

# Aide-Mémoire

## COVID-19 Context

<b>Date due to MO:</b>	13 February 2024	<b>Action required by:</b>	N/A
<b>Security level:</b>	IN CONFIDENCE	<b>Health Report number:</b>	H2024035351
<b>To:</b>	Hon Dr Shane Reti, Minister of Health		
<b>Consulted:</b>	Health New Zealand: <input checked="" type="checkbox"/> Māori Health Authority: <input type="checkbox"/>		

## Contact for telephone discussion

Name	Position	Telephone
<b>Dr Nicholas Jones</b>	Dr Nicholas Jones, Director of Public Health, Public Health Agency, Te Pou Hauora Tūmatanui	s 9(2)(a)

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### Purpose

1. This aide-mémoire responds to your request of 29 January 2024, for a current summary of the COVID-19 context both in New Zealand and internationally. As part of this, current intelligence and insights are provided on:
  - a. current variants in circulation,
  - b. trends in infection, hospitalisation, and mortality
  - c. evidence on long-COVID
  - d. recent, international shifts in the management of COVID-19.
2. This paper provides an overview of international shifts in public health management of COVID-19. Additionally, we can advise on recent updates to the clinical management of cases, including in-patient care, in consultation with Health New Zealand | Te Whatu Ora at a later date, if required.

### Background

3. COVID-19 will likely persist in the coming years, resulting in a sustained burden on the healthcare system. COVID-19 waves will continue to occur multiple times per year and affect the health of New Zealanders, the health system and the economy.
4. Whilst often compared to influenza, COVID-19 is its own unique disease, with a higher burden of hospitalisations, higher fatality rate compared with other circulating respiratory illnesses and a non-seasonal epidemiological pattern. New Zealand will likely continue to experience waves of increased hospital admissions and deaths as a result of COVID-19 infections, even with high population levels of hybrid immunity (due to previous exposures and vaccinations) and access to antivirals.
5. New Zealand's current approach to COVID-19 is summarised in the Aotearoa New Zealand Strategic Framework published in September 2023<sup>1</sup>. The framework focuses on 3 strategic outcomes:

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<sup>1</sup> Aotearoa New Zealand Strategic Framework for Managing COVID-19 – found at [https://www.health.govt.nz/system/files/documents/publications/strategic\\_framework\\_for\\_managing\\_covid-19\\_2023.pdf](https://www.health.govt.nz/system/files/documents/publications/strategic_framework_for_managing_covid-19_2023.pdf).

- a. preparing for future waves and variants
  - b. managing the direct and wider impacts of COVID-19
  - c. integrating and strengthening resilience across our system.
6. Under this framework New Zealand continues to minimise the impacts of COVID-19 by reducing the occurrence of severe disease in the populations most at risk. Measures such as case isolation are now focused on reducing transmission to the high-risk population rather than reducing population incidence. Vaccination is targeted to the population most likely to benefit and testing is increasingly focused on maintaining access to antivirals to prevent severe disease. Wastewater testing and whole genome sequencing of PCR virus detections (from clinical specimens) remain important for both “preparation” and “manage” outcomes.

## COVID-19 current situation and epidemic outlook

### Current situation

7. Currently, COVID-19 hospitalisations and community infection levels (based on wastewater trends) indicate that the current wave has peaked.
  - a. the 7-day rolling averages for reported cases, COVID-19 hospital admissions and deaths have all declined in recent weeks. Reported cases were down to 792 per day for the week ending 4 February, from 823 per day the prior week. COVID-19 hospital admissions declined from an average of 40 per day, to 35 per day in the week ending 31 January. COVID-19 deaths declined from 2.5 deaths per day to 1.7 deaths per day as of 31 January
  - b. the current dominant variant in the community is JN.1, which showed a clear growth advantage over the previous dominant variant EG.5 from early December. JN.1 currently accounts for about 90% of infections, based on wastewater and whole genome sequencing.
8. The vaccination status of the total population is becoming both complex to monitor and of less significance given the high levels of hybrid immunity and recommendations to avoid vaccination within 6 months of COVID-19 exposure. Despite this, as of 2 February 2024, 57% of eligible 50-year-olds and over have received at least 2 doses after the primary course and 74% of 18-year-olds and over have received at least one additional “booster”. Future COVID-19 vaccination monitoring will focus on the levels of recent vaccination in higher risk populations.

