The Royal New Zealand College of General Practitioners
Te Whare Tohu Rata o Aotearoa

Chasing elimination through lockdowns is stamping out livelihoods and lives

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New Zealand is one of few countries chasing elimination of COVID-19.[1] To achieve this goal under usual criteria will require the absence of community transmission for 36 consecutive months, which in turn requires water-tight border control and extensive ongoing testing and supportive genomic data.[2] Any border breach or escalation of cases may trigger further lockdowns.

A return to life similar to pre-COVID-19 depends on the development of an effective vaccine, which faces the serious problem of antibody induced enhancement.[3] Since this is poorly understood, it is a major barrier. As for influenza, even if a vaccine is developed, it is unlikely to achieve elimination, since cases continue despite widespread immunisation.

Until then, tourism, our biggest export earner which generates 5.8% of GDP,[4] would remain a casualty of the elimination goal. Our domestic economy will also endure ongoing disruption. For instance, Auckland has just emerged from a 16-day, level 3 lockdown which has cost an estimated 4000–8000 jobs and the economy NZ$3 to $5 billion.[5] To put this in perspective, New Zealand spends NZ$1 billion on the entire pharmaceutical budget each year.[6]

The view of many experts is that a safe and effective vaccine for COVID-19 is at best four years away, with the more likely timeframe a decade or more.[7] A vaccine may never eventuate. After 37 years and billions of dollars invested, an HIV vaccine remains elusive. Interestingly, Africa recently announced elimination of wild poliovirus after a three-decade effort assisted with a vaccine.[8] The only virus successfully eradicated is smallpox.[9] This global effort required an effective vaccine and took over three and a half decades.

The World Health Organisation (WHO), the global co-ordinator of efforts to minimise harm from COVID-19, has recently backed away from lockdowns and holding out for a vaccine as a response to the virus. Comments from WHO representatives including Director-General Dr Tedros Ghebreyesus that directly relate to this change in policy are listed below.[10,11]

‘we must learn to live with this virus’[10]
‘no country can just ride this out until we have a vaccine…’[11]
‘… even if we do have a vaccine, it won’t end the pandemic on its own…’[11]
‘…lockdowns are not a long-term solution for any country…’[11]
‘…we do not need to choose between lives and livelihoods, or between health and the economy. That’s a false choice…’[11]
‘…the pandemic is a reminder that health and the economy are inseparable.’[11]

Health and the economy are inseparable. Particularly since poor diets and obesity are strongly linked to socioeconomic status.[12] Since chronic disease is strongly associated with mortality from COVID-19,[13] efforts to improve metabolic health, such as through the restriction of sugar intake and improving nutrition are also likely to reduce harm from COVID-19.[14]

The single most important determinant of health is income. Evidence shows that this virus affects mainly the frail elderly[15] and that for most of the population aged < 65 years the virus presents a mild illness with up to 56.5% of people being asymptomatic.[16] However, lockdowns with a view to elimination prevent our workforce from supporting their livelihoods and our economy.

Dr Jay Bhattacharya, Professor of Medicine, Stanford University, recently considered the retraction of the New Zealand economy during the crisis. Our nation underwent one of the strictest social and economic lockdowns anywhere in the world. He found that, on average, incomes reduced by NZ$4500 per person per year.[17] This retraction takes income levels back to 2012.[17] When we compare New Zealand's life expectancy from 2012 to 2020, our average survival had increased by one year.[17] Now that our economy has retracted, it is likely that this gain will be lost. This equates to 4 800 000 life years lost, which compares to ~14 500 potential years of life lost (reference age is conservatively fixed at 85 years) if New Zealand followed Sweden's path (adjusting for population). This means that locking down to achieve elimination will result in a 330-fold greater loss of life. If we assume that a 'flattening the curve' approach halves the economic loss compared to lockdowns,[18] then the trade-off is not valuing the economy over lives – but rather lives for lives. Therefore, when a broader view of each policy is considered, the approach of 'flattening the curve' is strongly favoured over elimination and lockdowns.

The NZ government and the majority of its health experts have maintained their advocacy for elimination, in spite of:

– the WHO's stance, which leading overseas epidemiologists also advocated for;
– most countries not pursuing elimination;
– a vaccine being at best a four-year wait;
– the social, economic and health harm being likely to far outweigh the impacts of the alternative approach;[19]

Hard lockdowns are still the tool our government plans to reach for to 'stamp out the virus'.[20,21]

How many more lockdowns, billions of dollars and social and health harm is an acceptable price to pay before this misguided and expensive strategy is abandoned? We implore Prime Minister Jacinda Ardern, Director-General of Health Dr Ashley Bloomfield, and fellow health advisors to reflect on the points raised in this paper and to abandon elimination as a strategy and the use of lockdowns. We believe that future policy should return to the initial approach that was taken. That is to reduce transmission of COVID-19 through reasonable use of infection control, to maintain capacity in our hospitals and intensive care, while focusing public health and infection control efforts to protect the frail and elderly of our community.

