I. EPIDEMIC THRESHOLD ANALYSE

We tested the sensitivity of our analysis to the choice of 200 cases as the neighborhood level epidemic threshold. We evaluated the models' ability to predict dengue cases in a period with dengue cases greater than 100 and greater than 300. Figure 1 and Figure 2 show, respectively, the MAE values for peak intensity and timing, and RMSE for the entire curve of the time series. Both models continue to show better results when transport information is used to predict dengue cases, demonstrating that the utility of mobility information is not sensitive to the choice of epidemic threshold. With a threshold of 100 cases, the RNN models perform better. When using 300 or more dengue cases, the mechanistic models performs better for peak intensity prediction and for the RMSE of the time series as a whole, and the RNNc model does better for peak timing MAE. These results strengthen the findings of our main analysis: the mechanistic model better predicts large epidemics, but overestimates periods when there are fewer dengue cases, and the neural network model continues to better predict peak timing in all analyses.

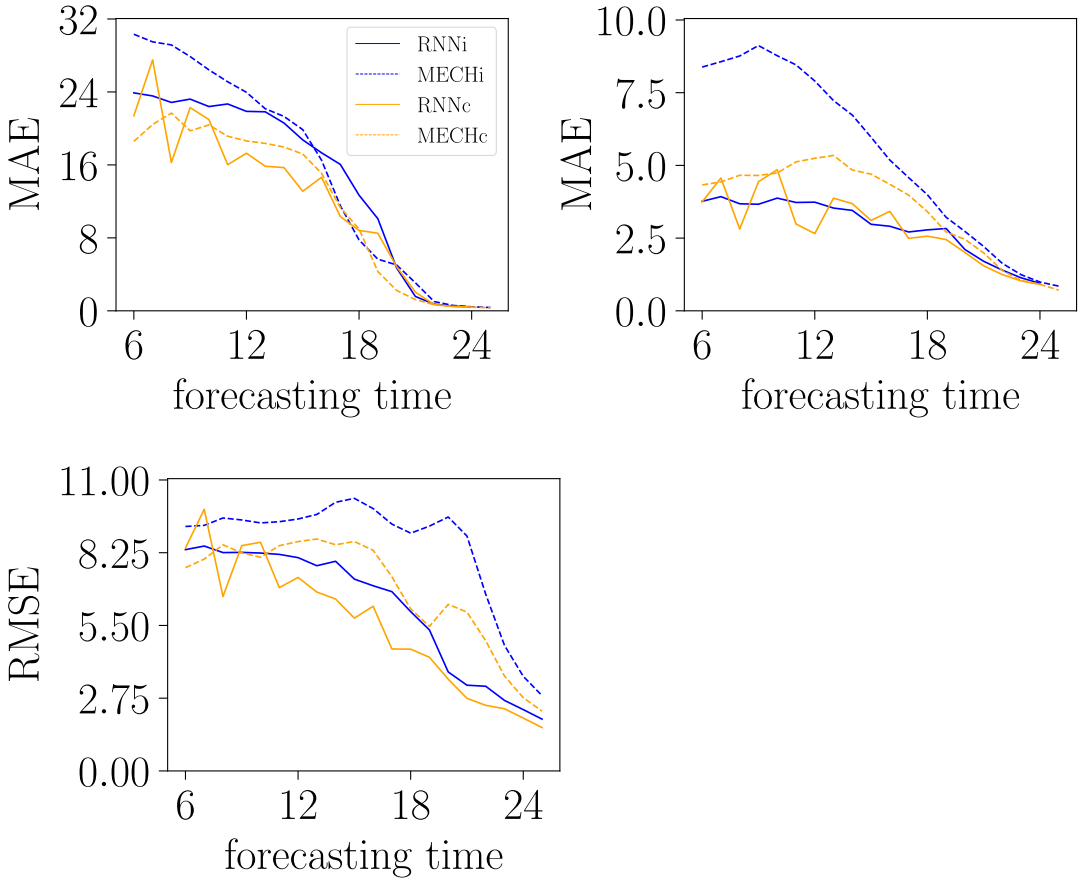

Figura 1. Results for periods with dengue cases greater than 100

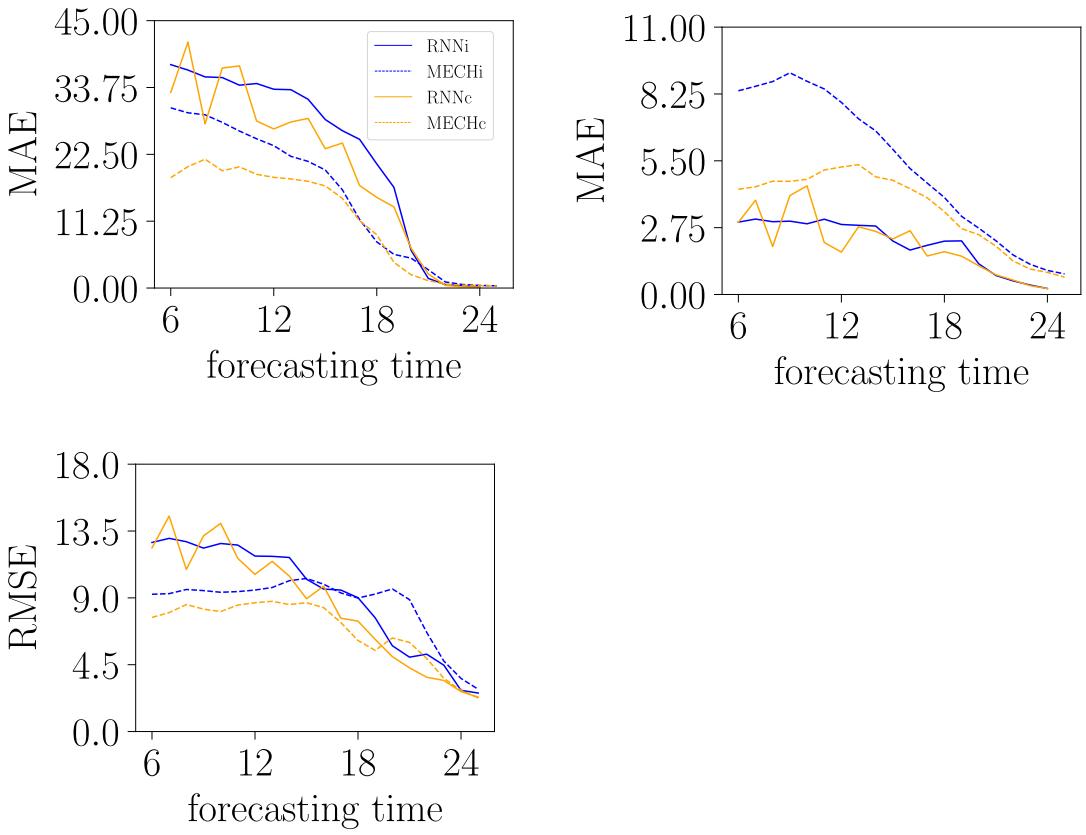

Figura 2. Results for periods with dengue cases greater than 300