### Epidemic outlook for 2024

9. New Zealand is currently exiting its fifth COVID-19 wave.<sup>2</sup> Cases and admissions rose from August 2023, peaking in early January 2024.
10. In 2023, 2 distinct waves were observed compared to 3 waves in 2022.

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<sup>2</sup> Technically the sixth if the initial April 2020 outbreak is counted.

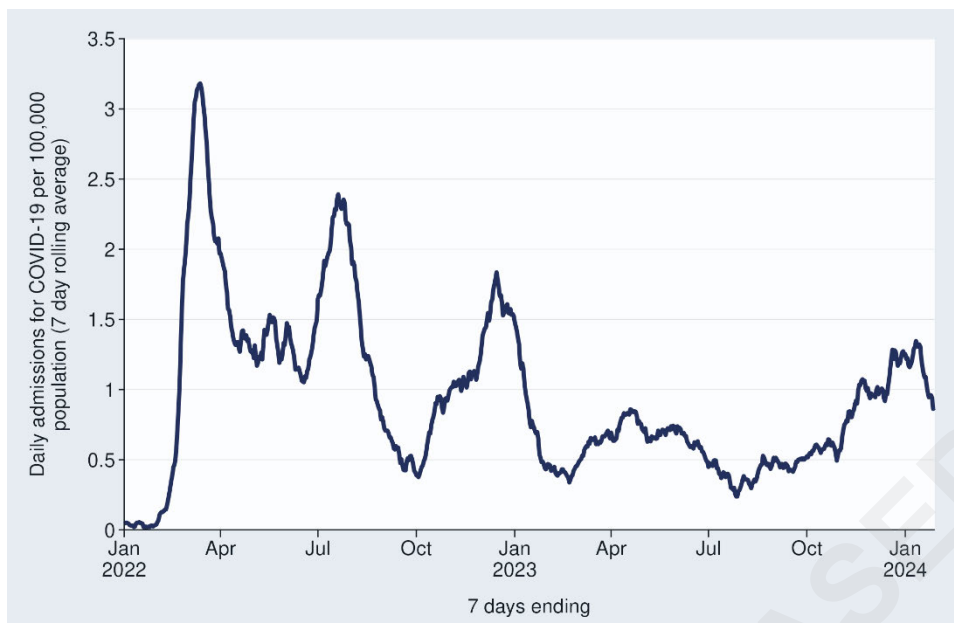


Figure 1. Seven-day rolling average of daily admissions for COVID-19 per 100,000 population.

11. It is likely that we could expect a similar number of waves in 2024 as seen in 2023. However, the size, duration and length of these potential waves remains highly uncertain and difficult to forecast. This is due to a number of unpredictable factors including the number of co-circulating variants in the community and ongoing emergence of new variants of SARS-CoV-2.
12. Currently, ongoing surveillance of wastewater and hospital admissions provide the best measures for monitoring the growth and impact of COVID-19 in the community, because they are not impacted by test-taking and reporting behaviours. Antiviral dispensing is also a useful measure but is dependent on test availability.
13. Wastewater surveillance is currently funded through COVID-19 appropriations ending in June 2024. To ensure maximum public health benefit, ongoing high-quality wastewater surveillance requires further funding and prioritisation of resources. Discontinuation of all wastewater testing would create a significant surveillance gap. Other comparable jurisdictions such as Australia, Ireland and Denmark are maintaining or expanding their wastewater surveillance systems to include more issues of public health interest, such as other viruses like measles and polio, gastrointestinal infections and even assessment of population nutritional status. COVID-19 still tends to kill many more people each week than other comparable respiratory conditions such as influenza. For example, in the US for the week ending 20 January 2024, 3.6% of deaths were due to COVID-19 compared to 1% for influenza and 0.1% for RSV<sup>3</sup>.

