time who is doing what, where, and when, at the global, regional, and national level. The 4Ws portal has already had an impact; more than 500 partner activities and associated budgets are now being tracked through the tool, helping to ensure that effort is directed where it is most needed, duplications and deficits are minimised, and the cost-effectiveness of activities is boosted accordingly.

Based on research to date, there is scientific consensus that Zika virus is a cause of microcephaly and Guillain-Barré syndrome.

## Progress and funding gaps in the response

Significant funding gaps exist for the full implementation of the Strategic Response Framework and Joint Operations Plan by WHO and its partners. This interim report highlights important work carried out so far, outlines the main priority funding needs, and explains how a new strategy will be developed to meet the challenge posed by this emerging threat.

In February 2016, 23 partners were identified as working with WHO to implement the Strategic Response Framework published in February 2016. This number has now increased to over 50. The following activities, which are not exhaustive, have been undertaken by WHO and some partner organizations. These examples serve to illustrate the depth and breadth of work being conducted globally despite a significant gap between the funding requested and the funding received, and reflect the addition of new partners to the collaboration against Zika.

Since the initial Joint Operations Plan was published, the total amount of funding being requested by WHO and partners for activities over the first six month period to July 2016 has increased from the initial US\$ 56 million. WHO's Contingency Fund for Emergencies, established in May 2015, has rapidly released US\$ 3.8 million to implement the initial stages of the response.

Whilst the amount of funding secured has fallen far short of this request, funding requirements have been re-prioritized and an amount for 'essential activities' has been determined to ensure the limited available funding goes where it is most needed. New funding figures will be included in the revised global strategy, but where current gaps and essential requirements are known, they are indicated below.

### Panel 1 | Partners contributing to the Zika emergency 4Ws portal

AmeriCares  
 Australasian Society for Infectious Diseases  
 Australian Cerebral Palsy Alliance  
 Child Fund International  
 Cruz Roja Boliviana  
 Curtin and PathWest  
 European Centre for Disease Prevention and Control  
 European Virus Archive goes Global  
 Heart to Heart  
 Institut Pasteur  
 Institute of Environmental Science and Research, New Zealand  
 International Federation of Red Cross and Red Crescent Societies  
 International GBS Outcome Study  
 International Medical Clinic  
 International Severe Acute Respiratory and Emerging Infection Consortium  
 Malteser International  
 Marie Bashir Institute for Infectious Disease and Biosecurity  
 National Institute for Communicable Diseases, South Africa  
 National Institute of Infectious Diseases, Japan  
 New South Wales Public Health Library  
 Peruvian Red Cross  
 Public Health Agency of Canada  
 Save the Children  
 UN Development Programme (UNDP)  
 UN High Commissioner for Refugees (UNHCR)  
 UN International Children's Emergency Fund (UNICEF)  
 UN International Strategy for Disaster Reduction (UNISDR)  
 UN Population Fund (UNFPA)  
 UN Women  
 Universal Postal Union  
 University of Sydney  
 University of Texas Medical Branch - Research  
 University of the West Indies  
 US Centers for Disease Control and Prevention  
 US Department of Health and Human Services  
 World Food Programme  
 World Vision

## WHO

Funds requested	US\$ 17 721 484
Funds received	US\$ 2 338 084
Funding gap	US\$ 15 383 400

*These figures exclude PAHO (see below).*

As of May 2016, the funding gap stood at US\$ 15.4 million plus the US\$ 3.8 million from the Contingency Fund for Emergencies which need to be reimbursed.

WHO is playing a lead role in facilitating the development of a research agenda that will address vital questions that must be answered to respond to the Zika virus outbreak. WHO has used its convening authority to bring together more than 250 experts at meetings and in working groups to produce guidance, set research priorities, and advise on surveillance and response strategies.

Data are the basis for public health research and action, and rapid data sharing is critical during an unfolding health emergency. WHO has addressed deficiencies with existing data-sharing mechanisms by creating the Zika Open Repository to allow open and early access to Zika-related research manuscripts that are awaiting publication in peer-reviewed journals.

Furthermore, WHO has also initiated an emergency research and development plan, tailored to the current state of understanding of Zika virus infection, which addresses the research and development needs for new methods of mosquito control, diagnostics, vaccines, and therapeutics. The plan also sets out a strategy for the coordination of supportive research activities, such as the validation of appropriate animal models.

Another crucial aspect of WHO's early response has been to ensure that information flows easily to those who need it most: the public, health workers, researchers, and policy-makers. WHO's dedicated Zika portal hosts a rich range of public information materials about Zika virus and its potential complications, including videos, Q&A's, factsheets, infographics and timelines. WHO has been listening to news and social media and managing rumours. WHO Zika tweets have been seen 31.8 million times. Facebook posts on Zika have reached over 8.9 million people, with as many as 287 000 users interacting with the posts.

