One-hundred-and-fourth SAGE meeting on COVID-19, 28th January 2022

Held via Video Teleconference

Situation update

1. Hospital admissions and bed occupancy levels in England are decreasing, though with differences between regions. Occupancy of ICU beds is also declining, with levels now comparable to last summer, and data from CO-CIN indicate a recent fall in nosocomial infections. Linkage of a low number of ICU admissions to sequencing suggests that there is a higher proportion of ICU cases with Delta compared to Omicron than may be expected, given the low incidence of Delta (low confidence). Data from CO-CIN also suggest that admissions to ICU have been younger in this wave and mortality rates lower when compared to previous waves. The proportion of COVID-19 positive admissions which are due primarily to COVID-19 disease has continued to decrease.
2. There are indications that recent increases in cases in school-aged children are beginning to plateau. However, these remain at a very high level and there may be further capacity for case growth, particularly in primary school-aged children where immunity levels are expected to be lower than among secondary school-aged children. There has been no change to previous observations concerning admissions of young children, who are generally admitted for short stays only.
3. UKHSA continues to monitor the Omicron variant BA.2 (which is S-gene target positive). The proportion of S-gene positive cases is increasing and the growth of the variant in England suggests a growth advantage relative of BA.2 compared to the BA.1 variant. Similar observations have been made internationally, but not in all countries where BA.2 has been reported. Preliminary analysis also suggests BA.2 may have a higher household secondary attack rate than BA.1 (low confidence). It is too early to conclude whether any possible growth advantage is a result of an increase in inherent transmissibility or other factors. Early observations of new variants should be interpreted with care.
4. Initial estimates of vaccine effectiveness against symptomatic disease (from a small number of infections) do not indicate a significant difference compared to effectiveness against BA.1.
5. The long-term pattern of the epidemic in the UK is highly uncertain, but future waves of infection should be expected (high confidence). Key determinants of this pattern include the emergence of new variants (which remains unpredictable, and they could have varied transmissibility, severity and immune escape), the change in number and age distribution of susceptible individuals (e.g., through vaccination policy, waning of immunity, and births/deaths), mixing patterns and seasonality. It is not clear how long it will take for a stable global pattern to emerge, but the situation is likely to fluctuate for several years (medium confidence). SAGE has previously advised that increased international vaccination coverage is important for overall control of the pandemic and would also reduce the risk to the UK (SAGE 94).
6. The population's immune landscape will evolve over time through both vaccination and infection. An assessment of the current state of immunity in the population (including B/T cell immunity as well as seropositivity) would be valuable and would help determine future vaccination strategy.

7. The number, timing and characteristics (e.g. severity) of future variants is very unpredictable and future waves could still result in high numbers of infections, admissions and deaths (the most recent Omicron wave is likely to have been partially mitigated by the effective and rapid rollout of booster vaccinations). Future variants may not come from the Omicron lineage, which has lower severity. One possible scenario is the co-circulation of multiple variants with different characteristics that primarily impact different groups of the population due to heterogeneity of immunity and behaviour. There also remains uncertainty about the dynamics of other respiratory infections such as influenza over the coming years, following disruption of their normal seasonal cycles.
8. The timing and magnitude of previous waves have been largely driven by the emergence of variants with a significant transmission advantage (e.g., Alpha, Delta), and have been strongly influenced by interventions. Seasonality is highly likely to be an important component of the dynamics of future waves, because of a number of factors including indoor mixing patterns. In the long run, most waves are more likely to occur in autumn/winter, as for many other respiratory viruses (medium confidence), although in the short to medium term, other forces are likely to dominate such as the emergence of new variants or waning of immunity. This could result in non-seasonal waves (medium confidence). Waning of immunity from boosters, which were given to large numbers of people in a short time, is likely to be somewhat synchronous across the population.
9. Ensuring an effective system of monitoring and surveillance of variants linked to phenotypic assessment and predictive vaccinology will be essential for management of future variants and epidemic waves. The ONS Coronavirus Infection Survey has been and will continue to be a critical tool for monitoring the epidemic. Maintaining sufficient testing capacity for future waves will be very important as is maintaining a research capability as part of the future management of the pandemic.
10. SPI-M-O has reviewed combined model projections over the course of the epidemic which highlight extended periods of stability, particularly summer 2021, where growth had been expected. One hypothesis is that community testing and communication of risk within local networks sufficiently interrupted transmission to restrict growth. Changes to testing behaviour could have a larger impact on epidemic trajectories than other non-pharmaceutical interventions, but this remains uncertain and further evidence on testing behaviours is required, as well as analysis of testing effects across the UK in different regions and devolved administrations.
11. Previous analyses have suggested elevated risk of mortality for some ethnic groups in the UK. Updated analysis by the ONS suggests that this increased risk is no longer observed in those of Black African or Caribbean background after controlling for vaccination status. Some elevated risk for those of Pakistani or Bangladeshi backgrounds is, however, still seen even after controlling for vaccination status.

