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## Measuring and modelling changing social contact patterns

Social networks offer an attractive way of viewing patterns of human contacts; however, it is seldom (never?) possible to accurately measure an epidemiologically-relevant network in all its detail and complexity. In practice, therefore, models of disease spread are obliged to make a range of simplifications. One common simplification is to assume that patterns of contacts do not change over time; more ambitious models make plausible, though somewhat ad hoc, assumptions to capture the effects of, for example, school holidays. In contrast, we present an age-structured model of the spread of H1N1v influenza (swine flu) in the UK in 2009, parameterised using data from a social contact survey completed by an internet-based cohort throughout the course of the epidemic. We find that this simple model can provide remarkably satisfying representations of disease incidence data. We conclude that even when detailed social network data are unavailable all is not lost.