The role of behavioural science in the coronavirus outbreak

14th March 2020

What is "SPI-B?"

- During the coronavirus outbreak, scientific advice to the UK Government is co-ordinated by the Scientific Advisory Group for Emergencies (SAGE). SAGE is co-chaired by Sir Patrick Vallance (Government Chief Science Advisor) and Professor Chris Whitty (Chief Medical Officer).

- SAGE draws on a wide range of expertise from the medical and scientific community and has several subgroups reviewing specific issues including the modelling and clinical aspects of coronavirus.

- Many issues around the coronavirus response relate to behaviour. During the 2009/10 'swine flu' pandemic, SAGE received advice from a subgroup called the Scientific Pandemic Influenza group on Behaviour and Communications (SPI-B&C). On 13 February 2020, SAGE decided to reconvene this group, limiting its remit to behaviour (SPI-B).

- SPI-B is not asked to comment, and has not commented, on what interventions are effective or when they should be triggered. Instead, the group is asked to provide advice aimed at anticipating and helping people adhere to interventions that are recommended by medical or epidemiological experts.

Who attends SPI-B meetings?

- Participants change depending on the topic under consideration. Input has been received from academic specialists in Health Psychology, Social Psychology, Anthropology and History. Experts from Government departments also attend to provide input and to discuss issues they are facing.

- The chair and participants attend in a voluntary, unpaid capacity.

What has been discussed by SPI-B?

- To date, there have been three meetings of SPI-B to discuss specific topics of advice requested by SAGE.

- The topics discussed relate to the risk of public disorder; the use of behavioural and social interventions; and how to give guidance to people who are asked to self-isolate. Conclusions are summarised below.

Public disorder

- SPI-B agreed that large scale rioting is unlikely and rarely seen in these circumstances. Acts of altruism will likely predominate and the Government could promote and guide these.

- The group concluded that, in order to limit the risk of public disorder even further, the Government should: provide clear and transparent reasons for the different strategies that might be taken; set clear expectations on how the national response would develop; and promote collective action throughout the country.

The use of social and behavioural interventions

- The group was asked to consider several possible behavioural and social interventions.

- These included: stopping large events ('mass gatherings'), school closures, isolation of people with symptoms, isolation of people with symptoms and also their households, general social distancing, and lengthy social distancing for people in at-risk groups.

- SPI-B was asked to review the interventions in terms of: public attitudes and support; likely adherence; and any barriers, facilitators or communication issues that should be considered.

- The group concluded that several general issues apply across these interventions. It advised that in order to increase confidence in, and adherence to, the interventions, Government should: provide clear and transparent reasons for the strategies that have and have not been selected; reduce ambiguity wherever possible; and conduct rapid research into how best to help people adhere to the recommendations.

- Specific points about each of the interventions were also provided. These included a likely high level of public support for the cancellation of mass gatherings or general social distancing and the fact that isolation of symptomatic cases is likely to make intuitive sense to many people.

- Several potential challenges were also discussed. These included the high level of social disruption that may arise from school closures and the risk of social activities being displaced following school closure or banning mass gatherings.

- SPI-B identified potential factors that might reduce adherence, including the economic and other practical problems that might derive from prolonged isolation. SPI-B also identified factors that might help to promote adherence, including increasing risk perceptions, good Government communication, remote support for those in isolation and encouraging support from the community.

- The group's overarching recommendation was a need for Government to provide clear advice that takes account of public concerns and suggests behaviours that reduce risk. Transparency will help people understand the risk and build trust. People should be treated with respect, capable of taking decisions for themselves and managing personal risk.

Guidance for those asked to self-isolate / stay at home

- The group were asked to review draft guidance produced by Public Health England and intended to support people asked to self-isolate.

- The group concluded that:
    - the needs of different audiences are likely to vary and these should be carefully considered (e.g. those with more severe illness, vulnerable groups, sole caregivers),

    - there are a range of options that might improve adherence, but that rapid research was needed to a) study what has been helpful or difficult for people who have already been in home isolation around the country, and b) to obtain feedback on the draft guidance from people from different socioeconomic backgrounds and at-risk groups.

What is the evidence base?

- The coronavirus outbreak is a unique challenge. Identifying an evidence base from which to make behavioural science recommendations is difficult. This is made harder because there is evidence to show that how people respond to infectious disease outbreaks differs between countries [1,2]. While there is evidence from the swine flu outbreak, the current context is different and it is not clear how well the evidence translates. Many comments from SPI-B are by necessity based on members' knowledge of theory and evidence from different, albeit related, contexts

- With respect to issues around self-isolation and quarantine, two papers based on the same underlying rapid evidence review have been particularly drawn on [3,4]. With respect to issues around school closure a third rapid evidence review has been used [5]. The group is maintaining a log of COVID-19 specific behavioural science including polling and would welcome additional material that others are aware of.

1. Goodwin R, Hasque S, Neto F, Myers LB. Initial psychological responses to influenza A, H1N1 ("Swine flu"). BMC Infectious Diseases 2009, 9, 166
2. SteelFisher GK, Blendon RJ, Ward JR, Rapport R, Kahn EB, Kohl KS. Public response to the 2009 influenza A H1N1 pandemic: a polling study in five countries. Lancet Infectious Diseases 2012;12(11):845-50.
3. Brooks SK, Webster RK, Smith LE, Woodland L, Wessely S, Greenberg N, Rubin GJ. The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. Lancet 2020; 395: 912-920.
4. Webster RK, Brooks SK, Smith LE, Woodland L, Wessely S, Rubin GJ. How to improve adherence to quarantine: Rapid review of the evidence. Public Health, in press.
5. Brooks SK, Smith LE, Webster RK, Weston D, Woodland L, Hall I, Rubin GJ. The impact of unplanned school closure on children's social contact: Rapid evidence review. Eurosurveillance, under review.