## The cumulative impact of COVID-19 to date

14. The pandemic has led to substantial disease burden in New Zealand, specifically in terms of COVID-19 hospitalisations and deaths over the past 4 years. However, this disease burden is at a much lower rate than other countries. Since the start of the outbreak in 2020, there have been a total of:

<sup>3</sup> Centers for Disease Control and Prevention. Severe Viral Respiratory Illness. *U.S. Department of Health & Human Services* (2024). <https://www.cdc.gov/respiratory-viruses/data-research/dashboard/illness-severity.html>

- a. 3,592 deaths due to COVID-19 as either the underlying or a contributory cause. The majority of all deaths having occurred in 2022 compared to 2023
- b. 30,683 hospital admissions for COVID-19, out of which 61% occurred in 2022 compared to 32% in 2023.

## Unequal spread and impact of COVID-19

15. The impact of COVID-19 in the community has been unequal across ethnicity and social deprivation level:
  - a. cumulatively, age-standardised rates for COVID-19 hospital admissions are approximately 2 times higher among those most deprived compared to those least deprived
  - b. similarly, by ethnicity, cumulative age-standardised admissions are more than 2 times higher among Pacific communities and approximately 2 times higher among Māori, compared to both Asian and European/Other communities.
  - c. unequal impact is also observed in deaths, where the cumulative age-standardised death rates of those from the most deprived areas are approximately 2 times higher than those in least deprived areas
  - d. similarly, by ethnicity, cumulative age-standardised death rates are 2 times higher in Pacific communities and 1.5 times higher in Māori compared to Asian and European/Other communities.

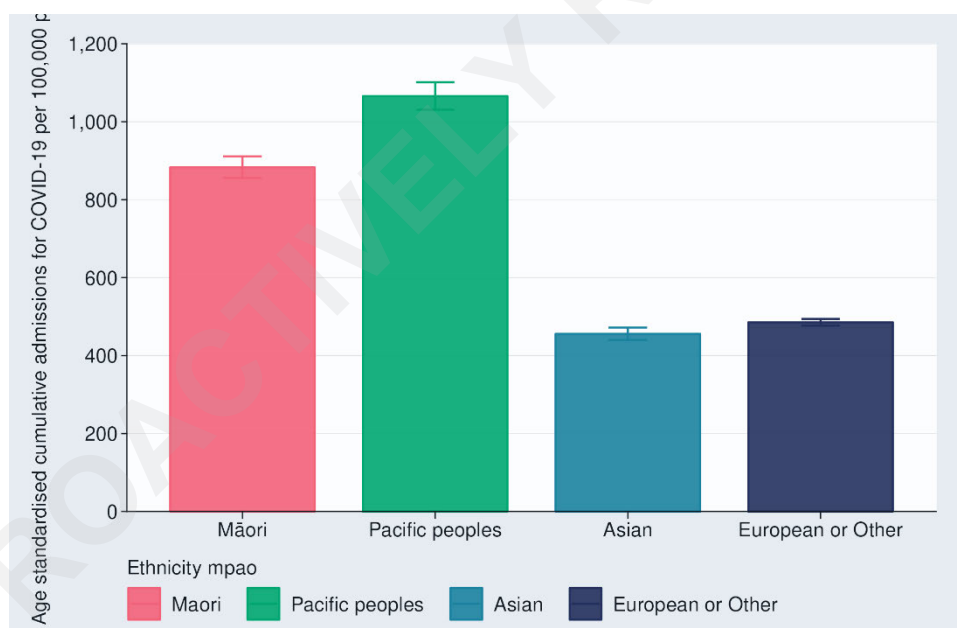


Figure 2. Age standardised cumulative admissions for COVID-19 by ethnicity per 100,000 population.

