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Modelling the Influence of Human Behaviour on the Spread of Infectious Diseases

People can protect themselves against being infected by a disease by changing their behaviour in response to an outbreak, for example, through wearing face masks or reducing their number of infectious contacts. This type of behavioural change can affect the epidemiology of the disease itself. Here, I will discuss different ways to model the influence of human behaviour on the spread of infectious diseases, as well as challenges therein. As an example, I will present a model in which individuals are influenced by their peers as awareness of the presence of a disease as well as the disease itself spread in the social networks of influence and disease.