
SHANNON COLLINSON, York University

Mass media effects on influenza infection

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 various scenarios to be considered during epidemic influenza based on a Susceptible-Exposed-Infected-Recovered (SEIR) model including the effects of mass media and vaccination. We have derived stochastic differential equation models for each of the different scenarios. We 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.

This is joint work with Jane Heffernan of York University.