

## **Proposing a semiquantitative tool for exposure to *Trypanosoma cruzi*: the Chagas Exposure Score (CES)**

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*Trypanosoma (T.) cruzi* infection leading to Chagas disease is considered endemic in 21 Latin American countries by WHO. Beyond vectorial transmission by reduviid bugs in rural settings, food contamination and vertical transmission from mother to child seem to play a larger part in recent years, moving the focus to urban settlements, rather. Another concern are infections due to blood or organ donations. Non-vectorial transmission also takes place in non-endemic countries, raising questions about screening individuals with a Latin American background. However, insecurity exists on the relative importance of episodes spent there, and of other criteria that may modify the risk of infection.

We therefore propose to develop and introduce a Chagas Exposure Score (CES) measured in “bug years”, which are calculated from the episodes spent in endemic countries. These will be multiplied by a modifying factor reflecting the relative endemicities of different countries and combined with other factors of personal history like rural dwelling, birth to an exposed mother, reception of blood or blood products. These can all be entered into a smartphone app and the resulting score calculated. There will be an option to enter serological test data, which serves to validate the exposure criteria.