Memo

Review of COVID-19 Protection Framework settings – 27 July 2022

Date:	1 August 2022
To:	Dr Di Sarfati, Director-General of Health
Copy:	Dr Harriette Carr, Acting Director of Public Health Dr Richard Jaine, Deputy Director of Public Health Dr Robyn Carey, Chief Medical Officer Dr Ian Town, Chief Science Advisor Dr Nick Chamberlain, Director, National Public Health Service Gerardine Clifford-Lidstone, Director, Pacific Health John Whaanga, Deputy Director-General, Māori Health Maree Roberts, Deputy Director-General Strategy, Policy and Legislation
From:	Dr Andrew Old, Deputy Director-General, Public Health Agency
For your:	Decision

Purpose

1. This memo provides you with advice following the 27 July 2022 COVID-19 Protection Framework Assessment Committee's (the Committee) regular review of:
   a. COVID-19 Protection Framework (CPF) colour settings, and
   b. isolation and quarantine periods for cases and household contacts.

Background and context

2. The objective of the CPF is to minimise the impact of, provide protection from, and slow the transmission of COVID-19. It seeks to minimise COVID-19 hospitalisations and deaths through vaccination and other public health measures, such as mask use. **Appendix 1** outlines current measures at the Orange and Red CPF settings.
3. The purpose of the Committee is to advise you on appropriate CPF levels and other related matters. Once approved by you, this advice informs overarching Department of the Prime Minister and Cabinet (DPMC) advice on CPF settings to COVID-19 Ministers.

The last standard CPF Assessment was held six weeks ago

4. The last standard CPF Assessment was on 15 June 2022. It recommended that all parts of the country should remain at Orange; to keep isolation period for cases and household contacts at 7-days; and to maintain mask settings for schools, airports, and aircraft. A rapid review of the Red setting measures, and whether mask requirements at Orange or Red should be strengthened was also recommended (outlined below).

Related work since the last standard CPF Assessment in mid-June

5. Since the last standard CPF Assessment meeting on 15 June 2022, the following related pieces of work have been commenced or completed by Manatū Hauora and others:

   a. *Winter Package* – announced on 14 July 2022, this aims to manage the high case and hospitalisation rates due to COVID-19 and other winter illnesses. It included measures to expand access to therapeutics and vaccination for COVID-19 and flu; expand eligibility for antivirals, including removing prescription requirements for eligible groups; and expand access to free rapid antigen tests (RATs) and masks.

   b. *Rapid review of Red CPF measures and mask requirements* – on 14 July 2022 the Committee considered whether to expand mask requirements across the Red and Orange; and/or to reduce gathering limits at Red. No changes were recommended at that time, but supported work to improve messaging, testing, and ventilation.

   c. *Masks in schools* – delivered with the Ministry of Education from 21 July 2022 this work supports improved mask-wearing in schools and includes a joint advice that all schools review their mask policies and, if appropriate, require four weeks of indoor mask wearing where students gather; greater sharing of district infection trend information to support decision-making; and advice on improving ventilation.

6. This standard CPF review occurred two weeks later than usual. This delay was intended to enable the Committee to better gauge the early effectiveness of the Winter Package and other work noted above and provide a better basis for the Committee to consider whether to maintain the current Orange CPF setting or whether a shift was required.

Current outbreak status

7. Further detail on the current outbreak and modelling is provided at **Appendix 2**.

8. In ***the two weeks since 17 July 2022, case rates have decreased by twelve percent***. For the week ending 24 July 2022, the current hospitalisation rate is 15.2 per 100,000, up seven percent on the prior week.

9. Current modelling suggests that ***COVID-19 cases may have peaked at approximately 11,000 cases in mid-July 2022***. However, recent trends may be affected by school holidays and a reduction of mixing that is affecting testing behaviour and transmission.

10. ***Wastewater detections across New Zealand have also tapered slightly*** and are still close to the levels during the Omicron peak in March 2022. This indicates that the number of new cases is reasonably stable.

11. Case rates across all age groups also plateaued over the past week. However, case rates are highest for those who are aged 65 or older. Compared to the Omicron peak in

March 2022, case rates are higher for those who are aged 90+ and close for all other age groups 50+, while case rates for children and young people are significantly lower.

12. ***Overall mortality rates are increasing and are at the highest level for this year.*** They are likely to continue increasing in the coming weeks due to the trend of mortality rate rises trending behind case rates rises.

Committee recommendations and rationale

Overall recommendations

13. Based on the available evidence at this time, and in line with approach agreed by Cabinet in April 2022 [CAB-22-MIN-0114][1], the CPF Committee recommended that:

    a. all parts of the country should ***remain at the Orange CPF setting***,

    b. ***no changes to case isolation and household contact quarantine requirements,***

    c. to signal what a step down in case isolation and household contact quarantine requirements would look like, and

    d. there be no requirement imposed at this time for people to routinely test if they have been in contact with someone who has tested positive for COVID-19 or if they are visiting a vulnerable person.

