What will happen to influenza when COVID-19 control measures are lifted?

Global Influenza Initiative

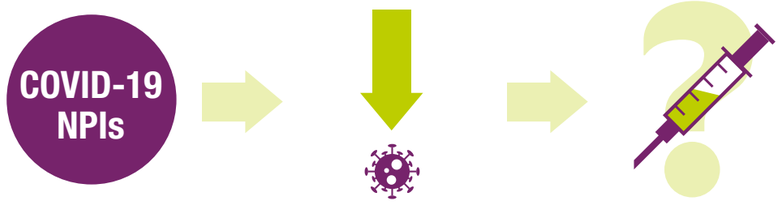
Certain aspects of COVID-19 control measures have varied widely between countries and over time:

Stringency

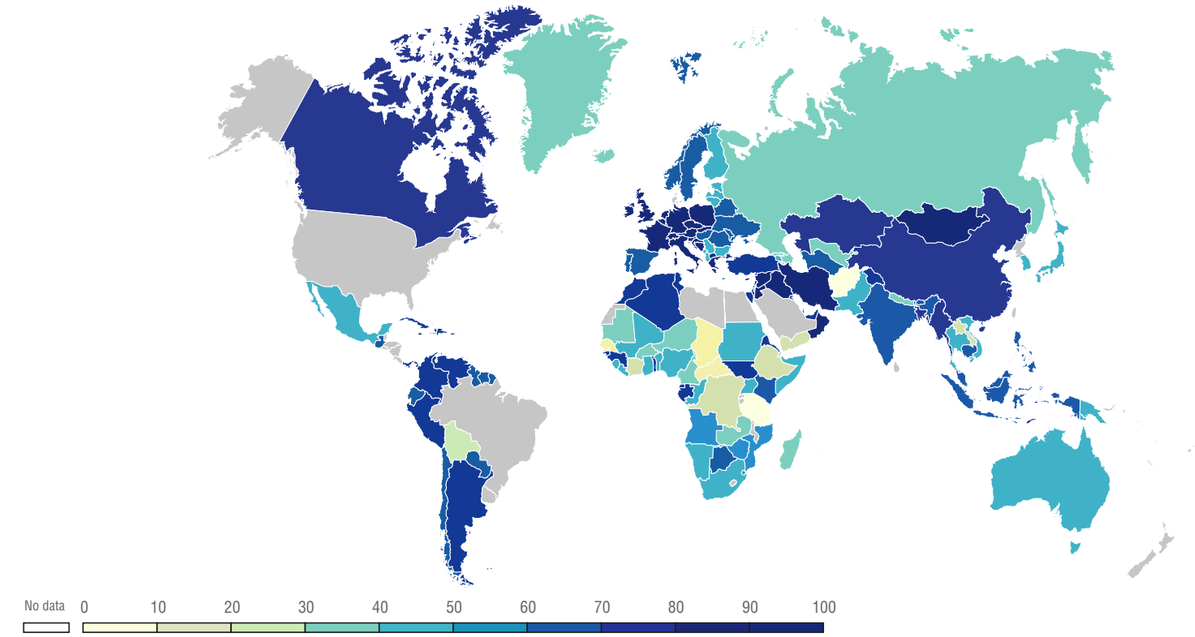
Level of compliance

Rigour of enforcement

COVID-19 control measures have led to low flu virus circulation during the pandemic[2–4] which may lead to the misconception that vaccination is not necessary



The Oxford COVID-19 Government Response Tracker (OxCGRT) illustrates the variation in COVID-19 stringency index between countries and over time[1]



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COVID-19 stringency index, April 12th 2021. Note: where policies vary at the sub-national level, the index shows the response level of the strictest sub-region.[4]

Evidence suggests that a mild flu season in one year can lead to a more severe season in the next

Key evidence:[5–7]

Climate change
Effects of warm winters with low flu circulation

Modelling
Effects of extended COVID NPIs

Pandemic flu dynamics
Effects of ratio of susceptible to immune individuals in one wave on the next

Ratio of influenza susceptible to immune individuals

Influenza outbreak with:

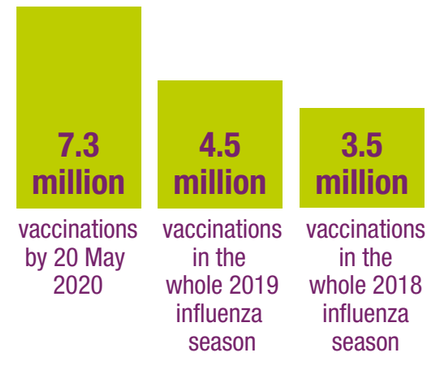
Earlier onset

Increased size

Increased severity

Demand for influenza vaccination in some countries has increased during the COVID-19 pandemic[8]

"…Vaccination against influenza remains important this year . . . Vaccination is our best defence against flu viruses."
Australian Government, Department of Health, April 2021.[9]



Influenza vaccine uptake in Australia[8]

What are the experts saying?

GII steering committee member, Ben Cowling (University of Hong Kong, China).
"…it is clear that influenza will be back and likely back with a bang"

For further information, see issue 2 of InFluNews from the Global Influenza Initiative

References. 1. Blavatnik School of Government, University of Oxford. COVID-19 government response tracker. Available at: https://www.bsg.ox.ac.uk/research/research-projects/covid-19-government-response-tracker. Accessed June 2021. **2.** World Health Organisation. Recommended composition of influenza virus vaccines for use in the 2021-2022 northern hemisphere influenza season. February 2021. Available at: https://www.who.int/influenza/vaccines/virus/recommendations/2021-22_north/en/. Accessed March 2021. **3.** Sullivan SG *et al.* Where has all the influenza gone? The impact of COVID-19 on the circulation of influenza and other respiratory viruses, Australia, March to September 2020. *Euro Surveill* 2020 Nov;25(47):2001847. **4.** World Health Organisation. Questions and Answers Recommended composition of influenza virus vaccines for use in the Northern hemisphere 2021-2022 influenza season and development of candidate vaccine viruses for pandemic preparedness. 26 February 2021. Available at: https://www.who.int/influenza/vaccines/virus/recommendations/202102_qanda_recommendation.pdf?ua=1. Accessed March 2021. **5.** Towers S, Chowell G, Hameed R, *et al.* Climate change and influenza: the likelihood of early and severe influenza seasons following warmer than average winters. *PLoS Curr* 2013;5:ecurrents.flu.3679b56a3a5313dc7c043fb944c6f138. **6.** Baker RE, Park SW, Yang W, *et al.* The impact of COVID-19 nonpharmaceutical interventions on the future dynamics of endemic infections. *Proc Natl Acad Sci USA* 2020;117(48):30547–53. **7.** Matrajt L, Longini IM Jr. Critical immune and vaccination thresholds for determining multiple influenza epidemic waves. *Epidemics* 2012;4:22–32. **8.** Richmond H, Rees N, McHale S, *et al.* Seasonal influenza vaccination during a pandemic. *Hum Vacc Immunother* 2020;16:2219–21. **9.** Jones N. How COVID-19 is changing the cold and flu season. *Nature* 2020;588:388–90.