The case against lockdown as a public health intervention

ROYAL COLLEGE of PHYSICIANS of EDINBURGH

Editorial

Journal of the Royal College of Physicians of Edinburgh
2022, Vol. 52(1) 12–13

DOI: 10.1177/14782715221088908
journals.sagepub.com/home/rcp
SAGE

The case against lockdown as a public health intervention

Mark Woolhouse

The two arguments routinely made to defend the UK's lockdown strategy in response to the COVID-19 pandemic are that lockdown saved lives and there was no other choice. In my view, both claims merit careful scrutiny. After all, as the Scottish Government has recognised throughout, lockdown was itself extremely damaging to wider healthcare provision, mental health, education and the economy.[1] If there were better ways of saving lives that did not require the wholesale shutting down of society, then that case needs to be made.

Estimates of the number of lives saved by lockdown continue to be revised. Back in March 2020, one influential mathematical modelling study was widely interpreted as suggesting that without lockdown up to half a million UK residents would die.[2] That estimate comes from comparing a full lockdown with doing nothing at all, a patently implausible scenario imagining that we would all continue to behave as normal as the epidemic rages around us.

Retrospective studies have concluded that the UK epidemic came under control shortly before the March 2020 lockdown began,[3] the marginal benefit of strict stay-at-home orders was small[4] and less drastic interventions can be as effective as lockdown,[5] particularly if they are implemented earlier.[6] Part of the explanation for such different conclusions is that the prospective modelling implicitly assumed that public health directives from government are the only driver of people's behaviour. This is clearly incorrect – the public, businesses and institutions can and do take their own steps to manage their own risks and that has had a major impact on the course of the epidemic.

Despite this, the March 2020 lockdown might still be justified by the precautionary principle given that the UK was responding to a fast-moving crisis (though that is a far harder case to make for subsequent lockdowns). To test this idea, we can look at the deaths that lockdown failed to prevent.

Those deaths were concentrated in a small fraction of the population: the QCOVID study demonstrated that 91% of deaths were suffered by the 15% of the population at highest risk, as defined by a set of risk factors including age, frailty and infirmity.[7] The majority of the population were always at low risk of poor outcomes, with children at very low risk. The main argument in favour of lockdown for all was that reducing the overall rate of transmission resulted in smaller epidemic waves and so the vulnerable minority was less likely to be exposed. The reality is less straightforward.

An October 2020 report[8] estimated that 50%–75% of deaths due to COVID-19 during the first wave in Scotland were the result of infections acquired during lockdown. That is 2–3000 people, just over half being care home residents. Clearly, lockdown by itself was not enough; we also needed to do more to protect vulnerable people, not only in care homes (as is now widely accepted) but also in the community. Subsequent work[9] has shown that hospital visits were an important contributor to these lockdown infections, underlining the critical role of infection control in managing COVID-19.

Our collective failure to do more to protect the most vulnerable – in or out of lockdown – is one of the most disappointing outcomes of the UK's COVID-19 response. In 2020, the discussion became highly polarised between two schools of thought: 'suppressing the virus' and what became known as 'focussed protection' of the vulnerable. The debate became so overheated that some went as far as describing the idea of protecting the vulnerable as 'unethical'. My proposal that we should do both was not heeded, but the advantages should have been obvious: there is a trade-off between suppressing and protecting the vulnerable; the better you do one, the less you need the other.[10] In other words, it was always possible to save more lives and reduce the time spent in lockdown.

I believe that our narrow focus on suppression arose from a widespread failure to accept that COVID-19 is here to stay. Such an extreme and damaging response as lockdown made sense only in the context of a Zero COVID strategy, but in the UK and many other countries that option was no longer realistic by March 2020. We would have had to adopt a New Zealand-like approach[11] several weeks earlier, before the World Health Organization had even declared a pandemic.

Once we accept that the challenge facing us was to manage the transition to endemicity, then it becomes obvious that we need interventions that are sustainable, which lockdown clearly is not. That implies a shift from restricting social contacts to making those contacts safe and quickly

Usher Institute, University of Edinburgh, Edinburgh, UK

Corresponding author:
Mark Woolhouse, Ashworth Laboratories, University of Edinburgh, Kings Buildings, Charlotte Auerbach Road, Edinburgh EH9 3FL, UK.
Email: mark.woolhouse@ed.ac.uk

dropping measures that have limited public benefit, such as banning outdoor activities[12] or closing schools.[13] Though this was understood by epidemiologists from very early on in the pandemic,[14] it was resisted by others and the concept of 'living with the virus' did not take hold until well into 2021.