14. These recommendations reflect the Committee's overall consideration of:

    a. the current high levels of COVID-19 infection in the community and burden on primary and hospital care systems,

    b. uncertainty around when the peak will be over, noting a temporary tapering off, and the risk of a post-school holiday increase,

    c. the uncertain shape of infections post-peak (lack of confidence in a smooth or rapid descent from the peak), and

    d. the high risk of public confusion and how it might fit within the current winter wellness and outbreak narrative and behaviours.

Review of CPF colour settings

15. There was consensus within Committee that the whole country should remain at the Orange CPF setting at this time. The Committee viewed a shift to Red was not warranted at this time, noting the Winter Package measures and impacts are not yet fully understood or evidenced to help inform decision making.

16. The Committee noted that cases do appear to be declining under current settings and measures. Therefore, we must now consider both what is needed in terms of our current public health response, but also how that fits with our glide path towards a future post-winter mostly comprised of only 'baseline' measures with fewer 'reserve' measures.

[1] Cabinet indicated that the health factors used to inform CPF colour decision-making include: the degree of protection from severe health outcomes from COVID-19 (vaccination coverage, immunity levels and availability of treatments); and the capacity of the health system to meet demand due to COVID-19.

More time is needed before we will see the full impact of the Winter Package

17. Initial indications suggest that the measures within the Winter Package are having a positive impact supporting existing measures at Orange, in particular:

    a. *Greater access to COVID-19 antivirals* – since the widening of criteria for COVID-19 antivirals on 18 July 2022 as part of the Winter Package, the volume dispensed in the week ending 24 July 2022 increased by 65.5 percent on to the week prior (48.7 percent). Nine percent went to Māori and three percent to Pacific People, an increase on the previous week.

    b. *Further increases in take-up of antivirals are expected* – with the phased removal of prescription requirements from 28 July 2022 and more pharmacies distributing (over 400). As antivirals access continues to expand, this in time, may help relieve some pressure on GPs and hospitalisations or hospital stays[2].

    c. *Making second COVID-19 booster shots available* - the rollout of a second COVID-19 booster, including to high-risk groups and those aged 50 years and over should reduce infection rates and hospitalisations and severe health outcomes for vulnerable people. However, it will take some weeks to see the full impact of this as uptake by eligible groups increases.

18. At the same time, other key Winter Package measures being implemented will further supplement existing measures at Orange, including:

    a. *Increasing access to, and supply of, free face masks* – to support the effectiveness of existing mask mandates, with messages encouraging use in other high-risk contexts[3]. Since 15 July 2022, 1.8 million P2/N95s (a 41 percent increase in the last week) and 25 million medical masks have been dispatched for community use.

    b. *Improving access to RATs* – expanding access will make it easier for people to undertake timely testing and reduce infection as people affected isolate. Since 15 July 2022, 6.5 million RATs have been dispatched across New Zealand.

19. The Committee noted these encouraging signs but that any impact on case rates or hospitalisations would be clearer when it next considered the CPF colour setting in mid-late August 2022 and nearer the end of winter.

Degree of protection from severe health outcomes from COVID-19

20. The Committee considered that currently there is a reasonably good level of protection from severe health outcomes due to COVID-19, because:

    a. the people most at risk of exposure to COVID-19 and/or severe outcomes are eligible for a second booster, and roll-out is progressing well to target groups,

    b. there has been a significant increase in the roll-out of antivirals, with further increases expected, as detailed above,

[2] However, current Manatū Hauora evidence shows that most hospitalised individuals are not diagnosed until after admission to hospital which requires further exploration.

[3] Other mask options are available for people who cannot use P2/N95 masks, and a Mask Exemption Pass is available.

c. other Winter Package measure continue to be implemented such as the distribution of free P2/N95 masks to vulnerable and at-risk communities,

d. the methodology used to develop risk scores for patients in Care in the Community has recently been updated – and 'Uptake by Reach' will further align the way by which people at high risk of hospitalisation are contacted, and

e. Care in the Community is working with the National Immunisation Program and the COVID Population Immunisation Register team to develop and send out communications promoting therapeutics to people who are immunocompromised.

Capacity of the health system to meet demand due to COVID-19

21. There is continued pressure on the health system due to COVID-19 and other influenza-like illnesses (ILIs). Hospital occupancy of cases has increased seven percent and are expected to continue rising in the coming weeks. It was noted that:

a. since the start of the year approximately 60 percent of hospital admissions for patients testing positive for COVID-19 have been due to COVID-19 symptoms,

b. COVID-19 admission rates are at their highest level since the start of the year for those who are aged 90+, 80-89 and 70-79 years old (noting that admission rates for these age groups increase every winter), and

c. Pacific Peoples had the highest cumulative incidence rate of hospitalisation with COVID-19 (age-standardised) being 1.4 times higher than Māori ethnicity, 3.5 times higher than European or Other ethnicity and 3.7 times higher than Asian Peoples.

