

## **Use of dispersion index to identify key containers responsible for *Aedes aegypti* breeding in select communities of Guatemala**

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As part of the Zika Community Response (ZICORE) project in Guatemala, we quantified household containers that could become *Aedes aegypti* breeding sites in order to gather entomological data to target Zika prevention and control interventions. As the water supply fluctuates, households store water and often have non-useful containers outside where rain water also accumulates. In 2017, a round of pupal surveys was conducted in 32 Guatemalan communities. Water containers were inspected for *Aedes* larvae or pupae, which were counted when present. A dispersion index (DI) was used to validate the sample size of water containers and to determine if the sample size needed adjustment. A total of 821 households (HHs) were visited, 40% of which contained pupae (HH index). Use of DI allowed for basins and barrels to be identified as key breeding sites for *Aedes* in 18 out of the 32 communities visited. Small and medium containers kept in the front yards or backyards were identified as key breeding sites in 8 communities. Used tires kept outdoors were identified as key breeding sites in 3 communities. These data were used to guide the implementation of social and behavior change communication and community mobilization activities to reduce or eliminate key containers, such as mass disposal of used tires in targeted communities. In contrast to other indices, DI was used to effectively determine container productivity and identify key *Aedes* breeding sites that needed to be targeted and removed. Such data-driven vector control activities have the potential to increase cost effectiveness and impact in the reduction of Zika transmission.