

Sixty-fourth SAGE meeting on Covid-19, 29th October 2020

Held via Zoom

Summary

1. Incidence across the UK continues to grow rapidly. The latest estimate of R for the UK is 1.1 to 1.3. Estimates from SPI-M suggest that there are between 50,000 and 63,000 new infections per day in England.
2. There appears to be faster growth in some areas of lower prevalence than in areas of high prevalence. In order to manage the overall epidemic, interventions should seek to prevent areas of low prevalence from becoming areas of high prevalence, as well as reducing prevalence where it is high. In the face of continued growth, the sooner R is brought below 1 the better. Failure to do so risks an even more significant epidemic burden and runs the risk of very significant pressures on the healthcare system.
3. Data show an increase in nosocomial infection, particularly in those areas with high prevalence. SAGE noted at its previous meeting reports of increasing deaths in care homes, particularly in regions with high prevalence (see SAGE 63). Whilst mitigations are applied in hospitals and care homes, these are less likely to be effective when prevalence is high. Keeping community infections low is the most effective way of preventing spread in these settings. Attention also needs to be paid to infection control in these settings.
4. The winter festive season presents a significant transmission risk due to potential indoor gatherings of people in larger groups from multiple households for prolonged periods, often with poor ventilation. These types of gatherings have many of the features associated with superspreader events and will often involve multiple generations.
5. To reduce the inevitable risk from social mixing during the festive period, a substantial reduction in prevalence is required ahead of any changes to behaviours or interventions. Measures to achieve this would need to be put in place as soon as possible.

Situation update

6. The epidemic continues to grow rapidly as shown by data from the ONS infection survey, modelled estimates from SPI-M and interim findings from the REACT surveillance survey.
7. The latest estimate of R for the UK is 1.1 to 1.3, while the daily growth rate estimate for new infections is +2% to +4%. This equates to a doubling time for new infections of 18 to 27 days, but it could be faster in some regions and age groups. Though this growth rate estimate is slightly lower than previous weeks, the epidemic continues to grow rapidly.
8. The latest estimate of R for England is also 1.1 to 1.3, while the daily growth rate estimate is +3% to +5%. While there is some limited evidence that the rate of growth of the epidemic is slowing in some areas of the country, R is almost certainly above 1 in all regions of England and in Scotland, Wales and Northern Ireland, with high prevalence of infection across much of the country.
9. As previously noted, these estimates rely on lagged data, mask wide regional variation in the number of new infections and how transmission is changing across the country. They should therefore be treated as an indication of the general trend. Changing patterns in testing, particularly in younger people, continue to make it hard to interpret changes in confirmed case numbers.
10. There appears to be faster growth in some areas of lower prevalence than in areas of high prevalence. It is not clear whether the slowing in growth in some high prevalence areas is due to the impact of interventions, behaviour changes, changes in susceptibility or a combination of factors. In order to manage the overall epidemic, interventions

should seek to prevent areas of low prevalence from becoming areas of high prevalence, as well as reducing prevalence where it is high.

11. REACT-2 estimates for R and doubling times suggest that the epidemic is growing faster than estimated by SPI-M. The latest interim findings from the REACT surveillance survey from 16th to 25th October estimate a weighted prevalence of 1.28% (1.15% to 1.41%). These interim findings are the highest observed in any round of the survey and over double the previous round estimate. Data show particularly high prevalence in the North West, North East, and Yorkshire and the Humber.
12. Estimates from SPI-M suggest that there are between 50,000 and 63,000 new infections per day in England. Although these estimates are slightly lower than last week, this is due to models having been further refined and does not imply that the epidemic has been suppressed. In the face of continued growth, the sooner R is brought below 1 the better. Failure to do so risks an even more significant epidemic burden and runs the risk of very significant pressures on the healthcare system.
13. The ONS infection survey estimates that from 17th to 23rd October an average of 568,100 people had COVID-19 in the community in England, which is a significant increase on the previous estimate. It is highly likely that prevalence has grown since this latest survey. The data do not include people in care homes, hospitals, or university halls of residence.
14. The ONS infection survey data indicate a continued growth in prevalence in secondary school age children (ages 11/12 to 15/16), who have the second highest level of infection (after ages 16/17-24) at around 1.48% in England. There is also growth in prevalence in primary school age children (ages 2-10/11), but this is much less than secondary school age children, at around 0.87% with COVID-19 (high confidence).
15. SPI-M medium-term projections suggest the North West region, despite potentially slowing growth, is close to returning to the peak level of daily hospital admissions reached earlier in the epidemic. Other regions in England may also reach this point within the next few weeks, including the North East and Yorkshire region. These figures mask significant variation within regions and therefore it could be significantly worse at a local level than shown by this regional view.
16. Data show an increase in nosocomial infection, particularly in those areas with high prevalence. SAGE noted at its previous meeting reports of increasing deaths in care homes, particularly in regions with high prevalence (see SAGE 63). Whilst mitigations are applied in hospitals and care homes, these are less likely to be effective when prevalence is high. Keeping community infections low is the most effective way of preventing spread in these settings. The NHS is also operating a higher proportion of non-Covid services than it was earlier in the epidemic, which adds to the challenge. It is important to monitor levels of infection and positive test rates in healthcare workers.
17. In adult patients requiring supplemental oxygen, moderate doses of dexamethasone (a corticosteroid) have been shown to reduce all-cause mortality, compared to standard care. Clinical guidance recommends the use of corticosteroids for patients with severe or critical COVID-19. CO-CIN data show that use of corticosteroids has increased over time, though around a quarter of hospitalised patients on oxygen therapy admitted in August and September did not receive any corticosteroid therapy.
18. COG-UK analysis of SARS-CoV-2 introductions and transmissions in Scotland and Wales during the first and second waves suggest imports following the easing of lockdown have played a role in seeding the current epidemic population.

