

Ninety-sixth SAGE meeting on COVID-19, 14 October 2021

Held via Video Teleconference

Summary

1. There should be no complacency around the risk posed by further viral evolution. Emergence of a variant of Delta or a variant from a different lineage that becomes dominant globally is a very real possibility. Ensuring sufficient capacity to monitor for variants, and capability to characterise new variants and conduct predictive vaccinology, is crucial.
2. Scenarios modelled for the coming winter and into 2022 suggest COVID-19 hospital admissions above the level seen in January 2021 are increasingly unlikely, but there are uncertainties around behaviour change and waning immunity.
3. Modelling suggests that the stringency of measures required to control transmission of a growing epidemic is increased by a faster doubling time. In the event of increasing case rates, earlier intervention would reduce the need for more stringent, disruptive, and longer-lasting measures.
4. SAGE advises that policy work on the potential reintroduction of measures should be undertaken now so that it can be ready for rapid deployment if required, stressing the importance of reintroducing measures in combination, supported by clear communication; consistent implementation that avoids creating barriers to adherence; and clear triggers for deployment.
5. Co-circulation and co-infection of SARS-CoV-2 with Respiratory Syncytial Virus (RSV) and influenza represents a significant challenge this winter. SAGE reiterated the importance of individuals showing symptoms of any respiratory infection to prevent further transmission by staying at home.

Situation update

6. SAGE noted recent increases in cases among some older age groups (including the over 60s) and some increases in hospitalisations. These should continue to be monitored carefully.
7. Comix data indicate that mixing patterns for children are comparable to pre-pandemic levels, but those for adults remain considerably lower.
8. Latest surveillance data from UKHSA on other respiratory infections shows very low hospital and GP notifications for influenza. RSV positivity in England, which has been higher than normal in recent weeks for this time of year, has increased slightly. There has been a decrease in rhinovirus positivity, and very low positivity for other respiratory infections.
9. SAGE received an update on monitoring of and measures to prevent nosocomial infection, including vaccination and testing of healthcare workers, and risk assessments for both COVID-19 and other respiratory illnesses. SAGE noted the importance of consistent testing of healthcare workers across the NHS and care sector, and a continued focus on use of ventilation and facemasks. A renewed emphasis on measures to reduce infection spread in hospital is advised.
10. SAGE received an update on ICU admissions of pregnant women, impacts of COVID-19 on pregnancy, vaccination levels, and plans to improve confidence in, and uptake of, vaccines among this group. More data are to be collected on both vaccinations and outcomes, but the data indicate that low rates of vaccination are a major risk factor in this group.
11. SAGE noted that, while the Delta variant has become dominant, there remains significant opportunity for viral evolution, including greater transmissibility, through

several possible mechanisms. Future waves featuring an evolution of Delta or the emergence of a new variant from a different lineage are both possible.

12. There should be no complacency around the risk posed by further viral evolution. Ensuring sufficient testing and sequencing capacity to monitor for variants and capability to characterise new variants and conduct predictive vaccinology is crucial. SAGE noted recent discussions on the significant level of infections sequenced and border surveillance measures that are required to identify new variants within specified timeframes following their emergence.

Updated modelling in light of changes to social mixing (schools, etc.)

13. The scenarios modelled for the coming winter and into 2022 assume no reimposition of measures, no increase in precautionary behaviour in response to increases in prevalence of infection, and no emergence of new VoCs such that Delta remains dominant. The modelling does not consider the burden from influenza and other respiratory viruses.
14. Although there remains uncertainty about the timing and magnitude of any future resurgence, these scenarios suggest hospital admissions above those seen in January 2021 are increasingly unlikely, particularly in 2021.
15. Behaviours are currently estimated to be closer to pre-pandemic norms than at any point previously since March 2020. But, how behaviours (contact rates, networks, precautionary behaviours) change over the coming months, and how quickly/whether they return to pre-pandemic norms is a key uncertainty in the modelled scenarios.
16. An important determinant of the magnitude and timing of any future resurgence is the rate and degree of waning of vaccine-induced protection that may occur after two doses and after a booster dose. Rollout and uptake of boosters will also have a significant impact. The modelled scenarios assume rapid rollout and high uptake.
17. A slower return to pre-pandemic behaviours and reduced waning are both expected to reduce and delay any further wave, although there remains potential for a rapid increase in hospital admissions if behaviours change quickly, and if waning is more significant and occurs after boosting. A new variant that caused a degree of vaccine escape has the potential to cause a more rapid increase.
18. Continued monitoring of vaccine effectiveness and evidence of waning of protection will be very important as is the maintenance of the ONS COVID-19 Infection Survey.
19. Further modelling considering the impact on transmission of interventions equivalent to reversing steps of the Roadmap suggests more stringent measures would be required to control transmission as doubling times decrease.
20. Any resurgence in hospital admissions that is driven by waning immunity may be more gradual than previous waves, allowing more time for effective intervention.
21. As SAGE has previously advised, earlier intervention may reduce the need for more stringent, disruptive and longer-lasting measures to avoid an unacceptable level of hospitalisations. Identifying early warning metrics and triggers for intervening is key to responding rapidly if needed.
22. SAGE has previously noted the risks associated with high prevalence (SAGE 93). Cases and admissions are currently at much higher levels than in European comparators, which have retained additional measures and have greater vaccine coverage especially in children. Reducing prevalence from a high level requires greater intervention than reducing from a lower level.

