Addendum to nineteenth SAGE meeting on Covid-19, 26th March 2020
Held via Zoom

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), Jonathan Van Tam (Deputy CMO), Sharon Peacock (PHE), Steve Powis (NHS), Calum Semple (Liverpool), Angela McLean (CSA MoD), Charlotte Watts (CSA DfID), Andrew Curran (CSA HSE), John Aston (CSA HO), Alan Penn (CSA MHCLG/UCL), Osama Rahman (CSA DfE), Peter Horby (Oxford), Graham Medley (LSHTM), Neil Ferguson (Imperial), John Edmunds (LSTHM), James Rubin (King's College), Brooke Rogers (King's College), Lucy Yardley (Bristol/Southampton), Ian Diamond (ONS), Andrew Rambaut (Edinburgh), Wendy Barclay (Imperial).*

Observers and Government officials: *Indra Joshi (NHSX), Stuart Wainwright (GoS).*

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.

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Summary

1. Data and modelling for NHS demand must be aligned completely with SPI-M modelling – and there must be a single version of the numbers in use across HMG.
2. Nosocomial transmission, risk markers for severe disease and severity scoring for COVID-19 cases need urgent attention.
3. It is vital not to make hasty decisions regarding treatments based on insufficient data.
4. SAGE will begin shifting attention to future phases of the epidemic to anticipate challenges and opportunities to minimise impacts and harms, release current measures safely and advise on long-term issues.

ACTION: SAGE secretariat to ensure key people are connected to align and ensure consistency of data between **SPI-M** and **NHS**

Priorities for SAGE ahead

5. Assuming interventions get R below 1 and demand on NHS critical care stabilises, SAGE needs to focus on behavioural and social interventions – monitoring, maintenance and release – and on the testing regime necessary for adjusting interventions.
6. SAGE will consider public messaging around interventions and explore potential behaviours linked to the easing and re-imposition of interventions and to mass testing.
7. More urgently, SAGE needs to understand nosocomial transmission and how to limit it.
8. SAGE needs to know more about immunology and its implications.
9. SAGE will focus on clinical trials (including when we might have meaningful results), treatments and vaccine options.
10. SAGE will consider how to minimise potential harms from the interventions, including those arising from postponement of normal services, mental ill health and reduced ability to exercise. It needs to consider in particular health impacts on poorer people.
11. SAGE's sub-groups will explore these issues in line with their remits. GCSA and CMO will discuss with Cabinet Office other priority questions for HMG.

ACTION: NHS (Steve Powis) to work with **PHE** to identify key questions for SAGE on nosocomial infection and to provide a plan for reducing nosocomial transmission

ACTION: **SAGE secretariat** to plan forward-looking piece of work on how and when to release measures and on future needs, including **SPI-B** to assess behavioural issues, **SPI-M** to define work on triggers for releasing measures, **NERVTAG** to identify at what point meaningful results from clinical trials might be available. **GCSA** and **CMO** to discuss other priority questions with Cabinet Office

Situation update

12. The data suggest a 3.3 day doubling time in hospitals.
13. New data collected from this week on human contact patterns will be used to estimate R for community spread. SPI-M is reviewing R later today.
14. Spare bed capacity is at roughly 20%, including in London. Surge capacity planning for London is underway.
15. Significantly fewer children are attending school than anticipated.
16. ONS data points to very high proportions of people in the UK changing their behaviour. Social interaction is greatly reduced, as is footfall on public transport, at parks and beaches. Mobile phone data for the over-65s suggest they are staying in one location. WiFi data suggests strong reductions in fast food outlet and supermarket use.
17. ONS is planning future surveys, including a dedicated survey for those experiencing social shielding.

18. CO-CIN data points to more men being admitted to hospitals than women, and more men than women dying. Cases cannot be triaged simply according to standard severity scores when they present at hospitals. Understanding is building of the most serious co-morbidities affecting mortality. New approaches to scoring severity and risk for COVID-19 are required.
19. ONS, DHSC and the HO Chief Scientific Adviser will produce a report on excess deaths by 8 March.
20. HSE found no material difference between the N95 and FFP2 respirator masks. Both provide protection as long as the wearer is face-fit tested. Choice of masks needs to risk-assessment driven. Further advice for NHS and PHE on overall PPE will be completed within 24 hours.
21. SAGE participants will receive advice about personal and digital security.

