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Guido Felipe España* (guido.espana@nd.edu) and **Alex Perkins**. *Projecting the impact of the CYD-TDV vaccination against dengue in Puerto Rico.*

Dengue is the fastest spreading vector-borne disease worldwide causing around 100 million cases every year. Almost 3 million cases were reported in Latin America in 2019. Even though a vaccine (CYD-TDV) has been developed against dengue, its efficacy is heterogeneous in the population. Hence, the World Health Organization has recommended to use serological screening prior to vaccination to administer the vaccine only to individuals that would benefit from it. However, serological screening with poor accuracy could result in misclassification of individuals, reducing the benefits of vaccination. We developed a stochastic, agent-based model to project the impact of routine vaccination strategies in a setting representative of Puerto Rico. We used our model to project the benefits of vaccination strategies with different levels of the accuracy of serological screening, and estimated the cost-effectiveness of these interventions. Our results suggest that this vaccination strategy could benefit Puerto Rico, assuming a moderate level of transmission. From a public payer perspective, the cost-effectiveness of vaccination strategies increased with high screening sensitivity. From an individual perspective, high specificity of serological screening reduced the risk of disease. (Received January 10, 2020)