



# **It's been 3 years since COVID entered New Zealand - here are 3 ways to improve our response**

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Michael Baker, Amanda Kvalsvig, Matire Harwood

# Summary

Aotearoa New Zealand's elimination strategy and subsequent high Covid-19 vaccination coverage gave this country exceptionally low mortality during the first three years of the pandemic. However, widespread circulation of Covid-19 from year three of the pandemic is resulting in frequent infection and reinfection with associated illness, hospitalisation, death, and disability from long Covid.

Available evidence supports a strategy that suppresses Covid infection to reduce the frequency of infection and adverse health effects. This strategy needs to be delivered in an effective and equitable way. An integrated respiratory infectious disease programme offers co-benefits as it can also decrease rates of influenza and other respiratory infections. Cost-effectiveness analysis and integrated surveillance can support the selection and equitable delivery of an optimal mix of interventions.

We need to prepare for future pandemics and there are multiple lessons from the Covid-19 response. A global strategy of eliminating potential pandemics at source and interrupting their spread offers huge benefits for global health security.

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**February 28 marks three years since [COVID was first reported](#) in Aotearoa New Zealand. Since then there have been major advances in our understanding of this infection and the tools and strategies to combat it.**

Here we describe three big opportunities to improve our response as we enter the fourth year of the pandemic.

## Strategy is key to driving down infection

New Zealand's response strategy started with elimination, which [minimised infection and death from COVID](#) during the first two years of the pandemic.

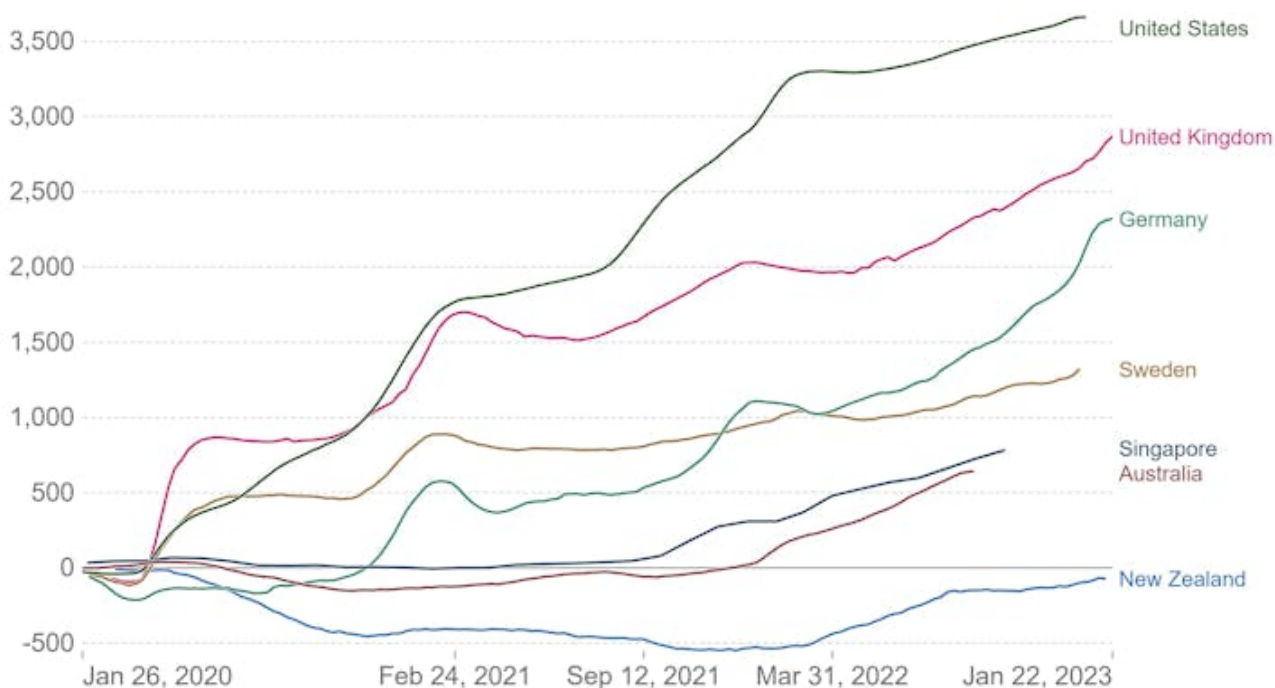
It also allowed time to roll out vaccines and improve treatments before widespread infection during the pandemic's third year. These measures decreased the case fatality risk from about one in a hundred during the first two years to less than one in a thousand now.

The net effect was the [lowest cumulative excess mortality](#) in the OECD during this period.

## Excess mortality: Cumulative number of deaths from all causes compared to projection based on previous years, per million people



The cumulative difference between the reported number of deaths since 1 January 2020 and the projected number of deaths for the same period based on previous years. The reported number might not count all deaths that occurred due to incomplete coverage and delays in reporting.



Source: Human Mortality Database (2022), World Mortality Dataset (2022)

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This graph shows the excess mortality in New Zealand compared to other countries. Our Word in Data, [CC BY-SA](#)

The world is now [transitioning from an emergency pandemic response](#)<sup>1</sup> to treating Covid-19 as another [important infectious disease to be controlled](#).<sup>2</sup> The first big challenge is identifying an optimal strategy for managing Covid-19 infection now that it is always present.

