



## CARIBBEAN PUBLIC HEALTH AGENCY

### *Zika- the disease*

Zika virus is an emerging mosquito-borne virus that was first identified in 1947 in rhesus monkeys in the Zika forest in Uganda, hence the virus was named “Zika”. The virus was subsequently identified in humans in 1952 and with small outbreaks reported in Africa and parts of South-east Asia. The virus was relatively unknown until 2007 when the large outbreaks reportedly began in several islands of the Pacific Region. Zika virus entered the Americas in 2014 when the first local cases of transmission were detected in Chile. In May 2015, local transmission was reported in Brazil and since then Zika virus has spread to several countries and territories in the Americas and the Caribbean.

Zika is transmitted primarily by the *Aedes aegypti* mosquito, the same mosquito which transmits chikungunya, dengue and yellow fever and which is present in every country of the Caribbean. Mosquitoes become infected when they feed on a person during the first week of infection with the virus and in turn these infected mosquitoes can then spread the virus to other people through bites.

The symptoms of Zika are similar to other mosquito-borne infections such as dengue and chikungunya, and include fever, skin rashes, conjunctivitis, headache, muscle and joint pain, and a general feeling of being unwell. Only 1 in 4 persons infected with Zika virus may develop symptoms which are usually mild and last for 2-7 days. However, serious complications can sometimes occur in persons who are infected.

In 2013, during large outbreaks of Zika in French Polynesia and Brazil, respectively, national health authorities reported potential neurological and auto-immune complications of Zika virus disease which include Guillain Barre Syndrome (GBS) and meningitis. In 2015, local health authorities in Brazil detected neurological syndromes, including GBS, in some patients who were recently infected with the Zika virus. As at January 17, 2016, more than 3,500 cases of microcephaly (smaller than normal head size) and 46 related deaths have been reported in areas where the Zika is circulating. This gives cause for concern as the evidence points to a potential link between Zika infection and microcephaly in babies born to mothers who were infected with the virus during pregnancy. We still do not understand the relationship between Zika virus and microcephaly in babies but the possibility that there is a link gives reason for public health concern. Investigations are ongoing into understanding the relationship and

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other potential causes of the increase in the number of cases of microcephaly as there is yet no definitive link between the two.

Zika virus is diagnosed through PCR (polymerase chain reaction) and virus isolation from blood samples. There is currently no vaccine or vaccine available to prevent or treat Zika infection. People sick with Zika virus should get plenty of rest, drink enough fluids to prevent dehydration, and treat pain and fever with common medicines such as acetaminophen or paracetamol. If symptoms worsen, they should seek medical care and advice. Aspirin and other non-steroidal anti-inflammatory drugs (NSAIDs), like ibuprofen should be avoided until dengue can be ruled out to reduce the risk of haemorrhage.

Zika is a new virus to which the Caribbean population has no immunity and so as a Region we need to be prepared by putting measures in place to prevent and/or reduce its spread. Mosquitoes and their breeding sites pose a significant risk factor for Zika virus infection. The *Aedes aegypti* mosquito vectors are aggressive daytime biters, prefer to bite people, and live in and around humans and their environs. These mosquitoes typically lay eggs in standing water in things like barrels, used tyres, buckets, flower pots, vases – in any type of container which can collect water. Therefore, prevention and control lies in reducing mosquito infestation levels through source reduction (removal and modification of breeding sites), and reducing contact between mosquitoes and people. Source reduction includes activities such as securely covering water barrels, placing used tyres in areas where they cannot collect water, emptying flower vases and scrubbing the insides to dislodge mosquito eggs. The inspecting of premises – homes, schools, offices- once a week for at least 10 minutes to identify and remove breeding sites/potential breeding sites can be very effective in reducing the *Aedes aegypti* mosquito populations.

One home or yard breeding mosquitos can supply the neighborhood, so there is a collective responsibility as well. In a way ‘we are indeed our brother’s keeper’

As part of CARPHA’s continued support to Member States in responding to the growing challenges of vector-borne diseases in the Region, a new and innovative mobile app called Zap-a-'quito, short for Zap a mosquito, was launched in December 2015. Zap-a-'quito, is packed with facts and trivia and is a simple and informative way for children to receive information about the breeding sites and prevention and control of mosquitoes. The app is being promoted across the Region and is now available for download free on Google Play.

Persons can protect themselves from mosquito bites by using insect repellent; wearing clothes (preferably light-coloured) that cover as much of the body as possible; using physical barriers such as screens, closed doors and windows; and sleeping under mosquito nets.

Special attention and help should be given to those who may not be able to protect themselves adequately, such as young children, the sick or elderly. In view of this we are issuing a challenge to health authorities to encourage “zero tolerance” of mosquitoes in and around public health facilities. Mosquito breeding at these facilities can contribute to the spread of epidemics as

this is where persons who are sick, gather for medical attention. Environmental health staff are asked to increase mosquito surveillance activities in and around the sea and airports also in an effort to render them “mosquito-free!”

The measures which have been put in place to deal with outbreaks of dengue and more recently, chikungunya, are the same measures which need to be strengthened for dealing with Zika. The enemy is the same *Aedes aegypti* mosquito!