

Discrete epidemic models

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Abstract

This is joint work with Carlos Castillo-Chavez and Zhilan Feng. Compartmental models for epidemics have commonly been continuous. Since data are collected and reported in discrete time intervals, it is natural to develop discrete single disease outbreak models that fit collected data naturally. We describe a discrete epidemic model framework and develop the theory, comparing continuous and discrete epidemic models. The emphasis is on a comparison driven by expressions for the final epidemic size.