## Current outbreak control measures

### Pharmaceutical control measures

16. As of 2 February 2024, the Pfizer COVID-19 bivalent vaccine is the primary COVID-19 vaccine in use for booster doses. Pharmac became responsible for the supply of COVID-19 vaccines in July 2023 and announced a transition to the monovalent XBB vaccine in December 2023. Health New Zealand | Te Whatu Ora is planning to roll out the updated

vaccine in the next few months for adults. Vaccination remains a highly effective tool for reducing the risk of hospitalisations and deaths, particularly among those who are most vulnerable.

17. Emerging evidence suggests that vaccination is also an effective measure at reducing the likelihood of Long COVID.
18. Antivirals, which reduce the risk of infections leading to hospitalisations, remain available for those who are at a higher risk of severe illness from COVID-19, (e.g., anyone 65 years and over, or Māori or Pacific people aged 50 or over) or anyone with 3 or more high-risk factors for severe illness from COVID-19. In July 2023, Pharmac confirmed that although Paxlovid was deemed to be the preferred antiviral for community treatment of COVID-19, Molnupiravir remains available for cases who are not able to receive the preferred antiviral.
19. The timely use of antivirals is dependent on the availability and use of rapid antigen tests (RATs), as a positive test is required to enable access to antivirals.

### **Non-pharmaceutical control measures**

20. Since February 2022, RATs have been publicly funded to enable timely access to care and support for those most vulnerable. RATs also facilitate outbreak management within high-risk facilities and settings, such as hospitals, aged-residential care, and prisons.
21. Currently, medical masks and N95 masks are publicly available for those who are most vulnerable. The current guidance recommends that people wear masks when visiting healthcare services and in closed, crowded, and confined spaces. The availability of and guidance for masks continues to enable the reduction of risk of transmission, especially in high-risk settings.
22. Evidence on the importance of ventilation in indoor settings is now well established. Further work on options for enhancing indoor ventilation as a control measure is warranted, particularly in public buildings such as schools, libraries, workplaces and government facilities.
23. Isolation is still recommended, as guidance, for those who test positive for COVID-19, with the recommendation of isolating for 5 days, even if there are only mild symptoms. Isolation remains a useful measure to reduce the spread of COVID-19 particularly to those most at risk, especially during the most infectious period.
24. There is some concern that the ongoing isolation recommendations for children could be negatively impacting school engagement and attendance. With the expected future use of RATs in the community focused on identifying persons requiring antivirals, we expect that the testing of children will continue to reduce. The Office of the Director of Public Health within the Public Health Agency is working with the Ministry of Education to develop guidance for school attendance based on symptoms.
25. COVID-19 remains a notifiable disease under Schedule 1 Part 1 of the Health Act and remains listed as a quarantinable infectious disease under Part 3 of Schedule 1. This means that health practitioners diagnosing COVID-19, or laboratories confirming COVID-19 by testing a clinical specimen, continue to be required to notify the case to a Medical Officer of Health. The requirement does not apply to RAT results generated by self-testing. In practice, reporting of cases continues to be carried out by hospitals and

laboratories with very limited reporting to Medical Officers of Health, should public health advice be required for local outbreak control.

26. The listing of COVID-19 under Part 3 provides for the ongoing use of Health Act Quarantine provisions at the border and internal ports. A Director-General exemption remains in place to provide for passenger vessels to enter New Zealand with COVID-19 cases aboard.
27. The schedule status of COVID-19, under both Parts 1 and 3, is under active review.

