

John Bibby **Spin or SPI-M?**

SPI-M is the Scientific Pandemic Influenza Group on Modelling which provides expert advice on infectious disease modelling and epidemiology to the government. SPI-B is the corresponding group advising on Behaviours. In 2013 (revised 2018) SPI-M published the useful “*SPI-M modelling summary for pandemic influenza*” which looks at the pandemics of 1918-19, 1957-58, 1968-70 and 2009. Much of the paper (pp.24-30) provides quantitative estimates of the potential impact of vaccines. Other features include:

- Estimated case fatality rate in 2009 of 0.1%; and a prescient warning that “it is important not to use the 2009 experience to predict the severity of the next pandemic” (p.4);
- Pandemic flu could take as little as 2-4 weeks to spread from Asia to the UK; the time from then to peak could be around 50 days;
- air-travel restrictions could delay the disease’s arrival – from 1-4 weeks with a 90% restriction to 2 months with a 99.9% restriction.
- “Screening on entry to the UK poses considerable policy questions (e.g. whether potential cases are quarantined), and planning (i.e. it requires considerable resources) and is not recommended” (pp.8-9).
- “Ensure that there are robust data systems in place that will be able to capture information regarding attack rate, disease pattern, severity, mortality, the propensity to seek healthcare and the background level of immunity” (p.18).
- School closures are most useful “if children are particularly badly affected (by the disease), or if there is known to be significant background immunity in adults” (p.19).
- “Of the three pandemics of the 20th Century, only that of 1918-19 generally produced national epidemics with second waves and thus in only one of these pandemics would a pandemic specific vaccine be of general value in controlling the pandemic (p.22);
- “Implications for planning: Set up arrangements for the required robust surveys of the background level of immunity across the population ...” (p. 23);
- Historical time-profiles from previous UK pandemics gave the following percentage of deaths etc. in the peak weeks: 10/17/10% in the pandemics of 1919/1958/2009 (deaths); local planning profiles will be more peaked than this (pp.31-34);
- Data requirements for real-time pandemic modelling are specified in detail (pp.35-38).

It defines the CFR = Case Fatality Rate deaths / number ‘clinically attacked’, and ‘clinically attacked’ means “showing symptoms”.

Note: *PI-M currently reports to the Scientific Advisory Group for Emergencies (SAGE). Like SAGE, its membership is partially hidden. One leading member is Julia Gog of Queen’s College, Cambridge.* <https://www.gov.uk/government/publications/spi-m-publish-updated-modelling-summary>