ACTION: SPI-M-O Secretariat and Chairs to amend “*SPI-M-O: summary of modelling considerations for the reimposition of measures*” to clarify that the content of paper considers impact of measures, rather than what the triggers for action might be if needed to mitigate an epidemic wave.

Impact of potential *Plan B* mitigations considering the impact of the Delta variant and the behavioural response to reimposition of measures

23. The proposed Plan B measures set out in the Government's autumn/winter plan are likely to be most effective when used in combination. Measures are not likely to be simply additive but to interact, resulting in a greater cumulative effect.
24. That effect is influenced by the context in which they are introduced, how they are introduced and by adherence. Measures have associated harms and potential for unequal impacts that should be considered prior to implementation.
25. There has been a decrease in self-reported precautionary behaviours such as wearing a face covering. Effective reintroduction of measures would require clear and positive public communications (providing sufficient time for implementation), setting out expected impacts as well as scope, exemptions and approach to enforcement.
26. Reintroduction of working from home guidance is likely to have the greatest individual impact on transmission out of the proposed measures. Impact would be dependent on effectiveness of communication and guidance, employer response, and the proportion of workers able to work from home who were not already doing so at the time of implementation. It was noted that "presenteeism" may become an increasing reason for spread in the workplace and that it will be important to communicate effectively to avoid this.
27. There is some evidence that vaccine certification may have a positive impact on vaccine uptake, particularly in younger age groups, but data are not directly comparable between countries which have used different approaches to certification. Introduction should consider vaccine effectiveness, evidence on waning immunity, and legal and ethical issues around equity, data security and interoperability. The range of settings involved is likely to affect both the potential impact on vaccine uptake and transmission. Public support is likely to influence effectiveness and is lower for approaches applied to wider ranges of settings.
28. Face coverings are expected to have some effect to reduce transmission through all routes by partially reducing emission of and exposure to aerosols and droplets carrying the virus, reducing transmission risk at both close proximity (even for short periods of time) and over longer range. Effectiveness is dependent on the quality of the covering, the fit and ensuring both the nose and mouth are covered. Mandating face coverings in some settings is likely to also have benefits for reducing transmission of other respiratory viruses.
29. There is no evidence that the fundamental mechanisms of transmission are different with the Delta variant, although it is more transmissible than the Alpha and other variants. It is unlikely that different mitigations are required, but there are some examples of large outbreaks occurring in settings with mitigations in place, highlighting the importance of ensuring measures are implemented rigorously and in combination following risk assessment of each mechanism of transmission.
30. As for other variants, household transmission, while reduced, continues to occur between vaccinated individuals infected with Delta. A significant proportion of transmission occurs in households and additional public guidance on mitigating this would be helpful. Transmission can occur through a number of routes, including through exposure to aerosols/droplets or contaminated surfaces. Although inhalation is a more likely route of transmission in shared indoor air or at close range, hand washing, and other environmental mitigations remain important. There is recent evidence of a correlation between hand swab positivity and transmission within households.
31. Other measures beyond those proposed as part of Plan B are available to mitigate the need for further measures over winter. Availability of asymptomatic and symptomatic testing for SARS-CoV-2 remains an important measure, as well as contact tracing and self-isolation.

32. SAGE advised that policy work on the potential reintroduction of measures should be undertaken now so that it can be ready for rapid deployment, stressing the importance of reintroducing measures in combination, supported by clear communication; consistent implementation that avoids creating barriers to adherence; and clear triggers for deployment.

