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COVID-19 pandemic caused by a virus with shared symptomatology, but with protracted hospital admissions and a higher risk of mortality, could potentially make the forthcoming northern hemisphere influenza season a public health catastrophe.

COVID-19 spread through the southern hemisphere just as the influenza season began, yet the experience this autumn and winter has been remarkable for the near absence of influenza. Following on from weekly surveillance data from Australia¹ and New Zealand, which showed historically low levels of influenza infections during the 2020 influenza season, we reviewed data from the WHO Global Influenza Surveillance and Response System shared on FluNet. Across countries in the temperate southern hemisphere, the number of specimens positive by subtype from WHO sentinel surveillance sites corroborates little southern hemisphere influenza activity since mid April, 2020 (appendix). Although testing might have been focused away from influenza and onto severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in some settings, this was not the case in Australia, for example, where more influenza tests were done in 2020 than in previous years, with few positive results.¹

Observational data cannot determine causation, but these early findings are consistent with the hypothesis that the non-pharmaceutical interventions (NPIs) put in place to control the spread of COVID-19 could have dramatically reduced the burden of influenza and prevented winter epidemics. If this were the case, it would not be consistent with prevailing dogma that specific NPIs prominent in the management of COVID-19 (eg, widespread mask use, school and workplace closures, physical distancing, travel restrictions, and limits on gathering sizes) would have limited efficacy for influenza control, due to the characteristics and transmission dynamics of influenza virus and experience in previous influenza pandemics.^{2,3}

As restrictions are reinstated in Europe to control increasing COVID-19 case numbers, the southern hemisphere experience suggests consideration must be given to whether these NPIs could affect other transmissible infections—particularly influenza, with its high morbidity, mortality, and health-care costs—and how this off-target effect on viruses other than SARS-CoV-2 could protect health system capacity. As evidence on both the benefits and costs of NPIs in the COVID-19 pandemic accrues, their role in the management of future influenza pandemics can be carefully considered.

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Herd immunity confusion

Hopefully, at some point, we will have a vaccine against severe acute respiratory syndrome coronavirus 2, and we will use this to seek ways of generating herd immunity, ie, promoting widespread immunity in the population and reducing transmission so that the epidemic will end without having to vaccinate everybody.^{1,2}

Herd immunity is a real phenomenon that occurs whether the immunity generated is naturally acquired or vaccine-induced. This term has been used for many decades applied

to diseases of people, livestock, and wildlife.²

In a paper describing the history of the term, David Jones and Stefan Helmreich³ selectively quote an interview I gave on BBC Newsnight at the start of the epidemic in the UK on March 12, 2020, in which I attempted to explain this phenomenon.⁴

At the time, it was clear that the UK would be experiencing an epidemic, but how that would develop in the coming weeks, months, and years was unknown. In the same interview, I also said that “the better we manage it, the longer it will be. The worst case would be to have an uncontrolled epidemic”.⁴

The epidemic is ongoing, and it remains the case that although most people remain susceptible to infection, control of transmission has to be through non-pharmaceutical interventions. Isolation and quarantine, physical distancing, and contact tracing will be required until transmission is reduced by immunity. Ideally, this immunity will be vaccine-induced rather than through transmission of the disease.

There have been increasing suggestions that one option is to simply protect everyone who is at risk of infection and allow the epidemic to spread in those at low risk. In this same interview from March, 2020,⁴ I noted that this approach is conceptually appealing but impossible in practice. It is not a strategy I endorse. I was not aware, until I read Jones and Helmreich’s Perspective,³ of the historic association of the term herd immunity with racial and eugenic interpretation. I strongly dissociate myself from any link with this meaning and clarify that I was referring to herd immunity purely in the scientific sense.

Since the interview, the term has also become layered with further political interpretations, and even used to label strategies, but they are not clearly defined.

The scientific and medical communities have a duty to inform and support the public, especially during times that threaten lives with an

For New Zealand surveillance data see <https://www.esr.cri.nz/our-services/consultancy/flu-surveillance-and-research/>

For FluNet see https://www.who.int/influenza/gisrs_laboratory/flu-net

See Online for appendix



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unknown disease. Technical terms are part of the scientific language, and scientists should explain what they are and the ideas behind them. Otherwise discussion of how societies are going to cope with this pandemic becomes impossible, and cohesive and coherent strategies cannot be agreed.

If discussion about strategy becomes polarised on suppression versus epidemic, or lockdown versus freedom, then we lose the opportunity of finding a way through this pandemic that minimises the total harms.

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Science misuse and polarised political narratives in the COVID-19 response

Strategies to address the COVID-19 pandemic have elicited polarised debates that frequently focus on an economy versus health trade-off, and are often divided by politics.¹ Evidence has increasingly been used to justify these arguments, without due attention to its quality or reporting. Additionally, evidence suggests arguments over a trade-off are inappropriate as countries which have controlled the pandemic better have experienced smaller economic contractions.²

We were dismayed by a recent Correspondence³ in *The Lancet*, in which Pontes and Lima argued against social distancing interventions in Brazil—a country lacking a comprehensive

pandemic strategy and a catastrophic 150 000 COVID-19 deaths by Oct 15, 2020. The authors cite our work in *The Lancet Global Health* on the Brazilian recession and mortality⁴ but selectively report our findings to skew the debate.

We analysed the 2014–16 Brazilian recession and found that recession-related increases in unemployment were associated with increases in mortality.⁴ This statement is often cited to argue against stay-at-home orders in Brazil. However, our findings are not that informative in the COVID-19 context because pandemic recessions are substantially different in impact and duration than traditional recessions. Whereas we examined the effects of recession on health, the causality is reversed during the pandemic where health is determining economic productivity. Indeed, evidence from the USA suggest health concerns, rather than official stay-at-home policies, drove reductions in consumer spending and economic contraction.⁵ Furthermore, in our study, we found that unemployment-associated mortality only increased where local health and welfare systems were weak and underfunded—a statement less frequently reported but in line with evidence from Europe.⁶ If strong health and welfare systems are key in protecting individuals from negative recession health impacts, then the argument should focus on promoting these services instead.

This is not the first instance of our work being misrepresented in the media. We have been contacted by journalists to clarify the impacts of stay-at-home orders implemented in Brazilian cities, and we made a concerted effort to improve reporting with statements published in the *BBC*⁷ and *O Globo*.⁸ Our experience is just one example of evidence misuse, but it is an experience shared by colleagues globally. We urge authors to continue promoting clarity in the reporting of their work and seek reliable platforms for disseminating findings.

The solutions to addressing the COVID-19 pandemic are complex and multifaceted requiring careful and informed policy decisions to balance economic, social, and health priorities. We do not doubt that economic recessions will have profound health consequences, but distilling arguments into simple trade-offs is unhelpful. Evidence points to the importance in investing in health and welfare systems to protect both health and the economy, yet further polarising debates with misuse of evidence will only hamper effective pandemic responses in a desperate Brazil.

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