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), Angela McLean (CSA MoD), Jonathan Van Tam (Deputy CMO), Steve Powis (NHS), Sharon Peacock (PHE), Yvonne Doyle (PHE), Maria Zambon (PHE), Calum Semple (Liverpool), Ian Diamond (ONS), Charlotte Watts (CSA DfID), John Aston (CSA HO), Andrew Curran (CSA HSE), Carole Mundell (CSA FCO), Mike Parker (Oxford), Andrew Morris (Scottish Covid-19 Advisory Group), Jeremy Farrar (Wellcome), Graham Medley (LSHTM), Neil Ferguson (Imperial), John Edmunds (LSTHM), Julia Gog (Cambridge), Peter Horby (Oxford), Brooke Rogers (King’s College), James Rubin (King’s College), Lucy Yardley (Bristol/Southampton), Wendy Barclay (Imperial), Andrew Rambaut (Edinburgh), Ian Young (CMO Northern Ireland), Rob Orford (Health CSA Wales), Gregor Smith (dCMO Scotland), Fliss Bennee (Health CSA Wales), Venki Ramakrishnan (Royal Society), Cath Noakes (Leeds), Ian Boyd (St Andrews).

Observers and Government officials: Vanessa MacDougall (HMT), Dominic Cummings (No 10), 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.
Twenty-fifth SAGE meeting on COVID-19, 14th April 2020
Held via Zoom

Summary
1. The number of deaths is plateauing, with transmission in the community highly likely to be declining.
2. Nosocomial transmission accounts for an increasing proportion of cases.
3. Relatively small changes to social distancing measures could push R back above 1 in the community. It is therefore too early to recommend releasing any measures.
4. When measures do start to be released, the lowest-risk changes should be considered first. The impact of any changes will need to be closely monitored.
5. Risk of outdoor transmission is significantly lower than indoors.

Situation update
6. Data indicate that hospital death numbers are still high, but may have reached a plateau, with a possible decline in London. There is a decline in hospital admissions newly confirmed with COVID-19, which may have peaked, though detailed analysis to support this is not yet available.
7. Transmission in the community has slowed and it is highly likely that R in the community is less than 1 (any value in the range 0.5 to 1 is considered plausible).
8. There is significant transmission in hospitals. This may have been masking the decline in cases in the community. It is not known whether R is higher or lower than 1 in hospitals nationally, though heterogeneity means that it will be in some hospitals; where it is, outbreaks will be self-sustaining.
9. Nosocomial cases are therefore making up an increasing proportion of overall cases.
10. Care homes also remain a concern. There are less data available from these.
11. SAGE advises that increased testing in these settings, supported by modelling, is important. PHE is doing some survey work to better understand transmission and infection prevention & control (IPC) in these settings.
12. CO-CIN data show that obesity is an independent risk factor.
13. The Nowcast has been further developed to include deaths by region. This is being provided to CCS.
14. PHE has been looking at its use of ISARIC samples and supporting development of standards for serological testing.

ACTION: Nosocomial Working Group to widen viral sampling in hospitals and care homes – including a rapid review of infection, prevention and control – to test for infection. Note that asymptomatic individuals should be tested in certain circumstances.

ACTION: Sharon Peacock to a) share report on PHE use of ISARIC samples with SAGE and b) discuss with Calum Semple whether there are issues around materials for handling of samples for serological testing and prioritise accordingly (for next SAGE meeting on 16th April)

Understanding Covid-19
15. Evidence does not currently support use of face masks to protect the wearer in the general population.
16. There is mechanistic evidence for efficacy of face masks in reducing transmission when used by someone who is infected with (a source of) the virus. Direct trial evidence does not support effectiveness in practice in other diseases. The fundamental difference with COVID-19 is the shedding of virus during asymptomatic and presymptomatic infection.
17. There are theoretical drawbacks to increased use of masks in the population. However, the evidence on these drawbacks may not be applicable to the current situation, particularly evidence around compliance.

