

**Addendum to seventh SAGE meeting on Covid-19, 13<sup>th</sup> February 2020**  
**Held in 10 Victoria St, London, SW1H 0NN**

This addendum clarifies the roles of the SAGE attendees listed in the minute. There are three categories of attendee. Scientific experts provide evidence and advice as part of the SAGE process. HMG attendees listen to this discussion, to help inform policy work, and are able to provide the scientific experts with context on the work of government where appropriate. The secretariat attends in an organisational capacity. The list of attendees is split into these groups below.

**Attendees**

**Scientific experts:** *Patrick Vallance (GCSA), Chris Whitty (CMO), Sharon Peacock (PHE), Brooke Rogers (King's College), James Rubin (King's College), Neil Ferguson (Imperial), John Edmunds (LSTHM), Charlotte Watts (CSA DfID), John Aston (CSA HO), Graham Medley (LSHTM), Peter Horby (Oxford), Maria Zambon (DD PHE), Alaster Smith (dCSA DfE).*

**Observers and Government officials:** *Kate Thomas (DHSC).*

**Secretariat:** [redacted]

Names of junior officials and the secretariat are redacted.

Participants who were Observers and Government Officials were not consistently recorded therefore this may not be a complete list.

## Seventh SAGE meeting on Covid-19, 13 February 2020 Held at Government Office for Science

### Summary

1. SAGE concluded that neither travel restrictions within the UK nor prevention of mass gatherings would be effective in limiting transmission.
2. SAGE advised that the most effective way to limit spread in prisons at this stage would be by reducing transfer of individuals *between* prisons.
3. Public messaging should stress the importance of personal responsibility and responsibility to others.
4. Public messaging should stress both the efficacy and sufficiency of any behaviours it recommends to reduce the likelihood of the public adopting further unnecessary or contradictory behaviours.

### Situation update

5. SAGE and wider HMG should continue to work on the assumption that China will be unable to contain the epidemic.

**ACTION: SAGE** secretariat to circulate to what case definitions are being used in China (attached to this minute)

**ACTION: PHE** to work with **SPI-M** to produce a paper on principles for sharing of clinical and modelling data, including access to real-time data (for SAGE meeting on 18 Feb)

**ACTION: NERVTAG** to provide clinical assumptions to inform **SPI-M** modelling, as soon as sufficient data is available, of what proportion of the population could be infected with Covid-19, what proportion of these could be symptomatic, within this who will require hospital care and of those, what proportion will require respiratory support. This should be modelled by age group and by risk groups (comorbidities)

### Measures to limit spread in the UK

6. SAGE discussed a range of potential measures to delay spread, based on a paper by SPI-M.
7. SAGE concluded that travel restrictions within the UK, unless draconian and fully adhered to, would not be effective in limiting transmission. They would also be ineffective if Covid-19 cases were already established in the UK.
8. There is no current evidence to suggest prevention of mass gatherings is effective in limiting transmission. Public actions in the absence of a mass gathering could have comparable impacts (e.g. watching a football match in a pub instead of a stadium as likely to spread the disease).
9. Presenteeism is an issue: around 20% of the population go to school or work when febrile (and this varies considerably among different types of employment).

**ACTION: SPI-M** to update its previous assessment on how many weeks a UK epidemic might be delayed through a combination of enhanced monitoring and contact tracing (for SAGE meeting on 20 Feb)

### School closures

10. Any decision to close schools must consider what objective is being sought in terms of seeking to affect the epidemic curve (i.e. peak, duration, waves of infection).
11. School closures can potentially delay a) the first wave of an epidemic or b) the peak of an epidemic – but would require closures lasting weeks, and evidence suggests they would not alter total numbers affected.
12. Either would have impacts on schools, other services and the wider economy.

13. In an influenza pandemic, school children are critical to transmission because they have less immunity than adults and because of their social mixing patterns.
14. The impact of Covid-19 on school-age children remains poorly understood, but SAGE would like modelling to assume a similar pattern of infection to influenza (and sensitivity analyses around these).
15. The serial interval for Covid-19 is longer than it is for influenza – meaning that school closures would have to last longer than for influenza to achieve a similar impact.
16. The response of parents to school closures is a significant factor in their effectiveness. School closures would not have positive effects if children congregate in other places.

**ACTION:** Assuming Covid-19 is transmissible by children, **SPI-M** to use **DFE** data to model scenarios and parameters under which school closures could be useful and not useful in a) delaying the peak of the UK epidemic, and b) bringing down the peak of the UK epidemic (for SAGE meeting on 20 Feb). This should also:

- explore selective closures (e.g. secondary schools or non-public exam year groups only) and subsequent impacts
- provide quantitative and sensitivity analysis for what parameters will have the biggest impacts in achieving a) and b) above
- take into account behavioural consequences that might alter the effect

### **Prisons**

17. SAGE discussed how to limit spread within the prisons estate and prisoner population. There is a high degree of movement across the prison estate.
18. SAGE advised that the current approach for the general UK population should be followed in prisons with regards to isolation, contact tracing and good personal hygiene.
19. SAGE advised that the most effective way to limit spread in prisons at an early stage of a UK outbreak is by reducing transfer of individuals *between* prisons.
20. Should Covid-19 become established within a prisoner population, there are no obvious recommended response measures specific to prisons, besides limiting prisoner transfers.

### **Behavioural science**

21. Public behaviour where there is perceived risk of a forthcoming epidemic: available evidence suggests scepticism and general inaction dominate (certainly until the first confirmed domestic fatality).
22. Public reassurance is not the issue at this stage: more important, if necessary, is motivating the public to behave in specific, positive ways by making any risk feel relevant to individuals' lives.
23. Public response during an epidemic: this depends on a) perception of individual risk and risked to loved ones, and b) attitudes towards recommended behaviours, i.e. "Is that behaviour effective?" and "Does the behaviour have personal costs to me?" (e.g. financial, practical, emotional).
24. At this stage, public messaging should stress the importance of personal responsibility and responsibility to others, in order to drive positive public behaviours.
25. Public messaging should also stress *efficacy* of certain behaviours – and inform the public where behaviours are ineffective (e.g. avoiding certain types of people or products).
26. National messaging should be clear and definitive: if such messaging is presented as both precautionary and sufficient, it will reduce the likelihood of the public adopting further unnecessary or contradictory behaviours.
27. Panic – i.e. entirely irrational behaviour – is extremely rare: individuals can invariably explain why they display a range of behaviours (e.g. stockpiling food).

28. The public are more likely to take decisions for themselves in an information vacuum or to seek information from less reliable sources. Where counter-productive behaviours occur, HMG needs to understand the logic behind those behaviours in order to identify solutions and to improve messaging.
29. Perceived competition for limited resource (e.g. food, medicines) and/or perceived bias/preferential treatment in sharing or providing resources can increase social tensions: the key factor in determining public behaviour is whether there is trust in the institution(s) seeking to assure that there aren't resource shortages.
30. Civil unrest usually relates to underlying social issues, rather than to the specific crisis; the crisis itself tends to be the flashpoint which exposes the underlying issues.
31. SAGE agreed the importance of coherent and consistent public messaging being appropriate to the phase and scale of the outbreak, and properly informed by behavioural science insights. HMG should prepare public messaging for different phases of the outbreak to avoid abrupt shifts in public messaging as the outbreak evolves.

**ACTION: SPI-B** (Scientific Pandemic Influenza – Behaviour) sub-group to be established to provide behavioural science advice via SAGE throughout this incident

### **List of actions**

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*By phone:* Graham Medley, Peter Horby, Maria Zambon, Alaster Smith

Secretariat: [REDACTED]