## Long COVID

### Population health impact

28. The prevalence of Long COVID in New Zealand is currently unknown, but it is likely disproportionately affecting some groups as indicated by varying rates of acute COVID-19 infection. Estimates on the prevalence of Long COVID can vary based on definition. Evidence suggests that risk of Long COVID is lower for vaccinated individuals and infections with the omicron variant (compared to previous variants), hence the risk of Long COVID has reduced over time. However, there is a persistent risk of developing Long COVID with each reinfection.
29. The latest available data from the Ngā Kawekawe o Mate Korona study (study period prior to December 2021 and the emergence of Omicron) suggests that 22% of those who responded met the World Health Organization's (WHO) classification for Long COVID (i.e. symptoms that persist for longer than 12 weeks). This study cohort comprised of vaccinated and unvaccinated individuals.
30. International estimates indicate approximately 10-20% of those who have COVID-19 may go on to experience a range of mid- and long-term conditions<sup>4</sup>.
31. A recent United Kingdom (UK) study indicates that 3.7% of participants experienced Long COVID symptoms for more than 12 weeks, which meets the current WHO guidelines for Long COVID<sup>5</sup>. The study found that females, those from higher deprivation and those with pre-existing co-morbidities were associated with a higher risk of Long COVID.
32. Similarly, the Long COVID in Scotland study found that symptomatic SARS-CoV-2 infection was associated with a wide range of impaired daily activities and reduced health-related quality of life<sup>6</sup>.

### Economic and social impact

33. Findings from the New Zealand Long COVID registry study also indicates a substantial economic and social impact from those who are suffering from Long COVID. The study found that:
  - a. long COVID impacted employment, with Māori respondents working 7.5 fewer hours a week than before and non-Māori respondents working almost 10 fewer

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<sup>4</sup> University of Auckland. Welcome to the Long Covid Registry Aotearoa New Zealand. *University of Auckland* (n.d.). <https://www.lcregistry.auckland.ac.nz/>

<sup>5</sup> Atchison, C.J., Davies, B., Cooper, E. *et al.* Long-term health impacts of COVID-19 among 242,712 adults in England. *Nat Commun* **14**, 6588 (2023). <https://doi.org/10.1038/s41467-023-41879-2>.

<sup>6</sup> Hastie, C.E., Lowe, D.J., McAuley, A. *et al.* Outcomes among confirmed cases and a matched comparison group in the Long-COVID in Scotland study. *Nat Commun* **13**, 5663 (2022). <https://doi.org/10.1038/s41467-022-33415-5>

hours. About half of respondents have reduced their hours, and two thirds have taken at least some time off

- b. four in ten Māori and a third of non-Māori have used up all of their sick leave, and most of these people have had to take leave without pay
- c. on average, Māori have taken 96 days without pay because of Long COVID and non-Māori have taken 73 days.
- d. about half of the cohort said they had experienced a decline in income since they were infected with COVID-19. One in five said they had started getting a new benefit since getting Long COVID
- e. on average, non-Māori respondents spent \$1,417.63 on healthcare related to Long COVID, and Māori spent \$863.60. A similar trend has also been found in a UK study of primary care use<sup>7</sup>.

