

## CHALLENGES IN THE IMPLEMENTACION OF THE ECOHEALTH APPROACH FOR THE CONTROL OF A NATIVE VECTOR OF CHAGAS DISEASE IN GUATEMALA.

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**Background and Aims:** The natural habitats of triatomine bugs, the vectors of Chagas disease, include caves, animal burrows and nests, rock piles, and palm and trees cavities. In Central America, rural mud-bricked houses have similar conditions as caves or mud nests and are colonized by triatomines. The bugs probably arrive in human houses during annual migrations. Control of native vectors is not feasible with traditional insecticide application, new ECOHEALTH approach is experienced

**Methods:** The risk factors that sustain the presence and reproduction of bugs inside houses were addressed by developing community base interventions. The deterioration of wall plasters was addressed with a new mixture of local materials that could be applied with bare hands by women. Dirt floors were improved by applying a mixture of volcanic ashes heated with lime and compacted. The presence of domestic animals inside the house was reduced with the construction of wire corrals.

**Results:** Wall improvements reduced the number of bugs collected inside houses. Floor improvements reduced the presence of bug's eggs, and also decrease the prevalence of worm parasites in children. The removal of animals from inside the house improved not only the house sanitary conditions, but also the animals' living conditions leading to healthier poultry and pets. Over time the tendency of triatomine's blood sources is to reduce human blood consumption and switch to other domestic animal as poultry.

**CONCLUSION:** ECOHEALTH approach is an alternative for the control of native vector of Chagas disease in Guatemala reducing the risks factors that favor the presence of the vector inside human houses, the approach faced some challenges as: capacity building in rural communities and other stakeholders from health and environment institutions, development of a holistic perception of a disease problem, prevention-action approach rather than disease treatment, inter-institutional coordination, and sustainability of community participation among others.