Zika virus is an emerging viral disease that is transmitted through the bite of an infected Aedes mosquito, primarily *Aedes aegypti* that also transmits chikungunya, dengue and yellow fever. These mosquitoes are present in all countries in the SEA region.

The virus has been circulating since the 1950s in human populations and is found in Africa, Asia, the Pacific Islands and most recently in the Americas. As of 27 January 2016, 24 countries and territories in the Americas were reporting local transmission of Zika virus, including reported outbreaks in 6 countries, Brazil, Columbia, Cape Verde, El Salvador, Martinique and Panama.

There were reports of evidence of zika virus infection in India, Indonesia and Thailand in the past. During 2012-2014, seven cases of acute zika infection were reported in Thai residents across the country, and in January 2016, three cases of Zika reported from our region, Maldives, Thailand and Taiwan CDC.

In November 2015, Zika virus was detected in Jambi province of Indonesia. This was confirmed using molecular techniques from the samples those were previously negative for dengue and chikungunya.

**Agent-Host-Environment**

**Agent:** Zika Virus, Genera: Flavivirus

**Host:** Monkeys and Humans are identified as host of Zika virus and its vector is Aedes mosquitoes which usually bite during the morning and late afternoon/evening hours and the same mosquito that spread dengue, chikungunya, and yellow fever. Reservoir of Zika virus is still unknown

**Environment:** Environment condition that suitable for the vector of Zika virus is playing important role of the spreading of Zika virus. In most cases, Zika spreads through the *Aedes aegypti* mosquito in tropical and sub-tropical regions. The *Aedes aegypti* mosquito does not survive in cooler climate temperatures. The *Aedes albopictus* mosquito can also transmit Zika virus and this mosquito can hibernate and survive cooler temperature region.

**Sign and Symptoms**

- The incubation period (the time from exposure to symptoms) of Zika virus disease is not clear, but is likely to be a few days.
- The symptoms are similar to other arbovirus infections such as dengue, include fever, skin rashes, conjunctivitis, muscle and joint pain, malaise, and headache.
- These symptoms are usually mild and last for 2-7 days.

**Important Reminders**

- ZIKA virus is transmitted by MOSQUITOES
- BEWARE of Aedes mosquito BITES in the morning and in the evening before dusk
- KEEP your surroundings CLEAN and DRY

**Top 10 Aedes Breeding Sites**

1. Bird baths
2. Old tires
3. Unused containers such as barrels
4. Flower pot saucers
5. Swimming pool covers
6. Wading pools
7. Clogged gutters/eaves troughs
8. Clogged drainage ditches
9. Small containers such as cans or bottle tops
10. Unused children’s toys or vehicles

**Key Gaps in Understanding of Zika Virus**

- Epidemiological characteristics of the virus, e.g. its incubation period, the role mosquitoes in transmitting the virus and its geographical spread.
- Potential medical counter measures (including treatments and vaccines) that can be developed.
- How Zika virus interacts with other arboviruses (viruses that are transmitted by mosquitoes, ticks and other arthropods) such as dengue.
- Development of more specific laboratory diagnostic tests for Zika virus that can reduce misdiagnosis that may occur due to the presence of dengue or other viruses in a test sample.
**Diagnosis**

Zika virus is diagnosed through PCR (polymerase chain reaction) and virus could be isolated from blood samples. Diagnosis by serology is difficult as the virus can cross-react with other flaviviruses such as dengue, West Nile and yellow fever.

**Potential Complication**

Neurological syndromes and birth defect were observed during the outbreak event; however, its causal relationship has not been established but strongly suspected.

**Treatment**

There is no specific medicine to treat Zika virus disease but symptoms can be treated;
- Using common pain and fever medicines
- Drink plenty of water
- Rest
- There is currently no vaccines available.

**Potential Complication**

Neurological syndromes and birth defect were observed during the outbreak event, however its causal relationship has not been established but strongly suspected.

**Transmission**

Zika virus is transmitted to people through the bite of an infected mosquito from the Aedes genus, mainly *Aedes aegypti* in tropical regions. This is the same mosquito that transmits dengue, chikungunya and yellow fever.

**Potential Spread and Pandemic**

Zika has the potential for further international spread through inadvertently transportation of infected mosquitoes that given the wide geographical distribution of the mosquito vector and the lack of population immunity in newly affected areas.

As per current evidence, the virus does not transmit easily from one person to another without direct contact. Sustained human-to-human transmission is one of the main factors to constitute a pandemic.

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**Prevention and Control**

Mosquitoes and their breeding sites pose a significant risk factor for Zika virus infection. Prevention and control relies on:

- Reducing mosquitoes through source reduction (removal and modification of breeding sites):
  - Empty, clean and cover containers that can hold even small amount of water such as buckets, flower pots and used tires. These places are used by mosquitoes to breed.
  - During outbreak: Fogging, insecticides spraying to control adult mosquitoes / applying larvicides to treat standing water sites.
- Reducing contact between mosquitoes and people by using:
  - Repellent,
  - Wearing cloths that cover as much of the body as possible
  - Physical barrier such as screen
  - Closed doors and windows and
  - Sleeping under mosquito nets.

**Prevention and Control**

The World Health Organization is working with Ministry of Health to:

- Define the research priorities for Zika virus disease by convening experts and partners meetings. For example, in early March and April 2016, WHO will host global meetings to assess gaps in evidence related to Zika and how best to address those gaps.
- Enhance surveillance of Zika virus and potential complications reporting.
- Strengthen capacity in risk communication, to help Ministry of Health to meet their commitments under the International Health Regulations.
- Providing training on clinical management, diagnosis and vector control through WHO Collaborating Centers.
- Strengthen the capacity of laboratories to isolate the virus.
- Support health authorities to implement vector control strategies aimed to reduce Aedes mosquito populations this includes use of larvicide to treat standing water sites.
- Prepare recommendations for clinical care and follow-up of patients with Zika, in collaboration with experts and other health agencies.

More info on Zika virus please visit: