

Fifty-eighth SAGE meeting on COVID-19.

Held via Video Teleconference.

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 circuit-breaker (short period of lockdown) to return incidence to low levels
- advice to work from home for all those that can
- banning all contact within the home with members of other households (except members of a support bubble)
- closure of all bars, restaurants, cafes, indoor gyms, and personal services (for example hairdressers)
- 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 (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 (for example 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.