22. 9(2)(g)(i) [redacted]

23. 9(2)(g)(i) [redacted]

24. On balance, the Committee's assessment was that while there is high pressure on the health system, shifting to Red would have relatively little impact reducing pressure. The Committee also agreed there was a need to delay any decision to shift to Red (or other measures) so that infection and hospital admission rates can be assessed now school holidays are over and the Winter Package continues to be implemented.

A shift to the Red CPF setting will not be sufficient to control infection and hospitalisation rates

25. The Committee noted that if Government wanted to significantly reduce transmission, reserve measures of greater severity than those available under Red (capacity limits and

[4] One suggested action for MBIE was to emphasise workplace health and safety measures through its business sector guidelines and communications.

more mask mandates) would be needed (e.g. movement restrictions and/or lockdowns). At this stage, the Committee did not consider the threshold for such measures had been reached, particularly given the range of Winter Package measures being implemented.

26. As expressed in the Committee's rapid review advice on 14 July 2022, the limited array of available measures under the Red CPF setting mean that moving to Red would be of limited use for controlling COVID-19 infection and hospitalisation rates. The Red setting would not be effective enough at reducing cases, hospitalisation and/or fatalities to a point where such measures would be proportionate, or sufficiently justified from a public health point of view. This was also why the Committee previously recommended not changing the current Orange and Red measures.

Shifting to Red could cause confusion and a move back to Orange would be expected

27. In addition, the Committee expressed doubt as to how the behavioural impacts of a move to a Red CPF setting would play out and precisely how a move back to Orange (potentially in a month or so once the winter pressure had subsided) would be managed. Moving between the measures could foster confusion among the public and reduce the messaging impact of a move to Red (or equivalent reserve measures) in the future.

28. Based on the above analysis, Error! Reference source not found. below provides a summary of the Committee's assessment for each threshold [CAB-22-MIN-0114].

Table 1: Summary of thresholds to trigger movement between CPF colour settings

Threshold	Assessment
Are current immunity levels and availability of treatments such that the current COVID-19 restrictions are proportionate to the current level of health risk?	**Yes** – threshold not yet met
Is primary care and hospital system capacity sufficient to meet demand due to COVID-19, given other competing demands?	**Yes** – on balance, threshold not yet met
Is the likely impact of the proposal on at-risk populations proportionate?	**Yes** – on balance, not yet met

Review of COVID-19 isolation and quarantine periods

29. Isolation and quarantine periods for cases and household contacts must be kept under regular review to ensure these legal requirements are proportionate and balanced against wider societal and system pressures [CAB-22-MIN-0086][5].

30. On 15 June 2022, the Committee considered advice from the National Investigation and Tracing Centre (NITC) and COVID-19 Modelling Aotearoa (CMA). The advice received suggested that (in theory) a reduction in isolation measures might be possible without significantly increasing transmissions or hospitalisations[6].

[5] These were reviewed in April, May, and June 2022, and no changes were recommended.
[6] This applied to two scenarios: (i) reducing case isolation and contact quarantine to 5-days and (ii) reducing case isolation to 5-days and removing contact quarantine with a requirement that contacts test daily for 5 days.

31. However, the modelling of the likely impact of reducing isolation times at the time (assessed as negligible initially) assumed 100 percent compliance with increased public health precautions until Day 10[7]. The Committee did not consider the assumptions underpinning the modelling to be realistic and recommended keeping the issue under review as the modelling was refined further.

32. The 15 June 2022 CPF assessment also occurred before a further significant increase in COVID-19 cases and hospitalisations, which naturally shifted the short-term focus from options for decreasing self-isolation times, to options for limiting the further pressure on the health system from more cases and hospitalisations. In this context, in July 2022, NITC developed a proposal for enhanced public health measures for cases and contacts in the 3-day period following isolation/quarantine. However, ultimately this was not progressed as it was considered that the COVID-19 Public Health Response (Protection Framework) Order 2021 was the appropriate tool to communicate any requirements.

33. Going forward, we intend to coordinate all advice on isolation requirements through the public health risk assessment (eg CPF review) process. This should help avoid duplication or confusion of advice in relation to these requirements (and guidance) while ensuring requirements remain proportionate to the public health risk and well connected.

Committee recommendation and rationale

34. **Appendix 4** provides a summary of current settings, and the options considered by the Committee, specifically:

    a. Option 1: Status quo isolation for cases (7 days); remove quarantine requirement for household contacts, replace with a daily RAT requirement for 7 days, and

    b. Option 2: Reduce the legal isolation requirement for COVID-19 cases to 5 days and introduce a requirement to test negative on a RAT to release (or a maximum of 7 days isolation, whichever comes first); household contacts as in Option 1.

