



Five lessons for Aotearoa NZ from the current COVID-19 outbreak in New South Wales

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Australia has generally succeeded in eliminating community transmission of the pandemic virus SARS-CoV-2, but the Greater Sydney region is currently facing a large COVID-19 outbreak, driven by the Delta variant. The New South Wales Government is struggling to control the outbreak and the grim situation holds a number of lessons for NZ.

On 15 June 2021, a 60-year-old airport limo driver who was involved in transporting international aircrew to and from Sydney Airport tested positive for COVID-19 and was confirmed as a case on 16 June with polymerase chain reaction (PCR) testing (1, 2). A household contact subsequently tested positive (3) and case numbers quickly began to increase (see Figure 1). Genome sequencing revealed that the outbreak was driven by the highly transmissible Delta variant, which was likely imported from the US (4). There have been more than 5000 COVID-19 cases reported in NSW since the outbreak began.

In response to the new outbreak, the NSW Government made masks mandatory on public transport on 18 June (5). The public was also advised to wear masks indoors and maintain social distancing (5). However, case numbers continued to grow, and finally, on 26 June, the greater Sydney region entered a lockdown (6). However, the initial lockdown restrictions were criticised by some public health experts as not being strict enough to control the outbreak (eg, (7-9)). Indeed, the lockdown in greater Sydney and the surrounding regions was later extended until at least 28 August (10, 11).

Figure 1: Epidemic curve of daily notified confirmed and probable cases per million population in NSW and NZ up to 11 August 2021 (12-14)

