

## **Annex: SG CMO Advisory Group - COVID-19 Lockdown Exit Strategies**

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### **Overall aims**

- To learn to live with the virus by keeping transmission as low as possible, minimising direct harm from COVID-19
- To minimise adverse health impacts on those with other non-COVID-19 related disease.
- To enable as much of society to return, as far as is possible, to normal functioning

### **Strategic options**

The options summarised below are drawn from recently published working papers<sup>iiiiii</sup>. These are not necessarily mutually exclusive options; a number of countries are pursuing several approaches simultaneously.

### **Other considerations**

- Knowledge of how COVID-19 spreads (e.g. duration of survival on surfaces, how it is most easily contracted) may be more available in the short-term than a reliable antibody test or vaccine.
- Approaches could be applied at nationwide or regional level, but this creates difficulty of managing internal cross-border flows, especially for economy.
- Use of approaches with other longer-term public health measures such as use of face-masks in public and safe distancing<sup>iv</sup>. France and Austria are beginning to ease their lockdown interventions in this way. <https://www.bbc.co.uk/news/world-europe-52275959>
- The overall effectiveness of interventions such as lock down and case identification and contact tracing – the indications from several countries is that lock down works. It is not entirely clear the degree to which case identification with contact tracing is effective at different stages of the pandemic.
- Immunity after having COVID-19 is not yet been proved – makes immunity approach difficult in short/medium term<sup>v</sup>.

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	Approach	Features	Rationale	International Comparisons/ evidence sources
01	<b>Completely eradicate virus through rigorous test, trace and isolate &amp; then gradually reopen society</b>	Extensive population testing, tracing and isolation  Closure of borders	Save lives and ensure the health systems can cope in the long term	China, Singapore, South Korea, Czech Republic, Germany, New Zealand  Imperial College paper on China's attempt to eradicate & then reopen <sup>vi</sup>
02	<b>Intermittent lock down/ periodic switching</b>	Turn interventions on and off based on feedback from key measures trends such as number hospitalised/died	Controlled rate of infection so that NHS capacity not overwhelmed	Supported by Imperial College /Ferguson model <sup>vii</sup>
03	<b>Cyclical lockdowns</b>	e.g. 4 days of work followed by 10 days of lockdown	Control rate of transmission and provide structure around lifting interventions	Mathematical modelling <sup>viii</sup>
04	<b>Herd immunity: Gradual release from lockdown</b>	Develop immunity to the virus by allowing large numbers to contract the illness at a controlled pace - Soft social distancing	Reduces impact on economy and society	Denmark <sup>ix</sup> Sweden Austria and France <sup>x</sup>  A phased lift of control: a practical strategy to achieve herd immunity <sup>xi</sup>
05	<b>Lockdown till vaccine or effective drug treatment(s)</b>	Vaccine and effective drug treatments months off – could be 18 months	Will lessen spread of virus but population will not comply to interventions for a long period without strict control and will have a huge negative impact on the economy	None

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	Approach	Features	Rationale	International Comparisons/ evidence sources
06	Age-based unlocking	Set age limits for being under lockdown	Choose a level at which risk of illness in an age band is deemed acceptable	Recommend <30 <sup>xii</sup>
07	Population scheduling	Classify population into different segments and take turns to be in lockdown - Return of some segments at low risk to society e.g. schools	Slow rate of transmission	Panama <sup>xiii</sup> Being considered in Croatia France is considering the reopening of schools in May, but is receiving pushback from teachers
08	Geographical segmentation	Geographic variation within country may mean restrictions can be lifted in different areas at different times	Could control spread and lessen impact of whole population / health services	Taiwan <sup>xiv</sup>
09	Contact tracing (with/without testing) with isolation	Identify people that a positive COVID individual has been near. Potentially follow up with testing or recommend contacts isolate and remain aware of symptoms	Interrupt viral spread by breaking chains of (potentially asymptomatic) transmission	
10	Immunity passports	Those deemed immune are given a means to identify themselves and have rights to return to society.	Re-start economy and return to normal services and society	Germany issuing immunity certificates <sup>xv</sup> Reports of re-activation of disease described in South Korea <sup>xvi</sup>
11	Enhanced shielding of vulnerable populations	Vulnerable groups to continue to self-isolate	These groups are at risk and so can mitigate the risk of getting virus	Being considered by UK - Mark Woolhouse paper to SAGE
12	PPE for everyone	Whole population to use face masks and other protective clothing when in public places	Prevent spread in public places	US (encouraged though not mandated) Austria  Research on use of CDC <sup>xvii</sup>