ACTION: CMO to share CO-CIN paper '*Delayed adoption of corticosteroids as standard of care for hypoxic patients with COVID-19*' in the UK' with medical Royal Colleges and NICE and liaise with them over actions.

Potential trajectories for Covid-19

19. SAGE considered some high-level illustrative scenarios for the coming months, which provide one way of considering the potential impact of different approaches. It is important to consider the direct COVID-19 harms, indirect COVID-19 harms, non-COVID health effects caused by interventions, and other harms. Different regions could follow different paths and combinations of the scenarios are possible.
20. Interventions applied when prevalence is low can maintain low prevalence, whilst the same interventions when prevalence is higher may prevent further growth but result in continued high prevalence. Keeping prevalence low in low prevalence areas reduces the risk of a national large-scale epidemic.
21. Direct and indirect mortality and morbidity from COVID-19 is likely to be low in the event of low prevalence and a controlled epidemic, where test and trace can play a larger role in containing outbreaks, and interventions are in place to successfully control surges in cases where they occur, although economic and other harms arise from interventions.
22. Sustained high prevalence, even if further growth were prevented, would have significant consequences on mortality and morbidity, and place significant pressures on the health system. There would also be significant economic and other harms in these scenarios.
23. As the epidemic progresses, susceptibility will reduce, and therefore R will also reduce. The epidemic may plateau, possibly at a high level of infection, due to a combination of interventions, behaviour change and a degree of population immunity. Population immunity would contribute a small proportion of this effect and would be insufficient to have a significant effect if restrictions were released. The duration of immunity remains uncertain.
24. In this event, if interventions were relaxed or behaviours changed, R would likely quickly exceed 1 once again. This would result in prolonged periods of high incidence, and consequently high levels of hospitalisations and deaths. Trends seen in a number of US states in recent months are suggestive of this type of dynamic.

ACTION: SAGE secretariat to share papers on scenarios with Cabinet Office policy and analytical leads for consideration and use once amended.

Insights on Celebrations and Observances during COVID-19

25. Celebrations consist of a series of activities, each of which has an associated epidemiological risk and potential mitigations. As similar activities and behaviours are shared across many celebrations, it could be possible to develop an approach to mitigation of risks that can be applied for multiple celebrations.
26. The winter festive season presents a significant transmission risk due to potential indoors gatherings of people in larger groups from multiple households for prolonged periods, often with poor ventilation, and also due to the nature of many of the activities typically undertaken. These types of gatherings have many of the features associated with superspreader events and will often involve multiple generations.
27. Relaxing measures over the holiday season to allow such activities would therefore lead to a rapid increase in incidence and prevalence (high confidence). It would be possible to counteract a short period of relaxation of measures with a longer period of more stringent measures.
28. The relative duration of each of these periods would depend on the degree of relaxation and the stringency of measures (i.e. how far R is above and below 1 for each period respectively). One model suggests that for each day measures are relaxed, five days of stringent measures, before or after the event, would be required to reduce prevalence back to the original level.