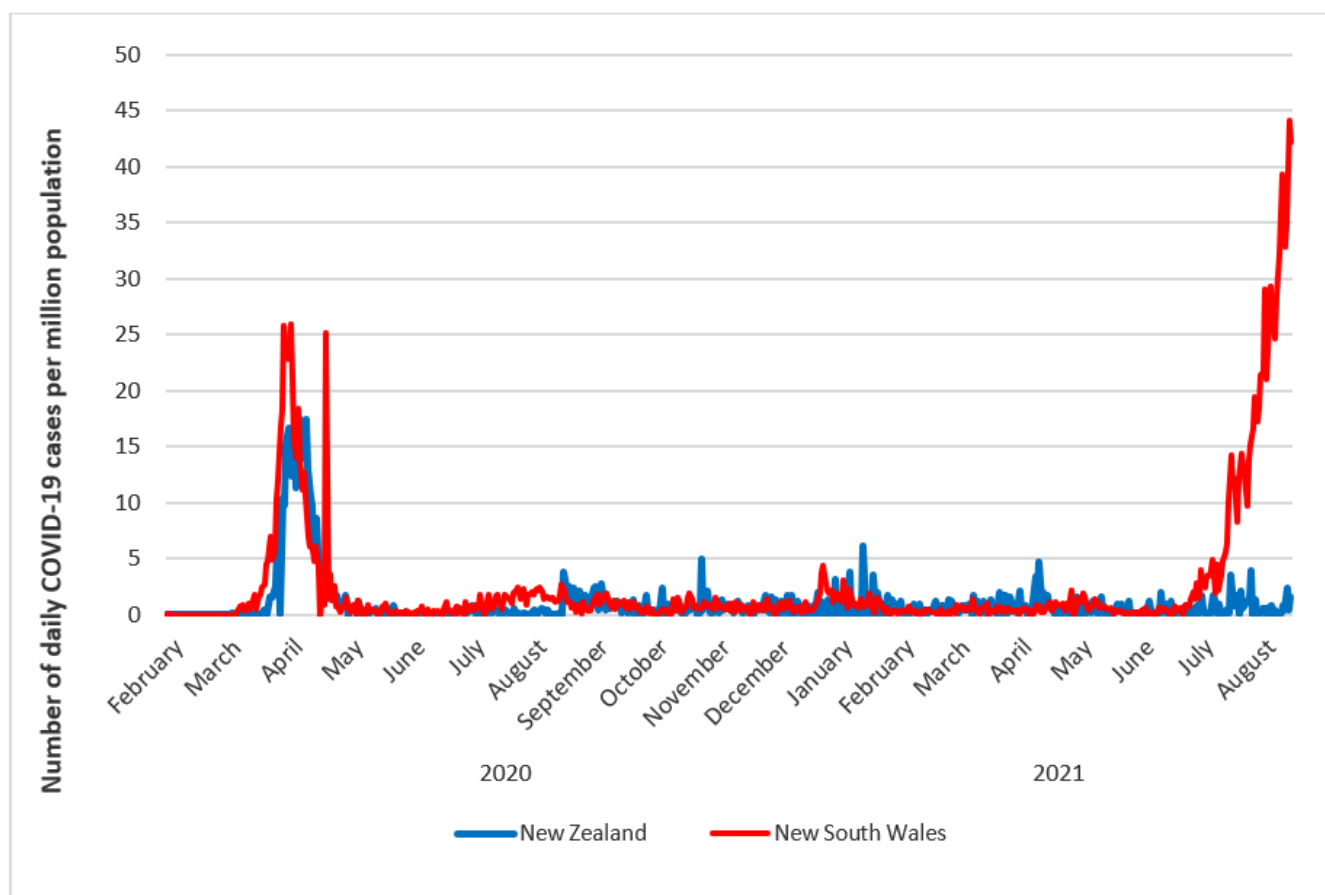


Table 1. Health impacts of the COVID-19 pandemic (confirmed and probable cases) in NZ and Australia - data current to 11 August 2021

Jurisdiction	Cumulative cases	Total deaths	Population (million)	Deaths per 1 million population	Reported cases per 1 million population
New Zealand	2913	26	5.1 (15)	5.1	569.4
Australia	37,755	947	25.7 (16)	37.3	1486.7
<i>New South Wales</i>	<i>12,249</i>	<i>91</i>	<i>8.2 (16)</i>	<i>11.1</i>	<i>1498.8</i>

We have identified several problems associated with the response to the outbreak in NSW and have listed five lessons for NZ.

The problem: There is a persisting COVID-19 outbreak in Sydney, driven by the highly transmissible Delta variant, that is not readily responding to the level of lockdown being applied. It might take additional months of restrictions before elimination, or a high level of suppression, is achieved again in NSW.

Lesson 1: NZ needs to continually improve border management to prevent COVID-19 entry into NZ, particularly in response to the Delta variant. These precautions could include additional pre-departure controls to minimise the number of infected travellers arriving at the border and ensuring maximum precautions are being used at all points of entry. Evidence from border failures in Sydney (as well as Singapore and Taiwan) has shown the problem of infected aircrew and associated occupational groups introducing Covid-19. Recent NZ experience has also reminded us that seaports remain a high concern (multiple ports, high volume of visits, diverse occupational groups, low vaccine uptake, and poor health and safety of international sea crews).

Lesson 2: NZ needs to be ready to lockdown local areas very fast and very hard in response to any chains of transmission where there is not a very clear link to the border. This would need to happen even faster than NZ has done previously and with an upgraded Alert Level system (eg, as proposed by Kvalsvig et al (17)). Benefits of an upgraded Alert Level system would include mandated mass masking at some levels. The NZ Government may also want to consider enforcement of current mask mandates on public transport, as anecdotal evidence suggests that there is suboptimal adherence in certain areas. Mandated QR code scanning in high risk settings would also improve the prospects for high-speed contact tracing to support an effective response to a Delta variant outbreak. Indeed, the NZ Government recently announced that the country should prepare for swift lockdowns if any community cases of the Delta variant are detected, and that changes in masking and QR code scanning requirements may be forthcoming.

The problem: There have been relatively low vaccination levels in NSW, and also wider Australia (although higher levels than New Zealand to date) (see Table 2). As of 4 August, around 4.1 million doses of the vaccine had been administered in NSW (18), although vaccination rates vary widely by area. For example, in southwestern Sydney (currently an area with a high case rate) only around a third of residents have received their first dose and only 15% have been fully vaccinated (19). The slow rate of vaccination in NSW may be delaying outbreak control and could result in a longer total time in lockdown.

Table 2. COVID-19 vaccination progress in NZ and Australia - data current to 11 August 2021 (for the whole population including children) (20, 21)

Jurisdiction	% Population with at least 1 vaccine dose	% Population with two vaccine doses
New Zealand	28.9	16.9
Australia	45.4	23.7
<i>New South Wales</i>	<i>48.1</i>	<i>24.4</i>

In late June, NSW premier Gladys Berejiklian expressed frustration with the vaccination supply to the state, stating: “The NSW government cannot control how many doses we get ... the NSW government has always said, give us more vaccines” (22). It has also been reported that NSW Health was left with no other option but to reallocate up to 40,000 doses of the Pfizer/BioNTech vaccine from their rural and regional supply to year 12 students in southwest and western Sydney in an effort to slow the outbreak (23), especially as data in Australia suggests that around 25% of new cases are in children (24). However, Prime Minister Scott Morrison finally promised additional vaccine supplies to NSW in recent weeks (25). The NSW Government is aiming for a vaccination rate around 80%, but may look to ease restrictions once the vaccination rate nears 50% or 60% (19, 26).

