The Virgin Islands Consortium

Chikungunya Epidemic Slams V.I., St. Thomas Hit Hardest

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Chikungunya Virgin Islands

As chikungunya cases continue to skyrocket in St. Thomas, residents have been calling on the Department of Health to conduct truck-mounted fogging to quell the seemingly unstoppable wave of the contagious disease. However, Health Commissioner Darice Plaskett hinted at other methods being used--even as the territory's epidemiologist, Dr. Esther Ellis, has confirmed that the Virgin Islands are now experiencing an epidemic. Pictured above, an Indonesian government employee makes fog at Bintaro residential to prevent the spreading of Chikungunya.

In August, the Virgin Islands Health Department reported there were over 150 suspected cases of chikungunya in the territory. In early September, that number had almost tripled as the department reported 415 suspected cases. Of that number, 389 suspected cases were reported on St. Thomas and St. John, while only 22 suspected cases were reported on St. Croix.

The amount of chikungunya cases now being reported in the territory is so widespread it has become difficult for the Department of Health (DOH) to keep count.

The U.S. Centers for Disease Control and Prevention has been assisting the Virgin Islands Health Department in strengthening its efforts to better investigate and diagnose potential cases, conduct proper surveillance and help educate health care workers about the clinical management of the virus. Because research confirmed that the Aedes aegypti mosquitoes carrying the chikungunya disease are usually found in homes and enclosed places, and lay their eggs in homes and other dwellings, the strategy used to help minimize the spread of the disease in the V.I. has been a combination of public outreach, source reduction and education on personal protection. The same strategy was reiterated in a media campaign waged by the DOH; however, the community's frustration, especially in St. Thomas where almost all cases have been reported, is now palpable.

Brett Ellis, Health Department entomologist said, "The impact of fogging to control Aedes aegypti, the mosquito responsible for transmitting dengue and chikungunya, has been controversial but most vector control programs acknowledge its extremely limited effect. Extensive trials carried out by the CDC others have repeatedly shown disappointing results, and there is no well-documented example of using fogging to interrupt an epidemic."

He added: "The primary reason for this is not because the chemicals are ineffective, but that it has been difficult to get the chemical in direct contact with the mosquito. This type of mosquito spends a lot of its time indoors near us, in dark places like our closets or under our beds, and do not come into contact with the chemicals when sprayed. Unlike many mosquito species, Aedes aegypti mosquitoes are aggressive daytime bitters, and fogging is typically performed in the evening. Fogging can also kill other beneficial insects such as bees."

Ellis went on to say there were "unique concerns" with implementing fogging in the Territory, particularly as it relates to safeguarding cisterns and potable water sources.

"Control programs should focus their efforts on an integrated approach that includes effective surveillance, clinical case management, community education, personal protection, and the destruction of mosquito breeding sites in and around our homes and public places," he said.

Health Commissioner Plaskett backed up Ellis' claim, adding that, according to CDC’s arboviral experts and vector control specialists, "the most effective method of abatement for Aedes aegypti mosquito in the territory is source reduction/elimination (draining and dumping stagnant water from containers like buckets, pet dishes, flower pots and tires)," and eradicating mosquito larva from large bodies of stagnant water that cannot be drained or dumped, by using the bacterial insecticide known as Bti briquettes or mosquito dunks.

The Department of Health’s territorial epidemiologist, Dr Esther Ellis, has said that the territory was now experiencing a chikungunya epidemic, and gave residents as well as visitors to the Islands, pertinent advice to protect themselves from catching the disease.

They include:

- Use insect repellents -- Repellents containing DEET or oil of lemon eucalyptus. Apply repellent only to exposed skin or clothing, follow product instructions carefully. Do not use repellents on babies less than two months of age.
- Use air conditioning or window/door screens to keep mosquitoes outside. If you are not able to protect yourself from mosquitoes inside your home or hotel, sleep under a mosquito bed net.
- Wear clothing that protects you from mosquito bites (long-sleeved shirts and long pants).
- Protect infants: cover cribs, strollers and baby carriers with cotton mosquito netting at all times, day and night, both inside and outside of your home. Dress babies in loose cotton clothing that covers arms and leg.
- Treat clothing with permethrin or purchase permethrin-treated clothing.

Awareness

Commissioner Plaskett reassured the community of the DOH's dedication to fighting the spread of chikungunya, and said the Department will increase the number of volunteers and staff traversing neighborhoods to raise awareness. Schools will also be canvased.

The mosquito-borne illness has symptoms similar to dengue. The symptoms generally begin three to seven days after being bitten by an infected mosquito, and may include fever, severe joint pain (often in the hands and feet), headache, muscle pain, joint swelling, or rash.