**Forty-seventh SAGE meeting on Covid-19, 16th July 2020**
**Held via Zoom**

## Summary

1. Mixing between age groups presents challenges for any policy which relies on separating people based on a specific age threshold, particularly if it affects significant numbers of parents and people of working age. Any age-related variation in advice would also need to consider risks to those below the age threshold who are vulnerable for other reasons, as well as the potential longer-term impacts on those affected.
2. There will be co-infection with influenza over winter (high confidence). During co-circulation of influenza and Covid-19, there are likely to be logistical challenges around cohorting of patients and PPE usage (high confidence).
3. SAGE reiterated the importance of optimising and maximising the flu vaccination programme this year to protect at-risk groups.

## Situation update

4. SAGE agreed that the notion of 'Covid security' is complex and hard to quantify. Development of a 'Covid secure' mark of approval is not straightforward. It is theoretically possible to quantify relative risk for particular settings/environments, but this may not be meaningful given the complex and varied interactions and activities of people in those settings. The new transmission consortium study may help to clarify what is feasible and develop a stronger evidence base in this area, but this will take time.
5. The latest estimate of R for the UK is 0.7 to 0.9. The daily growth rate estimate is -5% to -1%. In England, R is estimated at 0.8 to 1.0, with a daily growth rate of -4% to 0%. As previously, SPI-M does not have confidence that regional R estimates are sufficiently robust to inform decisions, since they are based on low case numbers and/or are dominated by clustered outbreaks.
6. CoMix data suggest no change in R for Scotland and Wales – but small increases in some parts of England (the North and the South West), possibly above one and likely linked to recent lifting of measures in England. The data do not indicate significant changes in behaviour, though greater change among younger people; overall, the public appears to be remaining cautious.
7. SPI-M short-term forecasts are to be limited to deaths while their utility is reviewed.

**ACTION: SAGE secretariat** to circulate 'Covid Secure' paper to HSE, PHE and BEIS; **HSE** and **PHE** to identify relevant additional research questions by 17 July

**ACTION: HSE** to invite SPI-M chair into consortium developing studies for 'Covid Secure' assessment work by 17 July

**ACTION: JBC, Devolved Administrations** and **NHS Medical Director** to confirm utility of SPI-M short-term forecasts and how these can be improved to cover more local approaches by 23 July

**ACTION: SAGE secretariat** to ascertain veracity of Reasonable Worst-Case Scenario for deaths potentially being used in Covid-19 planning by 16 July

## Segmentation

8. SAGE endorsed the SPI-M paper, which will be updated to include some additional information and then shared with Cabinet Office and other departments.
9. Data show that people tend to have more contacts with others around their own age, but also have a significant number of contacts with those 20-30 years older and younger than themselves (likely to mainly be contacts between parents and children). There are also significant levels of contact between grandparents and children.

10. This mixing between age groups would present challenges for any policy which relies on separating people based on a specific age threshold, particularly if it affects significant numbers of parents and people of working age and households. This would also be difficult to message and enforce unless the threshold could be justified.
11. Emerging data from Leicester, and some from the USA, suggest that an increase in incidence in younger adults has not been followed by a similar increase in either children or older adults, as might be expected. It is unclear why this is the case.
12. There is likely to be merit in varying the advice or guidance given to different groups, particularly to vulnerable people and those likely to have more contact with vulnerable people. This should be aligned with the changes to shielding and with risk stratification work.
13. Any age-related variation in rules or advice would also need to consider risks to those below the age threshold who are vulnerable for other reasons, and the potential longer-term effects on those at greater risk of infection under any policy.
14. Segmentation based on vulnerability should continue to be considered; messaging around segmentation could be advisory rather than mandated if necessary.
15. SPI-M and Public Health Wales are investigating the possibilities of geographic segmentation, but this work is in its early stages.

