Grant Duncan

The Covid-19 Pandemic
what happened? Was New Zealand Prepared?

Abstract

This introductory article traverses the basic events since the outbreak of Covid-19 in China in December 2019, through its arrival in New Zealand and the nationwide lockdown and collective effort to eliminate it, up until the end of May 2020. The government acted decisively, with considerable public support and cooperation, and the overall response was therefore a success, albeit a very costly one. Lessons have been learned, however, about pandemic preparedness.

Keywords Covid-19, New Zealand, government, pandemic preparedness

The Covid-19 pandemic was caused by a novel coronavirus (SARS-CoV-2) that appeared in December 2019 and was rapidly transmitted globally. By the end of May 2020 it had surpassed 6 million recorded infections and 370,000 fatalities, and rising. The virus was most probably of natural animal origin. The first known cases, in Wuhan, China, had onset of symptoms around 1 December 2019. A wholesale food market was 'the source of this outbreak or played a role in the initial amplification of the outbreak' (World Health Organization, 2020, p.1). A report on a cluster of pneumonia cases admitted to a hospital in Wuhan, all with confirmed SARS-CoV-2 infections, was first published online in the *Lancet* on 24 January 2020. It warned of the virus's 'pandemic potential' (Huang et al., 2020, p.504).

Grant Duncan is an associate professor of politics at Massey University, Auckland. He has previously published on a variety of topics in public policy and in political theory, including political trust.

On 30 January the World Health Organization (WHO) declared 'a public health emergency of international concern' – that is, an extraordinary event which constituted a public health risk to other states through the international spread of disease, and which potentially required a coordinated international response. The WHO called it a pandemic on 11 March 2020. By that date, five confirmed or probable cases had been reported in New Zealand, the first two of which had arrived from Iran and Italy where significant outbreaks were growing. Through the course of March, a number of gatherings occurred in New Zealand that resulted in clusters of cases and these were traced to overseas contacts. These included a conference in Queenstown, a St Patrick's Day celebration in Matamata and a wedding in Bluff. The latter occurred on 21 March, the same day that the prime minister announced a four-level alert system for the implementation of emergency measures to control transmission of the virus.

On 25 March a state of national emergency was declared and New Zealand prepared to go into the highest, 'level 4'

lockdown at midnight that night. This meant that only 'essential' services were permitted to operate, and that people were otherwise confined to their homes, except for local trips to the supermarket and the pharmacy or for exercise. Social gatherings were prohibited and a social-distancing norm of two metres was required at all times. Everyone was required to restrict closer contacts to a limited social 'bubble'. Non-essential businesses and employees continued to work at home online, in as much as possible. Schools and tertiary education institutions closed. On an index of 'stringency' of compulsory lockdown measures, New Zealand was rated among the most stringent in the world at that time (Blavatnik School of Government, 2020). These emergency measures were lowered to level 3 on 27 April, allowing many businesses to reopen, but nonetheless still with relatively strict constraints, and then to level 2 on 14 May.

The cumulative numbers of confirmed and probable cases in New Zealand rose to 1,504 by the end of May, but the numbers of new cases reported per day had peaked on 5 April. The number of active cases (that is, the cumulative total of confirmed and probable cases, minus the numbers recovered, minus fatalities) peaked at 930 on 6 April, declining steadily thereafter. The numbers in hospital on any one day never exceeded 20, and those in intensive care never exceeded five. There have been to date 22 fatalities.[1] One can only guess how many more lives may have been lost, and how many more may have been hospitalised, had less stringent measures, or none at all, been imposed. Mathematical modelling prior to the lockdown had warned of significant numbers of severe cases, thousands of deaths and a shortage of intensive care beds if the country had failed to eliminate the disease (Wilson et al., 2020). But New Zealand avoided exponential growth in case numbers, and intensive care units were not overwhelmed. Sweden, with about twice New Zealand's population and less stringent controls, had by the end of May about 28,000 active cases and 4,300 fatalities.

A success story

New Zealand's efforts to eliminate this aggressive virus may be considered a success for 'flattening the curve', avoiding overload in hospitals, and saving lives. This was a whole-of-government effort, informed by scientific evidence and supported by a high level of public cooperation. But the regular 'government of everyday life' had to be suspended, emergency measures prevailed, schools and businesses closed, and political leadership, public services and social cohesion were put to the test.