ACTION: SPI-M to reach consensus on R and doubling time by COP 26 March, reporting back to SAGE and DHSC

ACTION: ONS to circulate behavioural compliance data to SAGE participants immediately

ACTION: **ONS** to work with **John Edmunds** to ensure the most appropriate questions for modellers are incorporated into ONS surveys; **Brooke Rogers** to ensure mobile phone app data is fed to modellers and to link with **NHSX**

ACTION: **SAGE participants** to feed inputs on CO-CIN product direct to **Calum Semple**

ACTION: **SAGE secretariat** to circulate **HSE** report comparing N95 and FFP2 masks to SAGE participants, as well as the fuller PPE assessment. NHS and PHE to use this advice to inform their communications

Understanding COVID-19

22. The median time between onset of symptoms and hospitalisation is 4 days.
23. There is no evidence currently to suggest that virology phenotypes are changing.
24. In animal experiments to date, the virus is not being found in the central nervous system or urological tract. Anecdotal reports of cardiac involvement were noted.
25. There is some evidence of vertical transmission from mothers to new-born babies. To date, all babies born with COVID-19 have recovered. All were born by caesarean section.
26. There is no hard data on loss of taste or smell being a COVID-19 symptom – though it is a symptom of other respiratory viruses.
27. It is important to better understand risk markers/scoring systems for severe disease.
28. SAGE advises that there are currently conflicting data concerning potential treatments, such as chloroquine. No drug is completely safe, and it is vital not to make hasty decisions regarding treatments based on poor data. All cases should be used in some form of clinical trial.
29. As many people as possible need to participate in clinical trials. It is encouraging that 3 large international sister studies are being set up.

Reasonable worst case (RWC) scenario

30. SPI-M are reviewing 2 scenarios today using a consensus model from the Imperial group: the reasonable worst case and a more optimistic scenario. It is important that the outputs are presented in a format useful to HMG planners.
31. SAGE advises that, of these 2 scenarios, the reasonable worst case is the less likely.
32. Assuming good compliance, the epidemic peak in the UK can be expected in April – around 2 weeks after all interventions came into effect.
33. SAGE agreed that, for planning purposes, the scenarios should run to September only.
34. SAGE will separately review the various issues associated with a second epidemic peak.

ACTION: **SPI-M** to outline a set of scenarios for the RWC in a form that planners can use

Behavioural and social interventions

35. It may be helpful to prepare the public for the experience of hospital admission, including the risk of nosocomial transmission, through HMG messaging which focuses on the efforts to protect people in hospitals.

Testing and data

36. PHE described efforts to increase clinical testing, key worker testing and antibody testing. SAGE re-emphasised the importance of urgently ramping up testing with appropriate quality.
37. Testing priorities are set by CMO – and these need to be used by all testing providers.
38. The NHSX data hub will cover the whole of the UK, but is currently focused primarily on England.
39. Options to improve and coordinate data collection from ICUs are being explored, e.g. using medical students to input data. SAGE reiterated the crucial importance of data collection.

ACTION: **CMO** to communicate that prioritisation of testing – i.e. who gets tested first – sits with him. **Kathy Hall** to update SAGE at future meeting on testing timelines for NHS staff, including on the scale of testing required

Next meeting of SAGE

40. The next meeting is planned for Tuesday, 31 March. The agenda will include nosocomial transmission and an update on vaccines and treatments.

List of actions

SAGE secretariat to ensure key people are connected to align and ensure consistency of data between **SPI-M** and **NHS**

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SAGE secretariat to plan forward-looking piece of work on how and when to release measures and on future needs, including **SPI-B** to assess behavioural issues, **SPI-M** to define work on triggers for releasing measures, **NERVTAG** to identify at what point meaningful results from clinical trials might be available. **GCSA** and **CMO** to discuss other priority questions with Cabinet Office

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SAGE secretariat: [redacted] *Stuart Wainwright*