

**Fifty-eighth SAGE meeting on Covid-19, 21st September 2020**  
**Held via Zoom**

**Effectiveness and harms of different non-pharmaceutical interventions**

1. COVID-19 incidence is increasing across the country in all age groups. The effect of opening of schools, colleges and universities has only just begun to affect this increase. Even so, the latest data suggest that the doubling time for new infections could currently be as short as 7 days nationally. COVID-19 related hospitalisations and intensive care bed usage have started to rise. SPI-M has modelled the potential increases.
2. A package of interventions will need to be adopted to reverse this exponential rise in cases. Single interventions by themselves are unlikely to be able to bring R below 1 (high confidence). The shortlist of non-pharmaceutical interventions (NPIs) that should be considered for immediate introduction includes:
  - a. A circuit-breaker (short period of lockdown) to return incidence to low levels.
  - b. Advice to work from home for all those that can.
  - c. Banning all contact within the home with members of other households (except members of a support bubble)
  - d. Closure of all bars, restaurants, cafes, indoor gyms, and personal services (e.g. hairdressers)
  - e. All university and college teaching to be online unless face-to-face teaching is absolutely essential.
3. This shortlist is based on assessment of the effectiveness and harms of different NPIs at a population level. Effect on R has been estimated for each intervention where possible, though these are not necessarily additive. In determining the number and scale of NPIs to be suggested, it has been assumed that there will be no other policy decisions which would lead to further increases in transmission (i.e. no lifting of any existing restrictions) when these measures are introduced.
4. There are important interventions which have a significant effect on reducing individuals' risk, which are not considered here because their population level effect would be small (e.g. because they address situations which occur relatively infrequently).
5. All the interventions considered have associated costs in terms of health and wellbeing and many interventions will affect the poorest members of society to a greater extent. Measures will be urgently needed to mitigate these effects and to achieve equity and social justice, some of which could be introduced relatively quickly. Policy makers will need to consider analysis of economic impacts and the associated harms alongside this epidemiological assessment. This work is underway under the auspices of the Chief Economist.
6. The more rapidly interventions are put in place, and the more stringent they are, the faster the reduction in incidence and prevalence, and the greater the reduction in COVID-related deaths (high confidence). Both local and national measures are needed; measures should not be applied in too specific a geographical area.
7. A more effective response now may reduce the length of time for which some measures are required. However, some restrictions will be necessary for a considerable time (at least throughout the winter) and therefore consideration should be given to their sustainability.
8. A consistent package of measures should be adopted which do not promote, or appear to promote, contradictory goals. This will enable clear, consistent communications that can explain the rationale for measures, which in turn will support adherence.
9. Communication should increase public understanding of risk and should explain the importance of everyone adhering to guidance and reducing contacts, as anyone can contribute to transmission (even if they have previously been infected). Adherence



- will continue to be central to the effectiveness of measures, and it should not be assumed that people will respond in the same way that they have done previously.
10. The rapid rise in cases means that a raft of complementary operational response measures is even more important to reduce transmission, particularly in care homes, hospitals and other enclosed settings, such as prisons and hostels for the homeless. SAGE has previously noted the risks associated with discharging people from hospitals into the community without testing to ascertain whether they may be infectious. Specific attention to reducing spread to Care Homes and within Hospitals is critically important. This needs to be considered when assessing prioritisation within constrained testing capacity.
  11. Measures such as social distancing, hand hygiene, ventilation and appropriate use of face coverings will remain important contributors to reducing transmission.
  12. It is important that studies are undertaken to evaluate the risks in different settings and populations and the impact of different control policies in order to inform future decisions on which NPIs to apply. The existing evidence base for the effectiveness and harms of individual interventions is generally weak.
  13. SAGE endorsed the paper "Summary of the effectiveness and harms of different non-pharmaceutical interventions" subject to minor changes.

**ACTION:** John Edmunds and SAGE Secretariat to update paper "Summary of the effectiveness and harms of different non-pharmaceutical interventions"

#### Attendees

**Scientific Experts (27):** Patrick Vallance (GCSA), Chris Whitty (CMO), Jonathan Van Tam (dCMO), Jenny Harries (dCMO), Angela McLean (CSA MoD), John Aston (CSA HO), Charlotte Watts (CSA DfID), Alan Penn (MCHLG), Andrew Curran (CSA HSE), Carole Mundell (CSA FCO), Ian Diamond (ONS), Yvonne Doyle (PHE), Susan Hopkins (JBC), Jeanelle de Gruchy (DPH Tameside), Gregor Smith (CMO Scotland), Nicola Steedman (dCMO, Scotland), Fliss Bennee (Technical Advisory Cell, Wales), Ian Young (CSA Health NI), Graham Medley (LSHTM), John Edmunds (LSHTM), Catherine Noakes (Leeds), Peter Horby (Oxford), Lucy Yardley (Bristol and Southampton), Jeremy Farrar (Wellcome), James Rubin (KCL), Brooke Rogers (KCL), Calum Semple (Liverpool),

**Observers (10):** NR Ben Warner (No. 10) NR Julian Fletcher (CO), NR Name Redacted (HMT), David Lambert (DHSC), Phil Blythe (DfT), NR

**Secretariat (all GO-Science) (14):** NR  
LPP/L Simon Whitfield, Stuart Wainwright NR  
NR

**Total: 51**