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Political rhetoric does not defeat a pandemic; sound scientific knowledge and public health technologies do. New Zealand was very fortunate, nonetheless, to have had effective and compassionate leadership, with clear messages from the prime minister and senior public servants, especially the director-general of health. Transparency and consistent communication were essential to the public's trust in decision makers and willingness to collaborate. As Jacinda Ardern often said, it all depended on a team of five million. Everyone was called upon to obey extraordinary constraints on civil and economic liberties, often at considerable personal expense, loneliness, loss and grief. And the level of public acceptance of, and trust in, the government's lockdown was very high, according to surveys (Colmar Brunton, 2020; Manhire, 2020; Sibley et al., 2020). But ongoing public support cannot be taken for granted – either in terms of political support for the ministry on whose watch the crisis happened, or in terms of day-to-day compliance with lockdown rules. The people's trust in government is crucial at such times, and that trust must be reciprocated with transparency and with effective actions.

Pandemic preparedness

A common refrain was that Covid-19 was a 'one in one hundred years' event, harking back to the influenza pandemic of 1918. It is, however, unwise to assume that another such pandemic will not happen in our lifetimes. A globalised economy of international travel and supply chains enabled the rapid transmission of the virus and exacerbated the economic disruption. Crowded cities, air pollution, pre-existing chronic diseases and poverty worsened the global burden of disease. So, we should prepare ourselves for another such event and build on what has been learned and developed this time around.

Accepting that nothing can fully prepare any country for such a crisis, we can look at some of the provisions that were in place, to evaluate their fitness for purpose, and also consider the gaps that Covid-19 exposed. Arguably, New Zealand got all of the necessary systems working. But some had to be improvised as the crisis unfolded. Supermarket workers, for example, were unexpectedly drafted into the 'front line' of emergency response. It took extraordinary efforts from public servants and healthcare professionals to get systems up and running under pressure. These achievements need to be recorded, institutionalised and 'stowed away' for rapid redeployment. Below, I address some of the critical issues. Further details are provided by other contributors to this *Policy Quarterly*.

Preparedness in the health sector

The Ministry of Health has had an Influenza Pandemic Action Plan in place since 2002, last updated in 2017. As its name implies, it was designed to respond to influenza, such as the novel influenza A (H1N1) virus in 2009, but it did encompass other respiratory-type diseases, such as SARS in the epidemic of 2003. However, the action plan did not fully envisage a scenario with an aggressive, highly transmissible novel

coronavirus for which there was neither antiviral medication nor vaccine.

On 25 February 2020, the numbers of intensive care and high-dependency unit and negative pressure beds across the country were reported (Ministry of Health, 2020). Given that many of these would be occupied already, community transmission of Covid-19 could very quickly have overloaded the system with patients needing critical care. Fortunately, this did not happen, and the Covid-19 cases that did require ICU beds would have been more than offset by the reduction in the numbers of serious and fatal traffic accidents due to the lockdown.[2]

Two critical success factors in the disease-control response were testing and contact tracing. The numbers of tests per day increased dramatically from early March, reaching a seven-day rolling average of 5,928 in the period 4–10 May. As for contact tracing, it had become apparent in March that the workload would exceed the capacity of the 12 public health units. The pandemic had exposed system fragmentation at the national level and different data-gathering methods across public health units. A National Close Contact Service commenced on 24 March, using a manual system, and then a technology solution for all calls by 6 April. But some district health boards were already relying on their existing systems. As lockdown restrictions eased, swift case detection and contact tracing were essential for controlling any outbreaks of the virus, especially in the absence of a vaccine (Verrall, 2020).

Emergency powers

The Epidemic Preparedness Act 2006 provides executive powers, while an epidemic notice is in force, to 'modify' by order-in-council any statutory requirement or restriction if compliance therewith is rendered 'impossible or impracticable' by the epidemic, provided this is 'reasonably necessary in the circumstances'. The act had been passed without opposition, but nonetheless its powers aroused concern (New Zealand Law Society, 2020). The Health Act 1956 granted numerous powers to medical officers of health and the police during an epidemic, including the isolation of 'persons'. But the level-4 lockdown in April 2020 put the entire population into isolation. Questions were raised about the lawfulness of this (Radio New Zealand, 2020). Moreover, there was initial public confusion about the lockdown 'rules' regarding 'essential' services and routine exercise. Guidelines for the public about police powers under the epidemic notice, and about penalties for breaches, were initially not as clear as they should have been. Consequently, there was public uncertainty about the kinds of activities and travel, both commercial and recreational, that were or were not permitted.

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Economic policy

Saving lives was the first priority, but saving livelihoods could not be neglected. The New Zealand government responded with a fiscal stimulus package to support continuity of employment relations, and Parliament passed an imprest supply bill just before it went into recess. On 17 March the government announced a wage subsidy scheme and a $25 per week increase in main benefits. This helped many firms and households to weather the storm. But impatience with the lockdown became increasingly vocal as business revenues dried up. The Reserve Bank responded rapidly by lowering the official cash rate by 75 basis points on 16 March and removing mortgage loan-to-value ratio (LVR) restrictions for 12 months from 30 April. The Budget was delivered as scheduled on 14 May, but had had to be rapidly and substantially revised to accommodate the profound economic shock, rising unemployment, fiscal stimulus, new borrowing, and deficits projected until at least 2024. The Budget forecast unemployment to peak at 9.8% in September 2020.

