



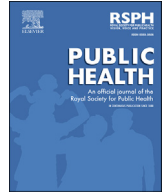
Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



Contents lists available at ScienceDirect

## Public Health

journal homepage: [www.elsevier.com/locate/puhe](http://www.elsevier.com/locate/puhe)

## Editorial

## COVID-19: difficult transitions



It has been an amazing achievement that within the past two years, vaccines against COVID-19 have been both developed and rolled out globally en masse. To date, more than 10 billion doses of COVID-19 vaccine have been given to 61% of the world's population.<sup>1</sup> However, there is still a lot more work to be done as many still remain unvaccinated, particularly in low- and middle-income countries.

Encouragingly, vaccination has considerably reduced the risks of the very worst outcomes of infection such as severe disease requiring hospitalisation, mechanical ventilation and death.<sup>2</sup> Globally, COVID-19 case fatality rates have declined to less than 2% in many countries.<sup>3</sup> Whilst still more severe than seasonal influenza, in vaccinated individuals the COVID-19 infection fatality rates in some countries are now approaching low levels similar to influenza. If the link between infection and severe outcomes has been broken by immunisation, this raises the question as to whether pandemic control measures can be removed.

At some point in time, many of the public health measures implemented in the past two years could be lifted, but the key question is the pace and timing for this transition from pandemic mode to the post-acute pandemic phase. This involves a trade-off between the social and economic benefits versus the infection risks for the population. If the measures are lifted prematurely, resurgent infections could follow. However, the longer the restrictions are kept in place, the greater the economic damage caused. For example, the UK experienced a severe recession and 9.7% drop in its Gross Domestic Product in 2020 due to the pandemic.<sup>4</sup> There are also well-recognised social impacts such as reductions in personal well-being and greater anxiety.<sup>5</sup> Growing public weariness with pandemic measures may also adversely affect adherence to them.

Public health policymakers may find it increasingly difficult to justify and advocate for continuance of restrictive public health measures, against competing voices from politicians, businesses, industry, education and other groups. The coming months could be a hazardous and challenging time for public health, whose message may be cast as authoritarian, doom-mongering, out-of-touch and damaging to wider society. Public health practitioners may rapidly go from hero to public enemy.

How the profession communicates its narrative to the public and policymakers will therefore be key to navigating through these treacherous hazards. We cannot assume that public health evidence will be accepted at face value, nor can it be examined purely in health terms as ultimately it will necessitate a balance of restrictions versus freedoms. We are likely to find our judgements and decisions called into question by critics armed with hindsight, which is always easier than foresight.

The evidence and justification for each and every public health measure will be challenged. On its own, the evidence of benefit for

each measure is likely to be limited, patchy and difficult to extricate from the confounding situation where many measures had been implemented throughout the course of the pandemic. Such an approach adopted by critics ignores the fact that no single intervention would have been sufficient for a challenging situation where a multilayered preventative approach was needed. Indeed, many public health measures had to be introduced on a precautionary basis, on the best evidence available at the time, however limited. That said, the relative protective value of non-pharmaceutical interventions in a highly vaccinated population may be less.

Transitioning out of the acute phase of the pandemic is especially tricky to manage as there are multiple views and interests at play. Each and every individual will have different risk appetites and tolerances, and there is no one-size-fits-all public health policy that will satisfy everyone. Vaccinated young persons for whom the disease in likelihoods will be mild may question the need and proportionality of the imposition of restrictions on them that limit their work, social and educational opportunities. Some older individuals who have suffered from the social isolation created by lockdowns and shielding may choose to prioritise and maximise their quality of life over quantity.