This paper has been prepared by the Plan B group, and presents knowledge, perspectives and questions from a group of concerned observers that consider how and why New Zealand should modify its response to COVID-19. We are a cross-disciplinary group of researchers concerned about the welfare and futures of all New Zealanders. As a group, we offer our views and share information for the public good and to set out our vision for a balanced response to COVID-19.

Competing interests

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References

1. Ministry of Health. Aotearoa-New Zealand's COVID-19 elimination strategy: an overview [Internet]; 2020 [cited 2020 Dec 17]. Available from: https://www.health.govt.nz/system/files/documents/pages/aotearoa-new_zealands_covid-19_elimination_strategy-_an_overview17may.pdf
2. World Health Organization. Framework for verifying elimination of measles and rubella. Wkly Epidemiol Rec 2013;88(9):89–99.

3. Arvin AM, Fink K, Schmid MA, et al. A perspective on potential antibody-dependent enhancement of SARS-CoV-2. Nature 2020;584(7821):353–63. doi:10.1038/s41586-020-2538-8
4. Tourism New Zealand. About the tourism industry [Internet]; 2020 [cited 2020 May 24]. Available from: https://www.tourismnewzealand.com/about/about-the-tourism-industy/
5. Niall T. Coronavirus: Auckland's level 3 costing 250 jobs, up to $75 million a day [Internet]; 2020 [cited 2020 Sep 1]. Available from: https://www.stuff.co.nz/business/122486343/coronavirus-aucklands-level-3-costing-250-jobs-up-to-75-million-a-day
6. New Zealand Government. Budget 2020 – securing New Zealand's medicine supply [Internet]; 2020 [cited 2020 Dec 17]. Available from: https://www.beehive.govt.nz/release/budget-2020-securing-new-zealand's-medicine-supply
7. Hargreaves B. Merck CEO: COVID-19 vaccine manufacture and distribution 'huge issue' [Internet]; 2020 [cited 2020 Dec 17]. Available from: https://www.biopharma-reporter.com/Article/2020/07/15/Merck-CEO-on-covid-19-vaccine-challenges?utm_source=copyright&utm_medium=OnSite&utm_campaign=copyright
8. World Health Organisation. Global polio eradication initiative applauds WHO African region for wild polio-free certification [Internet]; 2020 [cited 2020 Sep 1]. Available from: https://www.who.int/news-room/detail/25-08-2020-global-polio-eradication-initiative-applauds-who-african-region-for-wild-polio-free-certification
9. World Health Organisation. Historic milestone underscores urgent need to invest in global health security and universal health coverage [Internet]; 2020 [cited 2020 Dec 17]. Available from: https://www.who.int/news-room/detail/13-12-2019-who-commemorates-the-40th-anniversary-of-smallpox-eradication
10. David Nabarro. WHO's Nabarro: We must learn to live with Covid-19 [Internet]; 2020 [cited 2020 Dec 17]. Available from: https://www.bbc.com/news/av/health-52369969
11. Tedros Ghebreyesus. WHO Director-General's opening remarks at the media briefing on COVID-19 - 21 August 2020 [Internet]; 2020 [cited 2020 Dec 17]. Available from: https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19—21-august-2020
12. Duncan JS, Schofield G, Duncan EK, Rush EC. Risk factors for excess body fatness in New Zealand children. Asia Pac J Clin Nutr 2008;17(1):138–47.
13. Stefan N, Birkenfeld AL, Schulze MB, et al. Obesity and impaired metabolic health in patients with COVID-19. Nat Rev Endocrinol 2020;16:341–2. doi:10.1038/s41574-020-0364-6
14. Richelsen B. Sugar-sweetened beverages and cardiometabolic disease risks. Curr Opin Clin Nutr Metab Care 2013;16(4):478–84. doi:10.1097/MCO.0b013e328361c53e
15. Hewitt J, Carter B, Vilches-Moraga A, et al. The effect of frailty on survival in patients with COVID-19 (COPE): a multicentre, European, observational cohort study. Lancet Public Health 2020;5(8):e444–51. doi:10.1016/S2468-2667(20)30146-8
16. Kimball A, Hatfield KM, Arons M, James A, Taylor J, Spicer K. Asymptomatic and presymptomatic SARS-CoV-2 infections in residents of a long-term care skilled nursing facility - king county, Washington, March 2020. MMWR Morb Mortal Wkly Rep 2020;69(13):377–81. doi:10.15585/mmwr.mm6913e1
17. Bhattacharya J. The COVID-19 Threat and lockdown damage in New Zealand [Internet]; 2020 [cited 2020 Dec 17]. Available from: https://www.covidplanb.co.nz/videos/
18. Miltimore J. BBC: Sweden's Economy Is Doing Way Better Than the Rest of the EU During the COVID-19 Pandemic. Atlanta: Foundation for Economic Education; 2020 [cited 2020 Dec 17]. Available from: https://fee.org/articles/bbc-sweden-s-economy-is-doing-way-better-than-the-rest-of-the-eu-during-the-covid-19-pandemic/
19. Heatley D. A cost benefit analysis of 5 extra days at COVID-19 alert level 4. Wellington: New Zealand Productivity Commission; 2020 [cited 2020 Dec 17]. Available from: https://www.productivity.govt.nz/research/cost-benefit-analysis-covid-alert-4/
20. Hollingsworth J. New Zealand PM Jacinda Ardern wants to eliminate coronavirus. Is she setting herself up to fail? [Internet] 2020 [cited 2020 Dec 17]. Available from: https://edition.cnn.com/2020/08/20/asia/new-zealand-coronavirus-bargain-intl-hnk/index.html
21. Weekes J. Coronavirus: Elimination of Covid-19 still best strategy for NZ, experts say [Internet]; 2020 [cited 2020 Dec 17]. Available from: https://www.stuff.co.nz/national/health/coronavirus/300082182/coronavirus-elimination-of-covid19-still-best-strategy-for-nz-experts-say

