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COVID-19—a very visible pandemic

The COVID-19 pandemic is exacting a confronting and extraordinarily visible toll in lives and livelihoods globally. The last occasion where humanity fought a similar calamitous infectious disease threat was the 1918–19 influenza pandemic. There are many lessons from that pandemic that are still relevant. The first pandemic wave did not grant adequate herd immunity and was followed by one or more subsequent waves, with those waves being more deadly than the initial wave.¹ Additionally, stringent public health measures flattened the epidemic curve, preserving hospital capacity and saving many lives.¹

Sweden has adopted a mitigation approach to this pandemic, which involves fewer public health measures to slow transmission than are being implemented by other European states and accepting much higher infection rates in the population. According to the Johns Hopkins University Centre for Systems Science and Engineering (CSSE) COVID-19 Dashboard, as of May 24, 2020, Sweden had one of the highest recorded population mortality rates in the world (343 deaths per million people), far higher than in its Scandinavian neighbours (Denmark, 92 deaths per million people, and Norway, 42 deaths per million people), and most other European nations that have implemented more rigorous pandemic containment measures. Thus, Johan Giesecke's provocative defense of the relaxed Swedish experiment as a model pandemic strategy² deserves careful scrutiny.

CSSE data show that any countries have contained the COVID-19 pandemic and reduced their daily count of cases to zero or near zero, including Australia, Hong Kong, Taiwan, North Korea, and a few small island states. Some countries, such as New Zealand, are successfully pursuing an explicit elimination strategy.³ Some low-income and

middle-income countries also appear to be successfully applying these approaches, including Vietnam and Mongolia. These countries are epidemiologically benefiting from rigorously implemented border controls, the strict quarantine of all returning international travellers, the mandatory self-isolation of people with COVID-19 and their close contacts, stringently limited gathering sizes, the active promotion of physical distancing during the first COVID-19 pandemic wave and, in many cases, the widespread use of face masks.

The experience of these countries discredits Giesecke's claim that "COVID-19 is spreading like wildfire in all countries"² and throws doubt on his contention that "when we count the number of deaths from COVID-19 in each country in 1 year from now, the figures will be similar, regardless of measures taken".²

Furthermore, it is probable that despite the burden of COVID-19 disease that has already occurred, Sweden and other heavily affected countries do not enjoy sufficient robust immunity (50–70%) to reduce the COVID-19 effective reproduction number below 1, as required to avoid a second pandemic wave. Seroprevalence survey estimates in multiple countries fall well below this mark, and empirical data quantifying the degree or duration of immunological protection conferred by infection and appropriate correlates of protection are elusive.⁴ Indeed, reports from Sweden itself suggest that the rate of immunity in the population is low.

Many developed countries made a serious error in not adequately assessing and responding to the COVID-19 pandemic threat at the point when it was containable. This containment approach offers many advantages, including minimising deaths while awaiting the availability of effective vaccines or antivirals, or both, and the potential for a return

to near-normal functioning in many parts of their economies, including carefully managed travel between countries that are enacting a similar approach.

Unfortunately, for many low-income countries, containment is now impossible. For them, it will be better to concentrate on protecting susceptible populations, while ensuring other vital health and basic human services continue to operate.

We declare no competing interests.

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- 2 Giesecke J. The invisible pandemic. *Lancet* 2020; **395**: e98.
- 3 Baker M, Kvalsvig A, Verrall A, Telfar-Barnard L, Wilson N. New Zealand's elimination strategy for the COVID-19 pandemic and what is required to make it work. *N Z Med J* 2020; **133**: 10–14.
- 4 Altmann DM, Douek DC, Boyton RJ. What policy makers need to know about COVID-19 protective immunity. *Lancet* 2020; **395**: 1527–29.

For the CSSE COVID-19 Dashboard see <https://coronavirus.jhu.edu/map.html>

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