ACTION: UKHSA (Susan Hopkins) to assess Omicron severity in terms of risk of entering ICU as opposed to overall hospitalisation

ACTION: SPI-B to consider and share with SPI-M-O any recent evidence on behaviours around testing (as part of SPI-B work to be commissioned by Cabinet Office).

ACTION: SPI-M-O and UKHSA (Jenny Harries) to consider what studies would elucidate the impact of testing behaviour on prevalence in the UK, including Devolved Administrations in discussion

ACTION: SAGE Secretariat to share the written response to the Public Affairs Committee with SAGE participants, when possible.

ACTION: SAGE Secretariat to ensure that the process of converting SAGE papers on GOV.UK to include a version in HTML makes clear that the content of the paper has not been revised.

Attendees

Scientific experts (27): *Patrick Vallance (GCSA), Chris Whitty (CMO), Angela McLean (MoD, CSA), Brooke Rogers (KCL), Calum Semple (Liverpool), Catherine Noakes (Leeds), Charlotte Watts (FCDO, CSA), Fliss Bennee (Welsh Government), Graham Medley (LSHTM), Harry Rutter (Bath), Ian Diamond (ONS), Ian Young (Northern Ireland Executive, Health CSA), Jeanelle de Gruchy (dCMO), Jenny Harries (UKHSA), Jim McManus (ADPH), John Edmunds (LSHTM), Jonathan Van Tam (dCMO), Julie Fitzpatrick (Scottish Government, CSA), Kamlesh Khunti (Leicester),* [redacted]*, Meera Chand (UKHSA), Michael Parker (Oxford), Nicola Steedman (Scottish Government, dCMO), Peter Horby (Oxford), Steve Powis (NHS England), Susan Hopkins (UKHSA) and Wendy Barclay (Imperial).*

Observers and government officials (26): *Alan Penn (DLUHC, CSA), Andrew Curran (HSE, CSA),* [redacted]*, Christopher Williams (PHW), Daniel Kleinberg (Scottish Government), Edward Wynne-Evans (UKHSA), Emma Sherwood (DHSC),* [redacted]*, Gideon Henderson (Defra, CSA), Giri Shankar (PHW),* [redacted]*, Henry Cook (No. 10), Jennifer Rubin (HO, CSA), Jim McMenamin (Public Health Scotland), Liz Lalley (Welsh Government), Louise Tinsley (HMT),* [redacted]*, Paul Monks (BEIS, CSA),* [redacted]*, Sarah Sharples (DfT, CSA), Soheila Amin-Hanjani (BEIS, dCSA),* [redacted]*, Tom Rodden (DCMS, CSA)* [redacted].

Secretariat (all GO-Science) (12): [redacted]*Simon Whitfield, Stuart Wainwright and Zoe Bond.*

Total: 65