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Spatial and temporal dynamics of infected populations: the Mexican epidemic

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Recently the A/H1N1-2009 virus pandemic appeared in Mexico and in other nations. We present a study of this pandemic in the Mexican case using the SIR model to describe epidemics. This model is one of the simplest models but it has been a successful description of some epidemics of closed populations. We consider the data for the Mexican case and use the SIR model to make some predictions. Then, we generalize the SIR model in order to describe the spatial dynamics of the disease. We make a study of the spatial and temporal spread of the infected population with model parameters that are consistent with temporal SIR model parameters obtained by fitting to the Mexican case.

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