Assessing Dengue transmission in the Southern of Puerto Rico implementing an agent-based model

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Abstract

Dengue is an arboviral disease caused by one of the four known dengue serotypes (1, 2, 3 and 4). In Puerto Rico, *Aedes aegypti* is the main vector of the virus, considering *Aedes mediovittatus* as a secondary vector in rural areas. Mainly the factors that impact transmission can be grouped into four areas: pathogen, vector, susceptible population and environment. In the first phase we evaluated the feasibility of developing an agent-based model using real-world data collected in the southern area of Puerto Rico. The ultimate objective of the project is, once the model has been calibrated and the results obtained, compare it with the real-world data that will be continuously collected.

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