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Spatio-temporal dynamics of dengue and chikungunya

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Stellingen

Behorende bij het proefschrift

Spatio-temporal dynamics of dengue and chikungunya:

Understanding arboviral transmission patterns to improve surveillance and control.

Maria Fernanda Vincenti Gonzalez

1. The transmission of dengue in our study area was highly focal (This thesis)
2. Proxy markers of poverty or lower socio-economic status were strongly associated with dengue seroprevalence hot spots at household and block level (This thesis)
3. The application of geographic information systems and spatial analysis for the detection of areas of greater transmission of dengue virus is of importance to improve the prevention and control of vector-borne diseases in urban areas of Latin America. (This thesis)
4. Focalizing dengue control measures during epidemic and inter-epidemic periods in disease high risk zones at household and neighborhood-level may significantly reduce pathogen transmission in comparison to random interventions (This thesis).
5. It is the interaction between infected mosquito dispersal at a very small scale and the movement of infected humans at a large scale that underlie the dynamics of dengue transmission through space and time. (This thesis)
6. A plausible mechanism to explain the influence of ENSO on dengue is related to the fluctuations of local climate conditions that are exhibited during an El Niño event (This thesis)
7. Our findings support the evidence of the effect of climate on dengue dynamics and advocate the incorporation of climate information in the surveillance and prediction of this arboviral disease in Venezuela (This thesis)
8. The directionality and heterogeneity of transmission during the first introduction of chikungunya, indicated existence of areas of diffusion and elevated risk of disease occurrence and highlight the importance of epidemic preparedness (This thesis).
9. Venezuela, once praised for its vector-control successes, has become a suitable place for endemic and (re-) emerging vector-borne diseases to spread at an explosive rate. The reduction and almost disappearance of vector control programmes during the last decade plus the current economic and health crisis has triggered this situation.
10. "Of all the forms of inequality, injustice in health care is the most shocking and inhumane." Martin Luther King Jr.
11. "We have the means and the capacity to deal with our problems, if only we can find the political will." Kofi Annan
12. "If you want to see things happen at the global level, start at the village level. Give women the tools and education and they will drive the change." Melinda Gates
13. "Nothing in life is to be feared, it is only to be understood. Now is the time to understand more, so that we may fear less." Marie Curie.
14. "Science is a way of thinking." Carl Sagan