Since the Zika outbreak was declared a Public Health Emergency of International Concern, WHO has published a weekly situation report on its dedicated Zika portal, ensuring the latest epidemiological data are publicly available. WHO headquarters also produce regular briefings and talking points for partners and key decision-makers.

WHO has rapidly produced and translated 16 expert guidance documents on topics ranging from psychosocial support for mothers to surveillance guidance for entomologists. In addition, WHO Zika apps for android and iOS mobile devices help keep health workers and the public connected to the latest guidance and developments. With constant new information, WHO has revised its approach since February 2016

and these changes will be reflected in the upcoming revised Strategic Response Framework in June.

In addition, the Western Pacific Regional Office (WPRO) had a partially activated Incident Management System and Emergency Operations Centre already running prior to declaration of the Public Health Emergency of International Concern as a result of recent Zika outbreaks in the region. This was then fully activated and adapted to the WHO headquarters IMS structure on 1 February 2016 to coordinate the response and share guidance documents and key information with Member States.

WPRO initially requested US\$ 3.8 million and have received just under US\$ 600 000, leaving a gap of US\$ 3.2 million.

WPRO has been the second most affected region after PAHO, with eleven countries and areas within the Region reporting locally acquired Zika cases in 2016. A total of 17 countries and areas have now reported vector borne Zika cases since the first large outbreak in Yap Island, Federated States of Micronesia in 2007.

WPRO has provided technical assistance to eight countries and areas through the deployment of eleven experts in epidemiology, entomology and risk communications. Laboratory testing equipment and vector control supplies have been provided to six countries and areas within the region.

WPRO will continue to support Member States in the management of Zika and its complications in line with the revised Strategic Response Framework.

## PAHO

Funds requested	US\$ 8 132 000
Funds received	US\$ 1 640 000
Funding gap	US\$ 6 492 000

PAHO has received approximately US\$ 1.6 million so far, but has an outstanding gap of US\$ 6.5 million.

In response to the declaration of the Public Health Emergency of International Concern pertaining to Zika-related complications, and with the intent to provide urgent support to Member States, on 1 February 2016, PAHO implemented an Incident Management Structure within the Organization's Emergency Operations Centre.

PAHO, WHO's Regional Office for the Americas has been the critical hub of the Zika response. To date, 35 countries and territories have confirmed local, vector-borne transmission of Zika virus in the Region of the Americas since 2015. Suspected and confirmed Zika virus cases have been showing a downward trend in some countries in the Americas, consistent with trends that have been observed in corresponding periods in previous years for other mosquito-borne diseases. Conversely, the trend of cases is still increasing in countries and territories in the Americas for which the outbreak started later, such as the Dominican Republic and Guadeloupe. At this stage, based on the evidence available, WHO does not see an overall decline in the outbreak. Vigilance needs to remain high.

PAHO has carried out 22 technical missions to 16 countries, procured laboratory supplies for 15 countries, conducted multiple workshops and technical meetings, and deployed many experts across the region to support countries. The essential activities that PAHO still needs to carry out can be split into surveillance, response and research. Surveillance includes missions to countries for implementation of surveillance guidelines, the provision of laboratory supplies to maintain virological surveillance for Zika and other arboviruses (viruses transmitted by blood-sucking arthropods), and the deployment of experts to affected countries. Under response, PAHO intends to conduct training, strengthen community participation, provide mosquito control material and support the management of Zika and its complications. PAHO's updated approach will be reflected in the revised Strategic Response Framework.

## AMERICARES

Throughout Latin America and the Caribbean, AmeriCares is partnering with hospitals and clinics to ensure they are well equipped to address the intensifying health crisis. AmeriCares is also working to improve education and prevention and ensure health providers have the medicine and supplies to provide the best possible care.

In Haiti, AmeriCares is working with a partner organization on a prevention program for expectant mothers, with the goal of keeping the women Zika-free until they deliver. In El Salvador, AmeriCares is developing a Zika-prevention program at its clinic, which provides primary and specialty care services for more than 60,000 patients annually, including prenatal care. As part of prevention efforts, supplies of insect repellent are being delivered to partners in El Salvador, Puerto Rico and Florida. Other Zika-specific supplies have been delivered to El Salvador, Dominican Republic and Nicaragua.

AmeriCares, which donates medicine and supplies to U.S.-based medical teams volunteering overseas, is also providing education materials to medical professionals working in Zika-affected countries. AmeriCares is supporting more than 150 medical teams planning travel to Latin America and the Caribbean through June.

## UNDP

Funds requested	US\$ 4 175 000
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Funds received	US\$ 40 000
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