Addendum: Chasing elimination through lockdowns is stamping out livelihoods and lives

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The recent approval and planned use a of vaccine in the UK means the development has been faster than we initially anticipated: about one year.[1] This will be among the fastest of vaccines ever developed, shortening the previous record by approximately three years. A hastened development process may compromise safety.[2] To date, very little data have been made publicly available related to the efficacy of the vaccine or to judge its safety profile. As part of the UK deal, the UK government have granted Pfizer protection from legal action.[3]

When a vaccine was rushed to address swine flu, the risk of children developing narcolepsy was five times greater in receiving the vaccine than among those who had not.[4] The vaccine was then destroyed in many countries.[5–7] With this history and the rushed authorisation, people may be rightly sceptical of the vaccine's safety profile. A recent UK survey found up to 20% of people would refuse to be vaccinated.[8] We do not know what proportion of any country's population will need to receive the vaccine for society to return to normal. Even if high levels of uptake were achieved it is not clear that the level of protection afforded by these vaccines will allow relaxation of border measures.

There is a growing international movement, supported by many scientists and doctors, to shield vulnerable people and for the rest of society to return to normal life which is not dependant on a vaccine.[9] At the time of writing, 12 694 medical and public health scientists, 38 054 medical practitioners and over half a million concerned citizens had endorsed the document.

References

1. Pfizer. Pfizer and Biontech achieve first authorization in the world for a vaccine to combat COVID-19 [Internet]; 2 December 2020; [cited 2020 Dec 17]. Available from: https://www.pfizer.com/news/press-release/press-release-detail/pfizer-and-biontech-achieve-first-authorization-world
2. Bostock B. Fauci said it will take 12 to 18 months to get a coronavirus vaccine in the US. Experts say a quick approval could be risky [Internet]; Business Insider Australia, 2 April 2020; [cited 2020 Dec 17]. Available from: https://www.businessinsider.com.au/coronavirus-vaccine-quest-18-months-fauci-experts-flag-dangers-testing-2020-4?r=US&IR=T
3. Lintern S. Coronavirus vaccine: Pfizer given protection from legal action by UK government [Internet]; Independent, 3 December 2020; [cited 2020 Dec 17]. Available from: https://www.independent.co.uk/news/health/coronavirus-pfizer-vaccine-legal-indemnity-safety-ministers-b1765124.html
4. Stranden AL. Norwegian study links flu vaccine to narcolepsy risk [Internet]; Science Norway, 28 March 2017; [cited 2020 Dec 17]. Available from: https://sciencenorway.no/forskningno-norway-vaccine/norwegian-study-links-flu-vaccine-to-narcolepsy-risk/1444067
5. Conner R. Germany to destroy expensive, unwanted swine flu vaccine [Internet]; Deutsche Welle, 17 August 2011; [cited 2020 Dec 17]. Available from: https://www.dw.com/en/germany-to-destroy-expensive-unwanted-swine-flu-vaccine/a-15324186
6. O'Callaghan T. Some 40 million doses of H1N1 vaccine to be destroyed [Internet]; Time, 1 July 2010; [cited 2020 Dec 17]. Available from: https://healthland.time.com/2010/07/01/some-40-million-doses-of-h1n1-vaccine-to-be-destroyed/
7. Independent. Netherlands destroying 17 million swine flu vaccine doses [Internet]; 18 September 2011; [cited 2020 Dec 17]. Available from: https://www.independent.co.uk/life-style/health-and-families/netherlands-destroying-17-million-swine-flu-vaccine-doses-2038287.html
8. Boseley S. Coronavirus: fifth of people likely to refuse Covid vaccine, UK survey finds [Internet]; Guardian, 24 September 2020; [cited 2020 Dec 17]. Available from: https://www.theguardian.com/world/2020/sep/24/a-fifth-of-people-likely-to-refuse-covid-vaccine-uk-survey-finds
9. Kulldorff M, Sunetra G, Bhattacharya J. The Great Barrington Declaration [Internet]; 2020; [cited 2020 Dec 17]. Available from: https://gbdeclaration.org/