I hope that the forthcoming inquiries into the pandemic response in the UK and in Scotland will take a critical view of the role of lockdowns. We cannot undo the harms they caused in 2020 and 2021, but we can take steps to ensure that we do better when the next pandemic arrives.

Mark Woolhouse is Professor of Infectious Disease Epidemiology at the University of Edinburgh and author of a new book about the pandemic, *The Year the World Went Mad* (Sandstone Press).

Declaration of conflicting interests

The author declared the following potential conflicts of interest with respect to the research, authorship, and/or publication of this article: He is also a member of the Scottish Government COVID-19 Advisory Group and Testing sub-group, Standing Committee on Pandemics and the SPI-M subgroup of SAGE.

Funding

The author disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: Mark Woolhouse received funding from the Scottish Funding Council for his work on the COVID-19 pandemic.

References

1. Scottish Government. COVID-19 in Scotland [Internet], https://data.gov.scot/coronavirus-covid-19/ (accessed 31 January 2022).
2. Imperial College London, MRC Centre for Global Infectious Disease Analysis. Report 9 – Impact of non-pharmaceutical interventions (NPIs) to reduce COVID-19 mortality and healthcare demand [Internet], https://www.imperial.ac.uk/mrc-global-infectious-disease-analysis/covid-19/report-9-impact-of-npis-on-covid-19/ (accessed 31 January 2022).
3. Wood SN. Inferring UK COVID-19 fatal infection trajectories from daily mortality data: were infections already in decline before the UK lockdowns? *Biom Pract*. Epub ahead of print 30 March 2021. DOI: 10.1111/biom.13462.
4. Brauner JM, Mindermann S, Sharma M et al. Inferring the effectiveness of government interventions against COVID-19. *Science* 2020; 371: eabd9338.
5. Haug N, Greyhofer L, Londei A et al. Ranking the effectiveness of worldwide COVID-19 government interventions. *Nat Hum Behav* 2020; 4: 1303–12.
6. Morgan ALK, Woolhouse MEJ, Medley GF et al. Optimizing time-limited non-pharmaceutical interventions for COVID-19 outbreak control. *Philos Trans R Soc Lond B Biol Sci* 2021; 376: 20200282.
7. Clift AK, Coupland CAC, Keogh RH et al. Living risk prediction algorithm (QCOVID) for risk of hospital admission and mortality from coronavirus 19 in adults: national derivation and validation cohort study. *BMJ* 2020; 371: m3731.
8. The Scottish Government. Mortality due to a second wave of COVID-19 in Scotland: the case for additional measures to protect the vulnerable [Internet], www.gov.scot/publications/covid-19-advisory-group-evidence-papers-october-2020/ (accessed 31 January 2022).
9. McKeigue PM, McAllister DA, Caldwell D et al. Relation of severe COVID-19 in Scotland to transmission-related factors and risk conditions eligible for shielding support: REACT-SCOT case-control study. *BMC Med* 2021; 19: 149.
10. van Bunnik BAD, Morgan ALK, Bessell PR et al. Segmentation and shielding of the most vulnerable members of the population as elements of an exit strategy from COVID-19 lockdown. *Philos Trans R Soc B* 2021; 376: 20200275.
11. Baker MG, Wilson N, Anglemyer A. Successful elimination of COVID-19 transmission in New Zealand. *N Engl J Med* 2020; 383: e56.
12. Bulfone TC, Malekinejad M, Rutherford GW et al. Outdoor transmission of SARS-CoV-2 and other respiratory viruses: a systematic review. *J Infect Dis* 2021; 223: 550–61.
13. Viner R, Bonell C, Blakemore SJ et al. Schools should still be the last to close and first to open if there were any future lockdown. *BMJ* 2022; 376: o21.
14. Kissler SM, Tedijanto C, Goldstein E et al. Projecting the transmission dynamics of SARS-CoV-2 through the postpandemic period. *Science* 2020; 368: 860–68.