ACTION: UKHSA to consider issuing clear advice on mitigations for within-household transmission.

ACTION: C-19 Task Force to consider SAGE advice on advanced planning for potential reintroduction of measures, including trigger points for implementation.

Potential impacts of co-infections

33. SAGE endorsed a NERVTAG paper on co-infection of respiratory viruses (to be shared with the NHS), noting the very different context for this winter compared to last, when cases of other respiratory viruses were abnormally low.
34. As the Academy of Medical Sciences also concludes, co-circulation and co-infection of SARS-CoV-2 with RSV and influenza represents a significant challenge this winter. There is some evidence that co-infection of SARS-CoV-2 and influenza can result in increased morbidity and mortality, and longer stays in hospital compared to patients with single infections.
35. It is hard to predict numbers of RSV and influenza cases this winter. SAGE noted the importance of infection prevention and control in healthcare settings and tests to support rapid patient diagnosis, including to enable early and effecting use of antivirals.
36. SAGE reiterated the importance of individuals showing symptoms of any respiratory infection to prevent further transmission by staying at home. As noted above, public health communications should seek to tackle work presenteeism in the UK culture as we approach winter.
37. SAGE noted the importance of rapid research on influenza and clinical trials to generate evidence on possible interventions, including community-level asymptomatic testing.

ACTION: DHSC CSA to bring together funding bodies to coordinate research on understanding co-infection risk and to identify interventions.

ACTION: NHS and UKHSA to consider NERVTAG paper on co-infection and implement key points of advice.

List of actions

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UKHSA to consider issuing clear advice on mitigations for within-household transmission.

C-19 Task Force to consider SAGE advice on advanced planning for potential reintroduction of measures, including trigger points for implementation.

DHSC CSA to bring together funding bodies to coordinate research on understanding co-infection risk and to identify interventions.

NHS and UKHSA to consider NERVTAG paper on co-infection and implement key points of advice.

Attendees

Scientific experts (34): Patrick Vallance (GCSA), Angela McLean (MoD, CSA), Ann John (Swansea), Brooke Rogers (KCL), Calum Semple (Liverpool), Catherine Noakes (Leeds), Charlotte Deane (UKRI), Charlotte Watts (FCDO, CSA), Edward Wynne-Evans (UKHSA), Fliss Bennee (Welsh Government), Graham Medley (LSHTM), Harry Rutter (Bath), Ian Diamond (ONS), Ian Young (Northern Ireland Executive, Health CSA), Jenny Harries (UKHSA), John Edmunds (LSHTM), Jonathan Van Tam (dCMO), Julia Gog (Cambridge), Julian Hiscox (Liverpool), Julie Fitzpatrick (Scottish Government, CSA), Lucy Chappell (DHSC, CSA), Mark Wilcox (Leeds), Meera Chand (UKHSA), Melinda Mills (Oxford), Michael Parker (Oxford), Nicola Steedman (Scottish Government, dCMO), Paul Kellam (Imperial), Peter Horby (Oxford), Rob Orford (Welsh Government, Health CSA), Stephen Powis (NHS England), Susan Hopkins (UKHSA), Thomas Waite (dCMO), Wendy Barclay (Imperial) and Yvonne Doyle (UKHSA).

Observers and government officials (28): Alan Penn (MHCLG, CSA), [REDACTED], [REDACTED] Andrew Curran (HSE, CSA), Andrew Morris (HDRUK), [REDACTED] Charlette Holt-Taylor (DHSC), Daniel Kleinberg (Scottish Government), [REDACTED] David Lamberti (DHSC), [REDACTED] Fergus Cumming (JBC), Gideon Henderson (Defra, CSA), Giri Shankar (PHW), Henry Cook (No.10), Ian Hall (Manchester), Jennifer Rubin (HO, CSA), Laura Bellingham (CO), Liz Lalley (Welsh Government), Louise Tinsley (HMT), [REDACTED], [REDACTED], [REDACTED], [REDACTED], [REDACTED] Paul Monks (BEIS, CSA), [REDACTED], [REDACTED], [REDACTED] Rob Harrison (CO) and [REDACTED].

Secretariat (all GO-Science) (14): [REDACTED], [REDACTED], [REDACTED], [REDACTED], [REDACTED], [REDACTED], [REDACTED], [REDACTED], [REDACTED], [REDACTED], [REDACTED], [REDACTED], [REDACTED], [REDACTED] Laura Eden, [REDACTED], [REDACTED] Simon Whitfield and Stuart Wainwright.

Total: 76