There will also be competing non-COVID-19 healthcare needs and demands, arising from healthcare activity that have been displaced and delayed by the response required of the pandemic. This includes elective healthcare, screening and prevention, as well as chronic disease management activities. Pandemic responses are expensive and draw on the same limited pool of health and care workers. There is an opportunity cost to maintaining the pandemic response infrastructure. In the UK, for example, the cost of the testing and tracing infrastructure was around £37 billion, accounting for a quarter of the total health budget.<sup>6</sup>

But whilst those countries with high vaccination coverage rates (who are mostly high-income countries) now contemplate transitioning to life beyond COVID-19, it is important to recognise that the pandemic has not ceased globally. Many countries remain in the grip of high levels of infections. Global vaccine inequity persists. Endemic disease may still cause high levels of ill health and mortality, which we know from bitter experience will disproportionately affect the poor, and especially vulnerable groups including the elderly and those with comorbidities, as well as marginalised groups such as the homeless, migrants and ethnic minority groups. Whilst winding down some of the pandemic response apparatus may be politically, socially and economically desirable, we have to ensure that there are measures in place to protect these vulnerable population groups.

Finally, there remains the very real possibility of new and emerging variants that may evade vaccine immunity and, unlike the Omicron variant, cause more severe disease and death. As Dr

Tedros Ghebreyesus, the World Health Organization Director-General, warns, “it is dangerous to assume that Omicron will be the last variant or that we are in the endgame. On the contrary, globally the conditions are ideal for more variants to emerge”.<sup>7</sup> Neither will vaccinations alone prevent infections and contain outbreaks.<sup>8</sup> So whilst countries may be de-escalating their pandemic response, they need to continue to be vigilant and retain their ability to mobilise and re-escalate to tackle any emergent threat.<sup>9</sup> It would be unwise to expect a return to a prepandemic world with no measures.

### Author statements

#### Ethical approval

None sought.

#### Funding

None declared.

#### Competing interests

None declared.

### References

1. Our World in Data. *Coronavirus (COVID-19) Vaccinations* (Website). N.d. Available at: <https://ourworldindata.org/covid-vaccinations> (accessed 3/2/22).
2. UK Health Security Agency. *COVID-19 vaccine surveillance report – Week 5*. 3 February 2022. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1052353/Vaccine\\_surveillance\\_report\\_-\\_week\\_5.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1052353/Vaccine_surveillance_report_-_week_5.pdf) (accessed 3/2/22).
3. Our World in Data. *Mortality Risk of COVID-19* (Website). N.d. Available at: <https://ourworldindata.org/mortality-risk-covid> (accessed 3/2/22).
4. Harari D, Keep M, Brien P. *Coronavirus: economic impact (Research briefing)*. House of Commons Library; 17 December 2021. Available at: (accessed 3/2/22).
5. Office for National Statistics. *Coronavirus and the social impacts on Great Britain: 21 January 2022*. 21 January 2022. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandwellbeing/bulletins/coronavirusandthesocialimpactsongreatbritain/21january2022>.
6. The King's Fund. *The NHS budget and how it has changed*. 3 February 2022. Available online at: <https://www.kingsfund.org.uk/projects/nhs-in-a-nutshell/nhs-budget> (accessed 3/2/22).
7. World Health Organization. *WHO Director-General's opening remarks at the 150th session of the Executive Board – 24 January 2022*. 24 January 2022. Available online at: <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-150th-session-of-the-executive-board-24-january-2022> (accessed 3/2/22).
8. Moore S, Hill EM, Tildesley MJ, Dyson L, Keeling MJ. Vaccination and non-pharmaceutical interventions for COVID-19: a mathematical modelling study. *Lancet Infect Dis* 2021 Jun 1; **21**(6):793–802.
9. El Bcheraoui C, Müller SA, Vaughan EC, Jansen Amm, Cook Rm, Hanefeld J. De-escalation strategies for non-pharmaceutical interventions following infectious disease outbreaks: a rapid review and a proposed dynamic de-escalation framework. *Glob Health* 2021 Dec; **17**(1):1–11.

A.C.K. Lee\*

The University of Sheffield, UK

J.R. Morling

The University of Nottingham, UK

\* Corresponding author.

E-mail address: [andrew.lee@sheffield.ac.uk](mailto:andrew.lee@sheffield.ac.uk) (A.C.K. Lee).

Available online 14 February 2022