Elimination is not currently feasible with available and acceptable interventions, so the decision is about the optimal level of control from [suppression to mitigation](#).<sup>3</sup> This is a risk assessment question based on the acute and long-term impacts of Covid-19 infections.

In 2022, Covid-19 became the [second leading cause of death](#) in New Zealand behind ischaemic heart disease. Globally, it is likely to have been the [third leading cause of death in the world](#) for the last three years (2020-22).

The immunity from the cumulative effects of vaccination and prior exposure is [reducing the severity of infection](#).<sup>4</sup> Unfortunately, the evidence from multiple strands of research is that Covid-19 is a multi-organ disease with symptoms commonly persisting after three months as [long Covid](#).<sup>5</sup>

Infection may damage the [circulatory system](#), [brain](#), and [lungs](#).<sup>5-7</sup> It increases the risk of subsequent [heart attacks and other circulatory diseases](#)<sup>8</sup> and appears to be driving an [increase in excess mortality](#) in many countries.

Covid-19 is not influenza where symptomatic infections typically occurs [years apart](#).<sup>9</sup> With



Covid-19, [reinfections are common](#) and [each carries a risk](#) of illness, hospitalisation, death, and disability from long Covid.<sup>10</sup>

The [life-course effects](#) of experiencing multiple infections are not yet known.

This evidence supports a suppression strategy for Covid-19 infection to minimise the frequency of infections and reinfections. [Major international reviews](#) describe this as a [vaccines-plus approach](#) that uses a mix of control measures as well as vaccines.<sup>11 12</sup> NZ has [partially adopted this approach](#) but will need to do more and clearly articulate a suppression strategy as a unifying goal for selecting interventions.

## Effective and equitable delivery is critical

It can be argued that we should treat Covid-19 more like other infectious diseases. The converse strategy is that we should treat other infectious diseases more like Covid-19.

There is a convincing argument for an [integrated approach to respiratory infections](#) that builds on the co-benefits of addressing multiple infections, along with a strong emphasis on equity.<sup>13</sup>

In the past we have accepted the [annual death toll from influenza of around 500](#) and its big impact on our hospital system.<sup>14</sup> Yet [influenza largely disappeared during the time of Covid-19 in NZ](#) as well as other countries with less stringent control measures.<sup>15</sup> This finding shows the disease burden of influenza is not inevitable.

We need to identify the [most effective and cost-effective mix](#) of respiratory protections.<sup>16</sup> Examples include [targeted and universal vaccine programmes](#), [improving ventilation in public buildings](#), and strategic [mask use in enclosed public environments](#) (for example, public transport).<sup>17 18</sup>

These interventions need to be [compared with other potential investments in health](#) to decide the best use of available resources.<sup>19</sup>

We know that [Māori and Pasifika](#) have the highest rates of hospitalisation and death from Covid-19 in NZ and lower levels of vaccination. This is a strong argument for continuing to strengthen Māori health leadership as exemplified by the role of the new [Māori Health Authority Te Aka Whai Ora](#).

An integrated programme addressing respiratory infections would be strengthened by research and surveillance. It is important to understand and [address barriers](#) to achieving high population coverage of key interventions. We also need ways to [combat disinformation](#) to help sustain the social license for public health measures.

[High-quality integrated surveillance of respiratory infections](#) would supply data on epidemiology, genomics, and health equity.

## We must learn and prevent the next pandemic

Given the extreme disruption the pandemic has caused, it is vital to learn from the experience. The terms of reference for the [Royal Commission of Inquiry](#) into New Zealand's Covid response have a strong focus on managing future pandemics.

This goal is important as there are [multiple infectious agents with pandemic potential](#).<sup>20</sup> [Avian influenza](#) is a growing concern at present.<sup>21</sup>

In our view, the greatest lesson from Covid-19 is that [elimination should be the default choice](#) for future pandemics.<sup>22</sup> A key priority [is rapid elimination at source](#), followed by interrupting the spread to give time to develop effective vaccines and prevention measures.

As we enter the fourth year of the pandemic, there is cause for optimism.

Evidence supports a suppression strategy that minimises the frequency of infections and their harmful consequences. Delivering such a strategy is likely to be more effective, equitable and sustainable if combined with a broad programme which treats all serious respiratory infections more like COVID.

While the threat of future pandemics may be increasing, we now have the ability to eliminate them. This is a huge advance in global health security.

## What's new in this briefing

- The New Zealand Covid-19 elimination strategy followed by high vaccine coverage has minimised the health impact of the pandemic
- Covid-19 is now circulating widely causing frequent infections and reinfections with resulting illness, death, and disability from long Covid

## Implications for public health

- A suppression strategy using a vaccines-plus approach is needed to reduce the rate of Covid-19 infection and reinfection
- Effective and equitable delivery is critical and can be supported by developing a programme for integrated prevention of respiratory infections
- We need to prepare for the next pandemic and elimination offers many benefits for controlling pandemics at source and interrupting their spread

## Authors

[Prof Michael Baker](#), Department of Public Health, University of Otago, Wellington

[Assoc Prof Amanda Kvalsvig](#), Department of Public Health, University of Otago, Wellington

[Assoc Prof Matire Harwood](#), Department of General Practice and Primary Care, University of Auckland

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