

Fifty-sixth SAGE meeting on Covid-19, 10th September 2020

Held via Zoom

Summary

1. The current situation in the UK is analogous to the one in early February, with rapidly increasing incidence which is concentrated amongst those with most contacts, most notably younger people.
2. It is almost certain that R is greater than 1 across large parts of England. This suggests that the epidemic is moving from being concentrated in local outbreaks to more widespread transmission.
3. It is highly likely that further national and local measures will be needed to bring R back below 1 in addition to those already announced. An early and comprehensive response would mean that measures have more effect and may be needed for a shorter duration.
4. As previously advised, preparation for increases in numbers of cases, hospitalisations and deaths will be critical, particularly as winter approaches.
5. Prioritising rapid testing of symptomatic people is likely to have a greater impact on identifying positive cases and reducing transmission than frequent testing of asymptomatic people in an outbreak area. Any Population Case Detection (PCD) programme should not come at the expense of test, trace and isolate systems.

Situation update

6. The current situation in the UK is analogous to the one in early February, with rapidly increasing incidence which is concentrated amongst those with most contacts, most notably younger people. There are already indications of increases in hospital admissions in at least some regions.
7. It is almost certain that increases in infections will lead to increases in hospitalisations and deaths as observed recently in other European countries (high confidence).
8. The latest estimate of R for the UK is 1.0 to 1.2, while the daily growth rate estimate is -1% to +3%. The latest estimate of R for England is also 1.0 to 1.2, while the daily growth rate estimate is +1% to +4%. As previously noted, these estimates do not fully reflect recent changes such as the reopening of schools in England and SAGE expects growth rate and R to increase (moderate confidence).
9. Though there remains variability between areas, it is almost certain that R is greater than 1 across large parts of England (high confidence). This suggests that the epidemic is moving from being concentrated in local outbreaks to more widespread transmission (high confidence). Major cities, excluding London, appear to be experiencing faster increases in transmission than other areas.
10. ONS infection survey data also indicate increasing incidence. Contact studies show large increases in contacts amongst all age groups during August, and in particularly younger age groups.
11. Similar increases in incidence have been seen elsewhere in Europe recently and are closely linked to easing of non-pharmaceutical interventions (NPIs) and the corresponding increases in contact levels. Large-scale returns to workplaces have been associated with increases in contact levels and transmission in some countries.
12. Different European countries have followed different trajectories following initial increases, depending on the speed and effectiveness of action taken. An earlier and more comprehensive response means that measures have more effect and may be needed for a shorter duration.
13. The effect of schools, colleges and universities across the UK starting new academic years is yet to be seen, though is expected to further increase R and incidence (high

confidence) which is already being seen in Scotland. It is therefore highly likely that further national and local measures will be needed to bring R back below 1 in addition to those already announced. Reinforcement of existing guidance is also needed.

Explanation of the reasons for measures is particularly important, as is the release of data so that people can see the underlying information.

14. Effective testing, contact tracing, and isolation will become increasingly important. SAGE has previously advised on the importance of speed of contact tracing, and of high levels of adherence to self-isolation. SAGE reemphasised the importance of ensuring high levels of adherence to self-isolation.
15. As previously advised, preparation for increases in numbers of cases, hospitalisations and deaths will be critical, particularly as winter approaches. This will require preparation from across the whole of the national response, including in the NHS and care homes. The impact of other respiratory illnesses will need to be carefully monitored, including impact on testing demand and interactions with COVID-19.
16. Good data on the settings in which transmission is happening is needed in order to be able to respond effectively. Test and trace systems should use backwards contact tracing to identify where people are infected and by whom, and where clusters arise. Some of this data may be available at a local level but should be made available nationally as soon as possible.

ACTION: John Edmunds to chair a working group to consider relative impact of reintroduction of different NPIs on the epidemic spread, which then should be considered by government in relation to the four harms (direct COVID-19 harms, indirect health harms, societal harms and economic harms)

ACTION: John Edmunds, Susan Hopkins, Rob Orford and Andrew Hayward to determine the most effective way to obtain detailed data on where transmission is taking place

Population case detection

17. SAGE endorsed the SPI-M statement on population case detection (PCD).
18. A PCD programme designed to reduce R should be considered as an additional benefit to a well-functioning system to rapidly test, trace and isolate (TTI) symptomatic people and their contacts. Any PCD programme should not come at the expense of TTI systems, and care should be taken in communications to ensure that public engagement with TTI systems is not negatively affected.
19. Prioritising rapid testing of symptomatic people is likely to have a greater impact on identifying positive cases and reducing transmission than frequent testing of asymptomatic people in an outbreak area (high confidence).
20. As noted previously, testing is one part of a wider system; its impact on interrupting transmission is dependent on adherence to self-isolation. SAGE reiterated that incentives and interventions to enhance adherence to testing and isolation are critical.
21. Priority groups for large scale population case detection should be identified according to the risk of individuals within the group being infected, and the severity of the consequences of onward transmission, if people in the group become infected.
22. Population case detection alone (i.e. without contact tracing and COVID-secure measures) is unlikely to control transmission.
23. Measuring transmission risks and impacts of COVID-secure measures is difficult given heterogeneity of public settings e.g. pubs and restaurants. Pilot studies to estimate transmission through aerosols could be beneficial.

ACTION: CSA MoD to offer briefing to CO on the PCD paper and use of the ready reckoners.