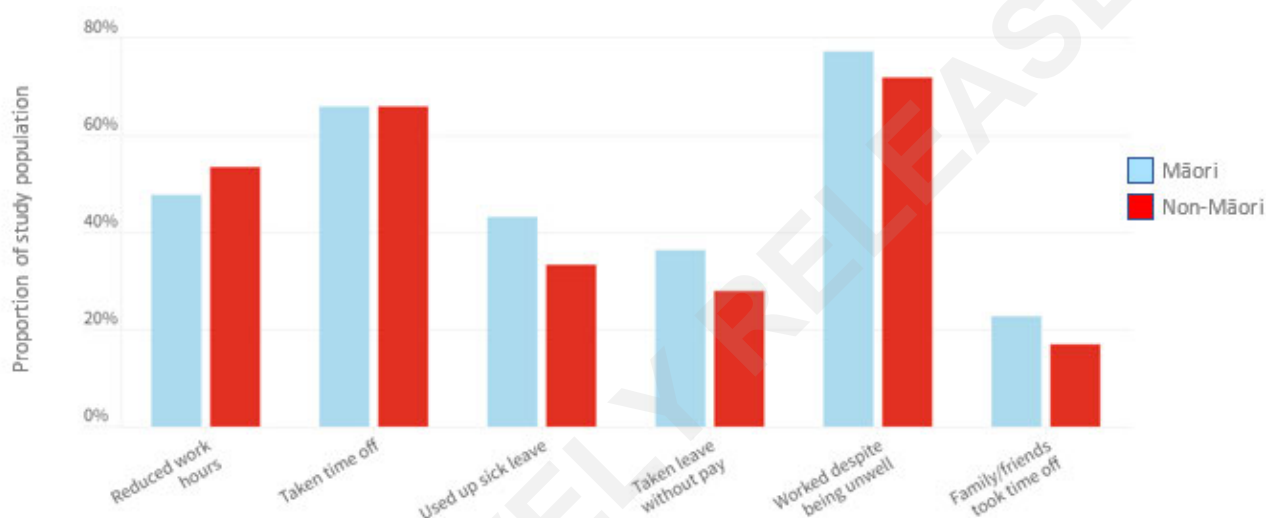


Figure 3. The impact of Long Covid on productivity for Māori and Non-Māori.

34. Similar results have been reported internationally with the economic impacts of Long COVID being estimated as the following:
  - a. a total economic cost of \$3.7 trillion in the US (incl. QALYs, lost earnings, medical spending)<sup>8</sup>
  - b. production loss of €3.4 billion; gross value-added loss €5.7 billion; €1.7 billion healthcare and pension system in Germany<sup>9</sup>.
35. The full impact of Long COVID is still relatively unknown and further international and New Zealand specific research will be required to attain a fuller understanding of the condition.

<sup>7</sup> Tufts, J., Guan, N., Zemedikun, D.T. *et al.* The cost of primary care consultations associated with long COVID in non-hospitalised adults: a retrospective cohort study using UK primary care data. *BMC Prim. Care* **24**, 245 (2023). <https://doi.org/10.1186/s12875-023-02196-1>

<sup>8</sup> Cutler DM. The Costs of Long COVID. *JAMA Health Forum.* (2022). doi:10.1001/jamahealthforum.2022.1809

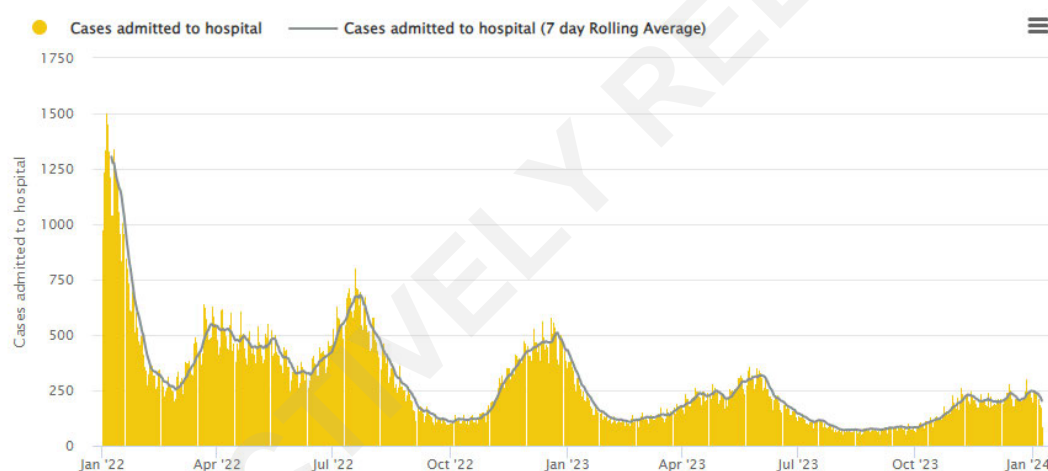
<sup>9</sup> Gandjour, A. Long COVID: Costs for the German economy and health care and pension system. *BMC Health Serv Res* **23**, 641 (2023). <https://doi.org/10.1186/s12913-023-09601-6>