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- <sup>i</sup> Bin et al (8 Apr 2020) On Fast Multi-Shot Epidemic Interventions for Post Lock-Down Mitigation, <https://arxiv.org/abs/2003.09930>
- <sup>ii</sup> Oswald Powdathée, 2020, [https://warwick.ac.uk/fac/soc/economics/research/centres/cage/manage/publications/policy\\_briefing\\_oswald\\_powdthavee.pdf](https://warwick.ac.uk/fac/soc/economics/research/centres/cage/manage/publications/policy_briefing_oswald_powdthavee.pdf)
- <sup>iii</sup> Wu et al, 2020, <https://www.medrxiv.org/content/10.1101/2020.03.30.20047365v1.full.pdf>
- <sup>iv</sup> For example - Austria plans to allow certain shops to open from 14th April, with restrictions on the number of people allowed in and only if facemasks are worn. Larger shops may open from 1st May; with restaurants and bars possibly following in mid May. Wearing facemasks will be mandatory on public transport as it already is in supermarkets. Source: Imperial College: Estimating the number of infections and the impact of non-pharmaceutical interventions on COVID-19 in 11 European countries. 30th March 2020  
<https://news.sky.com/story/coronavirus-the-european-countries-beginning-to-lift-lockdown-measures-11969857>
- <sup>v</sup> South Korean evidence, reported in FT, of patients testing negative for the virus then testing positive again. (potential for either false negatives, or virus coming back)  
<https://www.ft.com/content/44a40fcf-d641-46b2-a69e-46420ffb4933>
- <sup>vi</sup> Imperial College COVID-19 Response Team: Report 11: Evidence of initial success for China exiting COVID-19 social distancing policy after achieving containment  
<https://www.imperial.ac.uk/media/imperial-college/medicine/mrc-gida/2020-03-24-COVID19-Report-11.pdf>
- <sup>vii</sup> Imperial College COVID-19 Response Team: Report 9: Impact of non-pharmaceutical interventions (NPIs) to reduce COVID-19 mortality and healthcare demand  
<https://spiral.imperial.ac.uk/bitstream/10044/1/77482/8/2020-03-16-COVID19-Report-9.pdf>
- <sup>viii</sup> Adaptive cyclic exit strategies from lockdown to suppress COVID-19 and allow economic activity <https://www.medrxiv.org/content/10.1101/2020.04.04.20053579v1.full.pdf>
- <sup>ix</sup> <https://www.rte.ie/news/coronavirus/2020/04/12/1130075-lockdown-exit-austria-and-denmark-take-first-steps/>
- <sup>x</sup> <https://www.bbc.co.uk/news/world-europe-52275959>
- <sup>xi</sup> Department of Public Health, Erasmus MC, University Medical Center Rotterdam, Netherlands: A phased lift of control: a practical strategy to achieve herd immunity against Covid-19 at the country level <https://www.medrxiv.org/content/10.1101/2020.03.29.20046011v1.full.pdf>
- <sup>xii</sup> Wu et al, 2020, <https://www.medrxiv.org/content/10.1101/2020.03.30.20047365v1.full.pdf>
- <sup>xiii</sup> <https://edition.cnn.com/2020/04/01/world/panama-coronavirus-sex-intl/index.html>
- <sup>xiv</sup> <https://www.telegraph.co.uk/news/2020/04/09/countries-end-coronavirus-lockdown/>
- <sup>xv</sup> <https://www.telegraph.co.uk/news/2020/03/29/germany-will-issue-coronavirus-antibody-certificates-allow-quarantined/>
- <sup>xvi</sup> <https://www.telegraph.co.uk/news/2020/04/10/south-korea-reports-recovered-coronavirus-patients-testing-positive/>
- <sup>xvii</sup> Recommendation Regarding the Use of Cloth Face Coverings, Especially in Areas of Significant Community-Based Transmission <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-cover.html#studies>