18. Overall, the evidence that masks could prevent spread is weak, but probably marginally in favour of a small effect. If there are benefits, these are only likely in specific circumstances.

19. Circumstances where there may be benefits included enclosed environments with poor ventilation, and around vulnerable people. Conversely, there are unlikely to be any significant benefits in use of masks outdoors.

20. There are communication considerations around any change in advice on masks. Communications are likely to be required around fitting and usage as well as on the importance of maintaining the other, more effective, measures in place.

21. Other operational considerations include supply chain and distribution impacts but these were not considered as part of this review.

22. SAGE agreed that the existing advice on self-isolation remains the most important action for anyone with infection.

**ACTION: NERVTAG** to produce a shorter paper that could be used to inform ministers (along with policy and operational advice from CMO’s office and DHSC) on options for using face masks in different environments, setting out the evidence base, likely magnitude of effect and any unintended consequences based on discussion at SAGE today (for next SAGE meeting on 16th April)

**Environmental transmission**

23. It is difficult to determine how far the virus can travel in different settings, but in most cases, it will be diluted over distance, particularly outdoors.

24. Evidence suggests that transmission risk outdoors is significantly lower than indoors.

25. Ventilation in buildings is an important consideration, particularly for nosocomial transmission, but also as people return to work.

**ACTION: Cath Noakes** to a) establish and chair a new working group on environmental spread, with support from SAGE secretariat to ensure group is interdisciplinary and draws on expertise from RAMP (Rapid Assistance in Modelling the Pandemic taskforce); Cath to also ensure this work is fed into Nosocomial Working Group (SAGE secretariat to provide link)

**Releasing measures**

26. Though R in the community is currently highly likely to be below 1, relatively small changes to the approach could push it back above 1. It is therefore too early to recommend releasing any measures.

27. The release of measures should be done in a logical order, starting with lower-risk changes such as reducing restrictions on outdoor activity. This would aid monitoring and adaptation of the approach, as well as being more likely to obtain public acceptance.

28. Relaxing restrictions on the use of outdoor spaces to permit a greater range of activities, while maintaining social distancing from those outside the household, would be very likely to have no more than a negligible direct impact on transmission but have a positive impact on health and wellbeing.

29. Where appropriate, steps to support the safe release of measures, such as changes to workplace environments or practices, should be put in place ahead of changes being made.
30. Assumptions and evidence around transmission, and principles for its reduction, are needed to assess the relative risks of different types of activity including different types of work.

31. Previous SAGE advice on school occupancy remains unaltered.

32. SAGE noted that evidence suggests a prolonged/deep recession would have significant health impacts.

33. SAGE advised that a better understanding of household transmission, and transmission in other residential settings is needed.

34. SAGE advised that it is complex to obtain good data to assess the impact of measures on shielded and vulnerable groups, but a better understanding is needed.

**ACTION:** SPI-M to identify and set out potential principles/assumptions on transmission such as contact time and proximity, which could be used in assessing relative risks of different types of activity including different types of work, and in further refining policy on social distancing measures (for next SAGE meeting on 16th April)

**ACTION:** PHE to review household transmission – understanding studies already underway and commissioning new studies, including within specific communities/groups (e.g. barracks, boarding schools) – and report back to SAGE, with timescales, in week beginning 20th April

**ACTION:** SAGE secretariat to work with ONS, SPI-M, Calum Semple and PHE to determine what data can be obtained to assess the impact of measures on shielded and vulnerable groups (for next SAGE meeting on 16th April).

**Excess deaths**

35. SAGE supported the work being undertaken to improve the health data research infrastructure.

**ACTION:** John Aston and Andrew Morris to progress with plan as outlined in paper and to link up with NHS audit data holders and commission other new relevant data sets to support analysis of Covid-19.

**List of Actions**

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Attendees

SAGE secretariat: Stuart Wainwright