

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. Public Health 200 (2021) e6-e7



Contents lists available at ScienceDirect

Public Health

journal homepage: www.elsevier.com/locate/puhe

Letter to the Editor

COVID-19 border controls prevent a 2021 seasonal influenza epidemic in New Zealand



RSPH

PUBLIC

The lack of seasonal influenza epidemics has been an unexpected feature of the COVID-19 pandemic, illustrated by WHO sentinel surveillance data from temperate Southern Hemisphere countries demonstrating a near absence of influenza since early 2020.¹ These observational data were consistent with the hypothesis that non-pharmaceutical interventions (NPIs) introduced to control the spread of COVID-19 could have dramatically reduced the burden of influenza and prevented seasonal epidemics. However, this finding did not shed light on the relative contribution of specific NPIs (such as widespread face mask use, school and workplace closures, physical distancing, travel restrictions, limits on gathering sizes, and border control measures) on reducing influenza activity, if the association was indeed causative.

The 2021 influenza surveillance data in New Zealand (NZ) informs this issue.² Up to week 32, 2021, there have been no positive

influenza isolates reported to the WHO Global Influenza Surveillance and Response System, during which period an autumn/ winter epidemic would usually occur (Fig. 1). From June 2020 until the recent outbreak in August 2021, NZ has predominantly been at 'alert level one' (https://covid19.govt.nz/alert-levels-and-updates/ history-of-the-covid-19-alert-system/), where NPIs are essentially limited to border controls and mandatory mask-wearing in specific situations (such as on public transport), with transient increases in alert levels to manage localised COVID-19 cases. Thus, the primary preventative measure is the ongoing closure of NZ's borders to almost all travellers, with the requirement for those entering NZ to isolate for 14 days in a designated Managed Isolation and Quarantine facility, except for travellers coming through the recently established (and transiently open) quarantine-free 'travel bubble' with Australia. These border controls are likely to have completely

World Health Organization Influenza Laboratory Surveillance Information

generated on 20/08/2021 00:14:35 UTC

by the Global Influenza Surveillance and Response System (GISRS)

New Zealand



Fig. 1. Seasonal Influenza Laboratory Surveillance Information for New Zealand from 2016 to Week 32 2021, generated on 20/08/2021 00:14:35 UTC UTC, by the Global Influenza Surveillance and Response System (GISRS). Data source: FluNet (www.who.int/flunet), GISRS © World Health Organisation 2021.

https://doi.org/10.1016/j.puhe.2021.09.013

0033-3506/© 2021 The Royal Society for Public Health. Published by Elsevier Ltd. All rights reserved.

T. Hills, L. Hatter, N. Kearns et al.

prevented the introduction of new influenza strains to NZ. New Zealanders, as part of a 'team of five million', have largely accepted the necessity of this measure to help protect our communities and most vulnerable against COVID-19.³

To date, the influenza experience during COVID-19 in NZ contrasts with the historical view that mandatory travel restrictions are 'likely to be ineffective, infeasible, or unacceptable to the public', in a serious influenza pandemic, and the World Health Organisation recommendation that NPIs for influenza are not focused at international borders.^{4,5} Instead, NZ's experience suggests these interventions may be effective tools in specific contexts, such as island nations pursuing an elimination strategy. Border closure with managed quarantine measures may substantially reduce the risk in the setting of a global influenza pandemic, and the utility of such approaches in pandemic preparedness strategies should be re-evaluated.

Acknowledgements

Prof. Beasley and Dr. Hills have received funding from the Health Research Council of New Zealand outside the submitted work. There are no conflicts of interest.

References

 Hills T, Kearns N, Kearns C, Beasley R. Influenza control during the COVID-19 pandemic. Lancet 2020. https://doi.org/10.1016/S0140-6736(20)32166-8.

- WHO National influenza centres of the global influenza surveillance and Response System. FluNet. https://www.who.int/tools/flunet. (Accessed July 19, 2021).
- Department of the Prime Minister and Cabinet. Sentiment and behaviours benchmark. 16 June 2021. Wellington, New Zealand; 2021, https://covid19.govt.nz/assets/ reports/Research/DPMC-Sentiment-and-Behaviour-Research-Presentation-May-21.odf.
- Aledort JE, Lurie N, Wasserman J, Bozzette SA. Non-pharmaceutical public health interventions for pandemic influenza: an evaluation of the evidence base. BMC Public Health 2007;7(1):208.
- WHO. Nonpharmaceutical interventions for pandemic influenza, international measures. *Emerg Infect Dis* 2006;12(1):81.

T. Hills

Medical Research Institute of New Zealand, New Zealand

Auckland District Health Board, New Zealand

L. Hatter, N. Kearns^{*}, P. Bruce

Medical Research Institute of New Zealand, New Zealand

R. Beasley

Medical Research Institute of New Zealand, New Zealand Capital and Coast District Health Board, New Zealand

* Corresponding author. *E-mail address:* nethmi.kearns@mrinz.ac.nz (N. Kearns).

> 12 September 2021 Available online 20 September 2021