

Evaluation of community-level vector control activities and *A. aegypti* egg density indices in Guatemala

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The Zika Community Response (ZICORE) project in Guatemala aims to improve surveillance of the *Aedes* vector by using entomological data as the basis for low-cost community-level vector monitoring as well as social and behavior change interventions. In 2017, household-level *Aedes aegypti* breeding site monitoring was conducted in 44 communities. Ovitrap traps were installed in selected households and egg counts were recorded weekly. In these communities, 4,457 traps were positive out of 8,004 readings. A moving average was used to adjust for seasonality to enhance vector monitoring and identify communities of high entomological risk to be targeted for community-level clean-up campaigns. Utilizing weekly ovitrap monitoring results, the ZICORE project has implemented community-level campaigns to prevent *Aedes aegypti* breeding, such as:

- Breeding sites eliminated in targeted communities in the 90th percentile or above for ovitrap egg counts. Activities included disposal of non-useful containers and scrubbing of sinks and useful containers as part of the ZICORE-VELITA (*Voltear, Eliminar, Limpiar y Tapar*) protocol, which describes in Spanish the steps to be taken with household items that have the potential to become mosquito breeding sites (in English: flip, eliminate, clean and cover).
- Elimination of solid waste identified as potential *Aedes* breeding sites, including tires and non-useful containers of varying sizes. Included strong municipal government support, such as sponsored trash removal vehicles to dispose of waste.

Communities below the 90th percentile for ovitrap egg counts did not receive intensified community-level interventions and will be analyzed as controls. This analysis is useful for assessing any correlation between community-led clean-up campaigns and *Aedes aegypti* egg counts in intervention versus control communities.