**ACTION: SPI-M** to update 'Segmentation' paper to include distinct aspects on a) segmentation of under 45s, including behavioural aspects of guidance, b) segmentation of the shielded/vulnerable, and c) potential for geographic segmentation; **John Edmunds** to incorporate current CoMIX data on age mixing during epidemic and, where possible, evidence of Covid-19 transmission between age cohorts; **dCMO** to incorporate current approaches to shielding the vulnerable in segmentation strategies, all by 23 July

**Co-infection**

16. There is no strong evidence for enhancement of SARS-CoV-2 associated disease by co-infection with other viruses, but data are limited and not enough to dismiss this (low confidence).
17. There will be co-infection with influenza over winter (high confidence). To distinguish between the two syndromes, a point of care test for influenza, or both, is needed.
18. Multiplex and laboratory assays will be able to detect both infections. When cases of co-infection are identified, both infections should be treated.
19. During co-circulation of influenza and Covid-19, there are likely to be logistical challenges around cohorting of patients and PPE usage (high confidence).
20. SAGE reiterated the importance of maximising and optimising the flu vaccination programme this year to protect at-risk groups.
21. NERVTAG recommended researching the effects of co-infection in animal models, noting that this would be challenging, and the validity of the results of animal studies unclear.
22. SAGE noted evidence of a potential increased risk for Covid-19 patients with HIV. CO-CIN studied this relationship previously and recorded no adverse signal.

**ACTION: SAGE secretariat** to circulate 'Co-infections, vaccinations and interactions with SARS-CoV-2' to with DHSC, NHS and PHE; **PHE** to respond to recommendations on animal studies by 23 July

**ACTION: CO-CIN** to review evidence on comorbidity of HIV and Covid-19 by 23 July

**Singing, wind instruments, performing arts**

23. A PHE working group has overall responsibility for this area and will produce recommendations: NERVTAG and EMG work is feeding into the group, including papers seen and discussed by SAGE on transmission risk and performance spaces.

[redacted]

24. A separate, DCMS-led group is considering risk to audiences (as opposed to performers) in various settings, including theatres and sporting venues, and will consider advice on use of face coverings.
25. SAGE noted some initial evidence of variation among wind instruments in terms of transmission potential, and that singing does increase transmission of aerosol and droplets – more than speaking or breathing but variable by individual. HSE is carrying out studies as part of the transmission consortium.
26. SAGE also noted the importance of consistent guidance across various settings and sectors: this is the responsibility of PHE, dCMOs and lead government departments.
27. SAGE will consider this topic further should further investigations identify complex issues or if further validation is deemed necessary.

**ACTION: Singing & Wind Instruments Group** to take forward specific research on spread of Covid-19 through singing and playing, linking directly to DCMS but reporting back to SAGE if endorsement required

**ACTION: HSE** and **PHE** to take forward work on theatre ventilation, linking directly to DCMS but reporting back to SAGE if required

**Next meeting**

28. A paper on airborne transmission will come to SAGE 48. The meeting will also consider smart NPIs; outbreaks (including lessons learned from Leicester and insights from the PHE sitrep); policing and security and a MHCLG commission; and a revised reasonable worst-case scenario.

**List of actions**

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**Attendees**

***Scientific Experts (29):*** *Patrick Vallance (GCSA), Chris Whitty (CMO), Jenny Harries (dCMO), Angela McLean (CSA MoD), John Aston (CSA HO), Andrew Curran (CSA HSE), Andrew Morris (Scottish Covid-19 Advisory Group), Ian Diamond (ONS), Steve Powis (NHS), Mark Wilcox (NHS), Yvonne Doyle (PHE), Peter Horby (Oxford), Calum Semple (Liverpool), Graham Medley (LSHTM), John Edmunds (LSHTM), Julia Gog (Cambridge), Michael Parker (Oxford), Wendy Barclay (Imperial), James Rubin (KCL), Lucy Yardley (Bristol), Catherine Noakes (Leeds), Venki Ramakrishnan (Royal Society), Jeremy Farrar (Wellcome), Ian Boyd (St Andrews), Mark Walport (UKRI), Rob Orford (Health CSA Wales), Fliss Bennee (Wales Technical Advisory Cell), Ian Young (CMO Northern Ireland), Sheila Rowan (CSA Scotland)*

***Observers (9):*** [redacted] *Dharmesh Nayee (HMT), Chris Lewis (DFID),* [redacted]

***Secretariat (all GO-Science) (17):*** [redacted] *Stuart Wainwright, Simon Whitfield,* [redacted]

**Total: 55**