COVID-19: what comes after elimination?

Des Gorman, Murray Horn

Although the delta variant of Covid emerged last year and was detected in our managed isolation and quarantine (MIQ) facilities five months ago, we were poorly prepared for and have struggled to control this current outbreak. Our experience undermines the credibility of a long-term elimination strategy, and three other observations are warranted prior to considering, "what comes after elimination?" First, our management of the Covid epidemic has been largely reactive. Second, management has been politicised and centralised, and has been neither adaptive nor agile. And third, our approach to managing Covid infections differs from our approach to managing other health conditions.

The approach to Covid has been inconsistent with the generic approach to healthcare in New Zealand

Most New Zealanders have little understanding of how our health system operates.[1] They view it like they do insurance and assume that it will meet their needs when the time comes. However, our "universal" coverage is founded on affordable rationing. Outside publicly funded and accessible services, healthcare is privilege-based. Cancer drug availability is illustrative. Core services that warrant public funding have never been "defined." The most determined (yet unsuccessful) attempt to achieve such a definition was undertaken in the early 1990s by Simon Upton when he was the Minister of Health.

Consequently, we "tolerate" avoidable adverse health outcomes. The approach to Covid is in conflict with this reality; the current political rhetoric is "one Covid-death is one death too many." This has resulted in significant delays and deferrals of care for many people for conditions that are not directly related to Covid.[2] This will be exaggerated by the government decision to completely restructure our health system in the middle of a pandemic.[3]

An elimination approach to Covid is popular

Our current elimination approach is defined by the Director-General of Heath as "zero tolerance towards new cases, rather than the goal of no new cases." It implies that we will do everything reasonably practicable to reduce cases, knowing that this will not guarantee zero cases. A "reasonably practicable" test is useful here and underpins the Health and Safety at Work Act. "Zero tolerance" reflects an unvaccinated public's extreme anxiety expressed as a very limited appetite for the risk of Covid infections.

The cost of elimination is spread unevenly across different parts of the economy and generations of New Zealanders. For example, young people will shoulder a disproportionate share of the burden and yet are at a relatively low risk of hospitalisation or death from Covid. Nevertheless, elimination has proved popular with voters, which suggests that collectively we are prepared to bear these costs in order to support the zero tolerance approach.

However, the ground is shifting

The combination of the delta variant and vaccination is starting to change this calculus. This variant makes elimination harder, especially with the existing public health measures. The impact of relatively few instances of non-compliance seems exaggerated. It is no surprise that the latest lockdown has needed to be longer. Although widespread vaccination is unlikely to prevent infection or transmission, it will significantly reduce the risk of Covid-related hospitalisations and death.[4] Once every eligible person has had the chance to be vaccinated, we will inevitably expect a return to something approaching normality.

This change in calculus is reflected in a change in government focus from avoiding cases to avoiding deaths. There is also increasing attention on a path to normality that allows a phased opening of the border, avoids higher-level lockdowns and puts more emphasis on hospital capacity and pre-hospital treatment of Covid.

It is hard to gauge the extent of any change in the public's appetite for risk—although the government is either reflecting, anticipating or trying to lead such a change. Moving from zero tolerance for Covid cases to zero tolerance for Covid-related deaths is a sea change.

Managing endemic Covid is harder and requires a dedicated effort

As we move away from relying on border closure and lockdowns, effective management of Covid risks will become more challenging. A "hard" border and high-level lockdowns are disruptive and costly but effective and easy to implement. They also reduce reliance on other public health measures. Living with "endemic Covid" and a zero tolerance for Covid-related deaths requires more effective application of a wider range of public health and other measures. That makes it even more important that our efforts are better co-ordinated and proactive. A standalone management agency is essential.[2]

Given the infectivity of the delta variant, if we have no tolerance for Covid-deaths and a limited appetite for isolation and high-level lockdowns, then it is essential New Zealand has purpose-built quarantine facilities for higher-risk travellers and more effective surveillance, testing, contract tracing and targeted isolation, as well as increased hospital capacity and better pre-hospital treatment.[2] That, in turn, will require us to make some difficult choices.

For example, the efficacy of contact tracing is determined by the number of subjects of interest who can be traced, tested and isolated quickly. The quicker, the better. Our current "high-trust, low-tech" approach was quickly overwhelmed in this delta-variant outbreak. A system based on human honesty and memory—two of our most fallible qualities—was never going to be adequate.