29. To reduce the inevitable risk from social mixing during the festive period, a substantial reduction in prevalence would be required ahead of any changes to behaviours or interventions. Measures to achieve this would need to be put in place as soon as possible to achieve the effect in good time for upcoming celebrations.
30. It is important that people understand the risks to themselves and to others, though there may be still be challenges in achieving full adherence to measures over the holiday period. It is also important that they understand the rationale behind guidance, and how to reduce these risks. Providing advice early would allow people to plan and will increase their ability to adhere to guidance. Early advice is particularly important in informing people's travel arrangements. SAGE advises preparing communications on this as soon as possible.
31. Interventions should balance the value of usual celebratory practices against the risk associated with them, and of finding alternative ways of marking occasions. Interventions designed in collaboration with communities and religious groups are more likely to be based on an understanding of the value assigned to different traditions, and therefore to be effective.
32. Many different celebrations including religious celebrations from multiple faith groups, are valued in the UK and a consistent approach is needed in guidance and interventions in order to demonstrate fairness which in turn can promote adherence. If guidance differs for different celebrations or observances, the rationale behind decisions needs to be clearly communicated.

ACTION: SAGE Secretariat to convene a task and finish group on celebrations to develop SPI-B paper into short consensus statement on key evidence and advice, with practical outputs for policy and operations.

ACTION: Cabinet Office and **SAGE Secretariat** to arrange a seminar on evidence around celebrations, for CO and other relevant policy officials.

Update on ethnicity and household transmission

33. SAGE has previously advised that household composition (household size, multigenerational) and related factors among minority ethnic groups play a role in ethnic inequalities in COVID-19 (see SAGE 56).
34. Recent population-based studies have shown that living in large or multigenerational households explains some of the additional risk of COVID-19 infection and mortality in south Asian ethnic groups, but not other ethnic groups.
35. According to ONS data, living in a multigenerational household explained 10-15% of the additional risk of COVID-19 death amongst older women from South Asian backgrounds after accounting for age, household overcrowding, geographical factors, socio-economic factors, and underlying health, but very little for men or people from other ethnic groups. A further paper will come to SAGE.

List of actions

CMO to share CO-CIN paper '*Delayed adoption of corticosteroids as standard of care for hypoxic patients with COVID-19*' in the UK' with medical Royal Colleges and NICE and liaise with them over actions.

SAGE secretariat to share papers on scenarios with Cabinet Office policy and analytical leads for consideration and use once amended.

SAGE Secretariat to convene a task and finish group on celebrations to develop SPI-B paper into short consensus statement on key evidence and advice, with practical outputs for policy and operations.

Cabinet Office and **SAGE Secretariat** to arrange a seminar on evidence around celebrations, for CO and other relevant policy officials.

Attendees

Scientific Experts (28): Patrick Vallance (GCSA), Chris Whitty (CMO), Jonathan Van Tam (dCMO), Ian Diamond (ONS), Graham Medley (LSHTM), John Edmunds (LSHTM), Jeremy Farrar (Wellcome), Calum Semple (Liverpool), Ian Boyd (St. Andrews), Wendy Barclay (Imperial), Maria Zambon (PHE), Mark Wilcox (Leeds) Rob Orford (Health, Wales CSA), Mark Walport (UKRI), Charlotte Watts (DfID CSA), Yvonne Doyle (PHE), Peter Horby (Oxford), Angela McLean (MoD CSA), Nicola Steedman (Scotland), Steve Powis (NHS England), Michael Parker (Oxford), Jim McMenamain (Health Protection Scotland), Sheila Rowan (Scotland CSA), Brooke Rogers (KCL), James Rubin (KCL), Rohini Mathur (LSHTM), Kamlesh Kunti (Leicester), Andrew Morris (Edinburgh)

Observers and government officials (22): Paul Monks (BEIS CSA), Phil Blythe (DfT CSA), Alan Penn (MHCLG CSA), Rupert Shute (HO dCSA), Carole Mundell (FCO CSA), Tom Rodden (DCMS CSA), Osama Rahman (DfE CSA), John Aston (HO CSA), Andrew Curran (HSE CSA), Imran Shafi (No. 10), [REDACTED] Julian Fletcher (CO), [REDACTED] Vanessa MacDougall (HMT), [REDACTED] Thomas Waite (JBC), [REDACTED]

Secretariat (all GO-Science) (20): [REDACTED] Simon Whitfield, Stuart Wainwright, [REDACTED]

Total: 70