So the responses of the New Zealand government, as a whole, were admirably nimble and proportionate, given the risks to public health and the inevitable recession. Some responses were improvised; some were possibly *ultra vires*, no matter how necessary. This revealed some shortcomings in preparedness, even as it also revealed impressive commitment, leadership and pragmatism. We can begin, then, to ask how New Zealand could be better prepared for a future pandemic, and to reduce morbidity and mortality with less cost to economic activity and social connection.

Taiwan's rapid responses

Comparisons were frequently made with Australia's less restrictive lockdown. But a more instructive example is Taiwan. On 26 May, Taiwan's Centers for Disease Control reported a cumulative total of 441 confirmed cases of Covid-19 and 7 fatalities, in a population of 23.8 million – more than four times New Zealand's, and with much closer links to Wuhan. New Zealand's Ministry of Health reported 1,154 confirmed cases and 21 fatalities on that same date. Moreover, the lockdown restrictions in Taiwan were rated as less stringent than both New Zealand's and Australia's, but more stringent than Sweden's (Blavatnik School of Government, 2020).

How had Taiwan achieved much better health outcomes than New Zealand, but

with fewer restrictions on social and economic activities? On 31 December 2019 'Taiwanese officials began to board planes and assess passengers on direct flights from Wuhan for fever and pneumonia symptoms before passengers could deplane'. They reacted as soon as the WHO was notified of the disease. By 5 January, anyone who had travelled in the previous fortnight in Wuhan and had respiratory disease symptoms was tested for known viruses, quarantined at home and assessed for hospitalisation. On 20 January, Taiwan's Central Epidemic Command Center was activated and empowered to coordinate the key ministries 'in a comprehensive effort to counteract the emerging public health crisis'. Travel bans were progressively applied from then on as the virus spread to different regions. High-risk individuals were identified and tracked through data analytics. From 29 January, 'electronic monitoring of quarantined individuals via government-issued cell phones' was implemented. People who broke quarantine restrictions faced fines equivalent to US$10,000 (Wang, Ng and Brook, 2020).

By 29 January, New Zealand was not yet prepared. Granted, it had less travel to and from Wuhan than Taiwan did; but New Zealand lies only one long-haul flight from China. Entry restrictions on foreign nationals travelling from or through China were imposed on 3 February, and those permitted entry were required to self-isolate for 14 days. Health monitoring of those arriving from Hong Kong, Japan, South Korea, Singapore and Thailand began on 29 February. But anecdotal reports in the media of lax control as people arrived at Auckland International Airport were aired through March. At that crucial time, New Zealand lacked an effective, nationally-coordinated data system for tracking persons required to self-isolate and for tracing their contacts. A 14-day period of government-managed isolation or quarantine was imposed on all new arrivals from 10 April. But the virus had already breached New Zealand's first line of defence: its border.

The second line of defence, then, was a 'team of five million'. While health authorities dealt with clusters, the entire population was called upon to prevent community transmission and to keep themselves safe. This meant coercive police powers and economic shutdown on a scale never seen before in this country. The economic recovery will take years. With better pandemic emergency preparedness, more effectively utilising New Zealand's geographic isolation, the price of success may have been much lower.

Conclusion

The Covid-19 pandemic response showed how effectively and rapidly the New Zealand government, public servants, scientists, journalists and communities can collectively combat a common threat under deep uncertainty. There is much that we can reflect upon and take pride in; there are also lessons for future such emergencies. Moreover, there can be no return to the status quo ante. The pandemic has shaken up our ideas about public management and policymaking; it is speeding up technological and business innovations. Debates have begun about what this new era will look like, and what social and economic policies it demands. Economic inequality, preventable illnesses, artificial intelligence, terrorism and climate change remain, moreover, as contemporary challenges facing lawmakers and administrators. At the time of writing, the pandemic is far from over; travel restrictions and quarantine controls are still in place. We do not know the extent to which recovery will engender solidarity or division in society. But several articles herein argue strongly that our pandemic responses have strengthened bonds between central and local government, iwi, schools and communities – connections and capabilities that government should nurture. Others have recommendations about future governance and policy for public health. Rebuilding will make us rethink every dimension of public policy.

1 Figures are based on those reported daily by the Ministry of Health and may differ from final tallies.
2 Following Easter and a long Anzac weekend, it was reasonable to estimate 40 fewer traffic-related fatalities, compared with the previous two years to date.

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