

CHIKUNGUNYA – Information for Vector Control Personnel

Chikungunya is a viral disease which is spread by mosquitoes and can cause symptoms such as high onset of fever and severe joint pains. Outbreaks have occurred in Asia, Africa, Europe and islands in the Indian and Pacific Oceans but in December 2013, cases of chikungunya were confirmed for the first time in the Caribbean Region.

The Vectors

- *Aedes aegypti* and *Aedes albopictus* are the main mosquito vectors.
- Both mosquito species mainly bite during the daytime with peak feeding during twilight hours
- Both *Aedes aegypti* and *Aedes albopictus* can be found in some Caribbean islands *but Aedes aegypti* is the more prominent species in the Region.
- *Aedes aegypti* lives in and around human habitation and is commonly found resting and feeding indoors. The main breeding sites are containers which can be found on household premises. They usually contain stagnant water, and include flower vases, uncovered barrels, buckets, and discarded tyres.

Aedes aegypti



Aedes albopictus



Integrated Vector Management

Prevention and control of outbreaks of chikungunya depend on the implementation of integrated vector management strategies and personal protection to reduce mosquito densities and prevent mosquitoes from biting persons who are infected. Control measures are the same as for dengue, which can also be spread by both the *Aedes aegypti* and *Aedes albopictus* mosquitoes.

Surveillance

- Monitor vector populations and the risk for circulation of chikungunya virus.

- Conduct entomological surveillance activities to determine the most prominent types of *Aedes aegypti*/*Aedes albopictus* - producing containers and map high risk areas based on entomological indices.
- Establish/maintain communication with local epidemiology units to share epidemiological and environmental data and obtain information on the geographic location of chikungunya cases.
- Upon suspicion of a case of chikungunya, intensify vector control activities in and around the residence of the case to reduce mosquito infestation levels in an effort to stop transmission in the area.

Vector Control

- Reduce mosquito densities through source reduction efforts aimed at eliminating larval habitats.
- Involve the communities in clean-up programmes to remove discarded containers, tyres, etc which can support mosquito breeding.
- In circumstances where source reduction is not possible, householders should be encouraged to securely cover water-holding containers to prevent mosquito access. Larvicides or biological control agents, e.g. fish (guppies) can also be applied to potential larval habitats.
- *Aedes aegypti* and *Aedes albopictus* are most active during the day and can be controlled by ultra-low-volume (ULV) or thermal fogging insecticide applications in the early morning or late evening.
- Evaluate insecticide resistance status of local *Aedes aegypti* and *Aedes albopictus* populations in advance of an outbreak to ensure effective emergency control measures if necessary.
- Enhance current dengue control programmes in order to prevent Chikungunya transmission.

Personal Protection

There is no vaccine or medication available to prevent chikungunya. Encourage persons to reduce the risk of human-mosquito contact and the possibility of infection by doing the following:

- Using insect repellents on exposed skin
- Wearing long sleeved shirts and long pants when outdoors during the day and evening
- Using air conditioning and/or screen windows and doors
- Sleeping under an insecticide treated bednet
- Checking weekly for hidden bodies of water, such as clogged drains or gutters, or water-filled containers
- If they store empty containers or large objects outside, turn them over and place them in a position that does not allow water to collect in them
- Calling health authorities if they detect unusually large numbers of mosquitoes

In order to avoid mosquito bites and reduce the risk of chikungunya transmission, infected persons should be protected from additional exposure to mosquitoes within the first seven (7) days of illness.