OFFICIAL SENSITIVE: Potential impact of behavioural and social interventions on a Covid-19 epidemic in the UK

Potential impact of behavioural and social interventions on an epidemic of Covid-19 in the UK

Purpose:

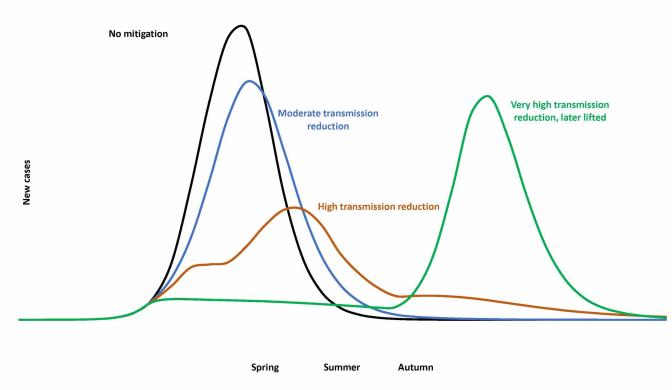
- 1. This outlines the available scientific evidence base around the <u>behavioural and social interventions</u> (previously referred to as <u>non-pharmaceutical interventions</u>) that could be applied as part of the HMG response to a UK epidemic of Covid-19, including the expected impacts on the spread of the virus and public behaviours. The note does not cover economic, operational or policy considerations.
- 2. SAGE <u>has not provided a recommendation</u> of which interventions, or package of interventions, that Government may choose to apply. Any decision must consider the impacts these interventions may have on society, on individuals, the workforce and businesses, and the operation of Government and public services.

Background:

- 3. In the event of a severe epidemic, the NHS will be unable to meet all demands placed on it. In the reasonable worst-case scenario, demand on beds is likely to overtake supply well before the peak is reached.
- 4. There are a range of behavioural and social interventions which are evidenced as having been effective in responding to historic epidemics. These interventions are also well understood by the public and have been enacted in other countries.
- 5. Applying these interventions could be helpful in containing an epidemic to some degree or changing the shape of the epicurve, see figure 1, making the response of the NHS and other sectors more sustainable. The objectives of these interventions could be to:
 - 1. Contain the outbreak so that it does not become an epidemic (note this may not be fully achievable);
 - 2. Delaying the peak so it occurs when the NHS is out of Winter pressures; and
 - 3. Reducing the size of and/or extending the peak so that the response by the NHS and other sectors can be maintained more sustainably.
- 6. Any intervention would need to be Government policy for a significant duration in order to see the benefit, as removing and/or relaxing the intervention before this could result in further peaks and potentially extend transmission of the virus into Winter 2020.
- 7. SAGE will consider the points below in further detail on 5 March:
 - o Optimal combination of interventions to achieve the objectives above,
 - Optimal point to enact these interventions,
 - \circ Duration that these interventions should be in place to achieve the objectives above.

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Illustrative impact of behavioural and social interventions lasting several months on a reasonable worst-case epidemic (Figure 1)



Key

The reasonable worst-case scenario, with no mitigating measures, would likely peak during April-May, with a high peak incidence.

Behavioural and social interventions which moderately reduce transmission are unlikely to greatly reduce the total number of cases but could reduce and slightly delay the peak. This scenario may also arise from behavioural changes without government intervention.

Behavioural and social interventions which further reduce transmission could delay and reduce the peak still further.

Very stringent behavioural and social interventions could have a similar scale of impact to Hong Kong and prevent a major epidemic. However, when lifted, a large epidemic would likely follow. Depending how long they were in place, this could peak in autumn.

Please note: The scale and timings of the epidemic curves in this diagram are illustrative only, but their patterns are robust.

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