## International comparisons

### Australia

36. Australia has also experienced multiple distinct waves of COVID-19. With current trends showing a similar reduction in waves compared to New Zealand. The dominant variant in Australia is also JN.1.
37. Recent reporting indicated that COVID-19 was still a key contributor to higher death rates, as the nationwide mortality rate was sitting at more than 6% higher than expected<sup>10</sup>. Although this marks a reduction from a 14% higher than expected mortality rate in 2022.
38. Approximately 74% of those who are 65-years and older have received a booster vaccine.
39. Australia continues to offer booster vaccinations and antivirals as measures to reduce the risk of hospitalisations and deaths amongst those most vulnerable.
40. Furthermore, Australia continues to promote and provide funding for the use of RATs (although this is state dependent) and provide guidance on masking and isolation. At the same time Australia has adopted a universal respiratory illness approach recommending that people with respiratory symptoms remain at home until well.



Source: National Notifiable Diseases Surveillance System, as at 09 Jan 2024

Figure 4. COVID-19 cases admitted to hospital, by date of diagnosis, Australia, 1 Jan 2022 to 8 Jan 2024 sourced from: <https://www.health.gov.au/topics/covid-19/reporting>

### United Kingdom

41. Available information indicates the UK also experienced a wave with the introduction of JN.1.
42. The SARS-CoV-2 Immunity and Reinfection Evaluation (SIREN) cohort study of healthcare workers indicates that test positivity rates of COVID-19 among healthcare workers has remained higher than positivity rates of influenza over the past 12 months<sup>11</sup>.

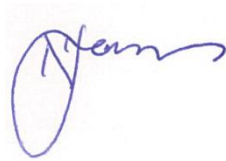
<sup>10</sup> Morris-Grant, B. Australia's mortality rate is more than 6pc higher than expected, new Australian Bureau of Statistics report reveals. *ABC News* (2023). <https://www.abc.net.au/news/2023-12-20/mortality-rates-australia-covid-excess/103241640>

<sup>11</sup> Immunisation and Vaccine Preventable Diseases Division. National Influenza and COVID-19 Report: week 50 report (up to week 49 data). *UK Health Security Agency* (2023).

43. On 7 February, the immunisation advisory group JCVI issued recommendations for the 2024 'spring booster' campaign. JCVI advises that a COVID-19 vaccine should be offered to adults aged 75 years and over, residents in a care home for older adults, and individuals aged 6 months and over who are immunosuppressed. JCVI recommends an interval of about 6 months after the last vaccine dose<sup>12</sup>.
44. The UK has no guidance on masking and isolation. Furthermore, RATs are also no longer available free of charge.

## Transition period

45. Globally, as acknowledged by WHO, the COVID-19 pandemic is in a transition period from a global public health emergency to management within broader disease prevention actions.
46. The current approach to outbreak management in New Zealand matches this change. Current measures are focused on reducing the risk of those most vulnerable by providing vaccinations and access to antivirals.
47. In the context of a health system under ongoing high demand measures remain in place to protect system capacity using support and care within the community through publicly accessible testing, masks and public health advice to enable people to have the resources available to manage their own risk.



Signature

Date: 13/02/2024

Dr Nicholas Jones

**Director of Public Health**

**Public Health Agency, Te Pou Hauora Tūmatanui**

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<sup>12</sup> <https://www.gov.uk/government/publications/covid-19-spring-2024-and-future-vaccination-programmes-jcvi-advice-4-december-2023/jcvi-statement-on-covid-19-vaccination-in-spring-2024-and-considerations-on-future-covid-19-vaccination-4-december-2023>