Using electronic tracking, including via wearable devices, to identify, trace and isolate a large number of close contacts quickly is reasonably practicable. Electronic tracking is also likely to be needed to support self-isolation at home and free up MIQ spaces. Similarly, using "vaccine passports" to allow the vaccinated and "naturally" immune to enjoy greater freedoms than the unvaccinated is also reasonably practicable and being employed in other countries. Finally, both routine and random mass-testing (using saliva and eventually exhaled breath samples) will need to become part of everyday life, especially for the more vulnerable, essential workers and younger people, who are the most potent vectors of the virus.[5]

Managing endemic Covid creates trade-offs that will test the appetite for risk

These options are causing concern. There is a trade-off: the more successfully these sorts of measures are resisted, the less credible it is to maintain a zero tolerance for Covid-related deaths. The relevant public risk-appetite will be revealed as such measures are debated and any compromises are worked through. We may well discover that, once everyone has had the chance to be vaccinated, we have a higher risk tolerance than we currently assume.

Our attitude to influenza is illustrative. This infection usually results in about 500 deaths annually in New Zealand.[6] This was dramatically reduced last year as a biproduct of the Covid elimination strategy, which proves that it is possible to reduce influenza deaths. The fact that we have chosen not to do so previously suggests we have a higher than zero tolerance for these deaths. One can imagine us eventually tolerating a similar number of Covid-related deaths.

Business needs to be more actively engaged

There are fewer trade-offs facing business. Currently, the freedom to operate is determined by a combination of the alert level and a business's status as "essential." This creates distinctions between businesses at different times that are often hard to justify. The Health and Safety at Work Act requires each business to identify its health and safety risks, have a plan for mitigating these

risks as far as reasonably practicable and ensure that this plan is implemented effectively. This approach allows each business to take their unique circumstances into account, and so should reduce the cost of taking the necessary precautions to protect their employees and others working on their premises. It would be reasonably practicable to require businesses who want to avoid additional Covid-related restrictions to have their plans audited for the effectiveness of Covid risk management and, if adequate, be so registered. Registered businesses would be free to operate even if specific Covid-related restrictions were imposed on non-registered businesses.

Business also has an incentive to play a more active role in our management of Covid if their participation can speed our path to normality, as primary industries do in New Zealand's management of biosecurity risks. It is reasonably practicable to expect government to identify those businesses that can help prevent incursions and contain outbreaks and to enter into government—industry agreements modelled on those used for biosecurity purposes.

Increasing the capacity of the health system is also critical

Finally, endemic Covid will put more pressure on our health system at a time when it is already distressed and when extra demand is arising from delayed diagnoses and treatment.[1,3] Creating a standalone pandemic management agency should help free-up the rest of the health sector to focus on addressing these broader health issues.[2] We also need to take advantage of the options for better treating Covid cases in the community and reducing the need for hospitalisation.[7] Postponing the planned reform of the health system, at least until we have mastered the ability to live with endemic Covid, would also avoid the distraction from what would otherwise be a massive structural change.[3]

Although these measures will help, we also must increase the capacity of our hospitals. This will require some investment in facilities, but the rate limiting factor is undoubtably the available workforce. Training a specialist workforce from scratch, which takes at least a decade, will not be much help in the nearer term. We are also unlikely to be able to recruit sufficient migrant health workers, even once we start to reopen the border. Indeed, there is a real risk of losing some of the extant migrant health workforce.

New Zealand is more reliant on migrant health workers than any other OECD country. The World Health Organization warned us 13 years ago that this reliance was unsustainable.[8] Recruitment will be increasingly unreliable as we compete with better funded and larger health economies. Our recent treatment of skilled migrants and their families is unlikely to help. As at the end of July, the media reported that more than 200 overseas-trained doctors and almost 1,000 nurses were on work visas because invitations to apply for residence have been suspended. Many were contemplating returning home.

If we cannot train the necessary health professionals fast enough and migrant workers cannot fill the gap, then we need to make the most of our existing workforce. Retaining these workers, such as by accelerating the residency applications of migrant workers, is pressing. Encouraging those working part-time to increase their work commitments and getting recently retired workers to return to the workforce would also help.[9] However, any meaningful response will require a new workforce that is trained just-in-time and for-purpose and micro-credentialed in tasks that will extend the reach of our traditional health workers. The utility and practicability of the micro-credentialling approach has already been successfully demonstrated by Careerforce (the health industry training organisation).[10]

Conclusion

Once everyone has had the chance to be vaccinated, we will inevitably move from an elimination strategy for Covid to one of minimisation and mitigation. There is a lot to be done differently, and not much time. We have already incurred large and avoidable human and economic costs by not being well prepared. We cannot continue to make that mistake.

Competing interests:
Nil.

Author information:
Des Gorman: Professor Emeritus, the University of Auckland.
Murray Horn: Former Secretary of the Treasury and Chairperson of the National Health Board.

Corresponding author:
Professor Emeritus Des Gorman, the University of Auckland, +64 21 221 7055
d.gorman@auckland.ac.nz

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