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The effects of media on influenza infection: An agent based Monte Carlo simulation

Media reports affect social behaviour during epidemics and pandemics. Changes in social behaviour, in turn, affect key epidemic measurements such as peak magnitude, time to peak, and the beginning and end of an epidemic. The extent of this effect has not been realized. We have developed mathematical models of influenza spread based on a Susceptible-Exposed-Infected-Recovered (SEIR) model including the effects of mass media. Different functions representing media are studied within the context of the models in order to evaluate the effect of media on key epidemic measurements. We have also developed an agent based Monte Carlo (ABMC) simulation to determine the variability in these key epidemic measurements, so as to provide some insight in to the effects of mass media on epidemic data.