ACTION: EMG to consider options for measuring potential impact of COVID-secure measures in different settings, including potential use of CO₂ sensors for understanding ventilation effectiveness (SAGE notes that this will not be straightforward).

Housing impacts and household transmission

24. Secondary attack rates of COVID-19 within households are high. The interactions between housing and household transmission are complex and multifactorial, and specific transmission routes are not well understood. There are some factors which make transmission within households more likely, including the household being larger or more densely occupied, or having poor ventilation.
25. Some types of household have particularly high levels of connectedness (through occupational, family or social networks) including some houses of multiple occupation (HMOs), which also increases transmission risk.
26. Socially deprived households tend to have high internal and external risks of infection due to being more likely to be exposed to environmental housing risks and having higher risk family or occupational networks, and may also often have health vulnerabilities.
27. There are mitigations which can reduce the risk of household transmission, some of which are relatively straightforward (e.g. increased handwashing within homes, making use of existing ventilation, and regular cleaning of shared surfaces), and some of which are longer-term considerations, such as improving housing quality and reducing overcrowding.
28. In some households there are barriers to isolation of individuals. In some cases, isolation outside the household may be appropriate, though this would need to be approached sensitively.
29. Homeless shelters with dormitory accommodation will present a high risk of transmission if they are reopened this winter. Shelters and areas with a high density of HMO are both potentially priorities for testing.

ACTION: MHCLG CSA to communicate findings and implications of paper to policy colleagues in MHCLG, and to share with PHE (including Regional Directors of Public Health) and equivalents in the DAs.

Asymptomatic and pauci-symptomatic cases

30. Estimating the proportion of asymptomatic infections with viral shedding is challenging given the majority of testing is carried out on symptomatic individuals. It is also important to differentiate truly asymptomatic cases (e.g. those that never develop symptoms) from pre-symptomatic cases (e.g. those that go on to develop symptoms later), paucisymptomatic cases (those with mild symptoms), postsymptomatic individuals (those who have recovered but still test positive), and false positive tests.
31. There is wide variation in the estimated proportion of infections that are truly asymptomatic across different studies with the rapid review providing a pooled estimate (based on 22 studies) of 28% but with very wide confidence intervals.
32. The proportion of infections which are asymptomatic affects the impact that a test, trace and isolate system can have on reducing transmission.
33. Studies suggest that asymptomatic infections are not associated with a prolonged period in which virus can be isolated relative to symptomatic infections (moderate confidence).

However, the amount of virus detected does not appear to be lower in asymptomatic individuals (moderate confidence)

34. Asymptomatic infection may be more likely in younger people and children than in older adults (moderate confidence).
35. Given that asymptomatic transmission is known to occur; SAGE reiterated the importance of maintaining social distancing and other COVID-secure measures.
36. There is a risk of mixed messaging to the public in that while only people with symptoms and certain other groups are encouraged to get tested, asymptomatic people outside these groups still present a transmission risk. It is important that risks of asymptomatic transmission are reflected in public communication and engagement.

ACTION: CSA MoD and CMO to discuss sensitivity of models to assumptions on proportion of cases which are asymptomatic.

Reuse of PPE

37. SAGE endorsed the paper '*Processing Methods to Facilitate the Re-use of Personal Protective Equipment (PPE) – Knowledge Summary*'.
38. Behavioural aspects of PPE reuse need to be considered, including end-user confidence in any reprocessing which takes place.

ACTION: SAGE secretariat to send endorsed paper '*Processing Methods to Facilitate the Re-use of Personal Protective Equipment*' to DHSC, PHE and Devolved Administrations

List of actions

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Attendees

Scientific Experts (33): Patrick Vallance (GCSA), Chris Whitty (CMO), Angela McLean (CSA MoD), John Aston (CSA HO), Robin Grimes (CSA Nuclear), Alan Penn (CSA MHCLG), Charlotte Watts (CSA DfID), Calum Semple (Liverpool), Andrew Curran (CSA HSE), Carole Mundell (CSA FCO), Yvonne Doyle (PHE), Maria Zambon (PHE), Steve Powis (NHSE), Susan Hopkins (JBC), Sheila Rowan (CSA Scotland), Jim McMenamin (HP Scotland), Rob Orford (Health CSA Wales), Fliss Bennee (Technical Advisory Cell, Wales), Ian Young (CSA Health NI), Wendy Barclay (Imperial), Graham Medley (LSHTM), John Edmunds (LSHTM), Catherine Noakes (Leeds), Ian Boyd (St Andrews), Venki Ramakrishnan (Royal Society), Mark Walport (UKRI), Peter Horby (Oxford), Michael Parker (Oxford), Lucy Yardley (Bristol and Southampton), Andrew Hayward (UCL), Tim Sharpe (Strathclyde), Mark Wilcox (Leeds), Chris Jones (FCDO).

Observers (14): [REDACTED] Ben Warner (No. 10), [REDACTED]
[REDACTED] Vanessa MacDougall (HMT),
Naomi Stauber DHSC, [REDACTED] Julian
Fletcher (CO), John Nicholson (Scotland), Simon Brindle (Wales), [REDACTED]
[REDACTED]

Secretariat (all GO-Science) (12): [REDACTED]
[REDACTED] Simon Whitfield, [REDACTED]
[REDACTED]

Total: 59