Lesson 3: NZ needs a faster vaccination rollout as it now lags far behind Australia (see Table 2). Faster vaccination is especially important for main cities with MIQ facilities and international airports, where outbreaks are most likely. In particular, vaccination of essential workers in [Vaccination Groups 3 and 4](#) in the main cities (detailed further below) should be accelerated so that they have reduced risk of transmitting infection during an outbreak. We probably need more mass vaccination centres as well as more options for vaccinations delivered by GP practices and at pharmacies. The approach of large workplaces organising vaccination on site should also be accelerated.

Lesson 4: NZ could fine-tune its vaccination roll-out to better protect key populations and to improve prospects for outbreak control. First, in order to effectively respond to future outbreaks, NZ should plan to be able to rapidly move vaccine supplies and vaccination teams to any area of the country where local lockdowns may be required. For example, mobile rapid response vaccination teams have been deployed in parts of the US to offer single dose Johnson & Johnson vaccines in rural areas with high positivity rates (27).

NZ must also continue to work to ensure that appropriate age, health/disability and ethnicity prioritisation of vaccination occurs across the country. In particular, Māori and Pasifika must be appropriately protected for their risk level. Prioritisation of Indigenous peoples for COVID-19 vaccination is being used in several other countries. For example, Indigenous people are being prioritised for vaccination in Canada due to being at higher risk of hospitalisation and death due to the transmission of COVID-19 than the non-Indigenous population (28). Aboriginal and Torres Strait Islander peoples are also being prioritised for vaccination in Australia (29).

Additionally, NZ should consider prioritisation of essential workers (eg, grocery store staff, teachers, transportation workers and others who would still be required to work on-site at

higher alert levels). As of 4 August, 12% of active workers on the Border Worker Testing Register in NZ had not yet had a single dose of the vaccine and around 44% of all port workers remained unvaccinated (30). The vaccination of children (at least in the 12-15 year age-group) will also be a decisive step in the development of population immunity and requires additional consideration by researchers and policy-makers.

The problem: There were anti-lockdown protests in the streets in Sydney that could have contributed to super-spreading events and prolonged the outbreak. The NSW Government has announced that it will provide financial assistance, support measures, and tax relief to businesses and people across the state impacted by the COVID-19 restrictions through the 2021 COVID-19 Support Package (31). Specifically, NSW has offered help for people who have lost their jobs or cannot pay their rent or mortgage, put in place an eviction moratorium, and introduced a small business support payment (31). However, in late July thousands of anti-lockdown protesters clashed with police in Sydney in violation of the state's COVID-19 restrictions (32).

Lesson 5: NZ needs to ensure the wellbeing of people if a 'lockdown' is needed (see Kvalsvig et al (17)) because this is both the right thing to do from a wellbeing perspective, but also it may help to minimise the risk of anti-lockdown protests that could be super-spreader events. In particular, the NZ Government would need to rapidly announce and then operationalise additional economic support for any areas subject to lockdowns or other restrictions. Indeed, the NZ Government has done this well in the past, although people at the lowest end of the income scale reported that while the benefits and payments introduced during the Alert Level 4 lockdown last year were helpful, they were not sufficient to prevent severe hardship including food insecurity (33).

Lessons for NSW: The experience of NZ, and indeed Australia generally and other countries pursuing elimination, is that this approach greatly outperforms other strategies, at least until high vaccine coverage and other interventions are in place (34, 35). NSW will hopefully act on this experience and take the decisive action needed to return to an elimination state.

In summary, NSW is currently experiencing a large COVID-19 outbreak which holds several important lessons for NZ. Specifically, improved prevention is urgently needed, and NZ must be ready to lockdown local areas very quickly and very hard. Additionally, a faster and more strategic vaccination rollout is needed to maximise the protection of all New Zealanders. Finally, the wellbeing of people experiencing COVID-19 restrictions, especially those in lockdown situations, must be maximised as part of a successful overall response.

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Image: [FreeVectorMaps](#)

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