35. Based on separate advice and options provided by NITC and wider Committee discussion, on balance it is recommended to retain the **status quo isolation and quarantine settings for now.**

36. However, the Committee also recommended a need to signal that once a descent from the BA.5 peak(s) has been confirmed (noting the current wave is driven by new variants, not by the season). s 9(2)(g)(i) [redacted] This change would be followed by further easing of requirements, indicatively outlined in paragraphs 39-41.

37. The Committee viewed that any reduction in isolation settings for cases and households at this time would outweigh the potential benefits. This reflected that:

    a. There remains a risk of household contacts being infectious prior to being symptomatic or returning a positive RAT, leading to a risk of onward transmission

[7] Public health precautions were wearing masks outside the home; avoiding high risk settings (as a visitor) eg aged care facilities, prisons, and hospitals (unless requiring care); and continuing to work from home wherever possible.

during this period if they do not quarantine[8]. This reflects the knowledge that viral loads typically peak early in the course of infection (days 3-4) and a proportion of household contacts will still test positive following a household index case[9].

b. There has been insufficient time to consult with Māori and Pacific stakeholders prior to changing isolation times. It was noted previous feedback included concerns that:

   i. They would prefer to retain the status quo measures over winter – as managing cases and household contacts together in a bubble is consistent with their whānau-centred approach (so different isolation or quarantine periods for cases and household contacts were not supported).

   ii. the impact of any change to isolation and quarantine requirements would need to be modelled (eg in terms of impact on hospitalisations or deaths) prior to a decision to change the settings, or it could be considered a breach of Te Tiriti.

c. Any change that might increase cases is not advisable now, because although it might lead to an increase in the available workforce:

   i. while the rate of new cases has slowed in recent weeks, it is not yet sufficiently clear that trend will continue,

   ii. overseas experience suggests that countries are better positioned to deal with new variants if they have had time to recover from the previous wave, and

   iii. there was widespread recognition that frontline healthcare workers are currently under a lot of pressure, and that it would be inappropriate to make a change now that could potentially add to that pressure.

d. Any workforce (and wider) benefits might be somewhat limited as a parent/guardian would still need stay home to care for dependants who had COVID-19 (a reasonable proportion of current workplace absenteeism is understood to be due to influenza, and a reasonable proportion of people remain unable to return to work on day 8)[10],

e. There was also a desire to keep public communications as simple and clear as possible, particularly in relation to the current winter and outbreak narrative.

38. The Committee also noted that, when it is the right time to make the change to isolation requirements for household contacts (noting from the above that now is not yet the right time), the benefits will likely include:

a. enabling people to return to work and study, and

b. time spent outside the house would reduce the risk of infection for household contacts (particularly in crowded houses) although it may increase risk for others with whom they encountered at work or school[11].

[8] A person may test negative in the morning, but then become infectious during the day. It is also possible a person may test negative but be infectious, (ie there may be a delay until they get a positive RAT, which would be inconsequential if they were quarantining but may lead to onward transmission if they are in the community during the day).
[9] Based on early data in New Zealand's BA.2 wave, 78 percent of household contacts tested positive, but this is unlikely to be representative of the wider population, as large family groups in houses were over-represented during.
[10] Canterbury healthcare worker data showed around 40 percent were not well enough to return to work after 7 days.
[11] No modelling has been done on this question to date, and it is unclear if it would be possible. Conceptually, this is more likely to impact on groups who are less likely to be able to work from home. However, this group may be less likely to

Signalling direction of travel

s 9(2)(g)(i)

Other matters related to self-isolation and quarantine requirements

Not considering a shift to test to release for cases at the current time

42. The Committee agreed that ***a 'test to release' option for cases was not appropriate at this time***. For example, it could mean that some people would be required to be in isolation for longer than they are currently. This was considered not viable without wider consultation and increased support for those likely affected first. It was acknowledged that a test to release approach for cases would be useful for cases that remain asymptomatic, but this could not be implemented in isolation.

Appropriateness of further guidance regarding testing

comply with quarantine settings (due to the impact it may have on employment and income), potentially making a testing option less risky than requiring quarantine.

43. The Committee was asked to consider whether it was appropriate that people test:

    a. in the case of non-household contacts, if they have been in contact with someone who has tested positive for COVID-19[12], or

    b. if they are visiting a vulnerable person.

44. In either situation, the Committee is of the view that it would not be appropriate to either recommend or require testing.

45. The rationale for this is that both options may identify asymptomatic cases - an approach not recommended in the Testing Plan. Although this may have benefits in terms of reducing transmission, any asymptomatic testing (outside of household contacts) could have several unintended consequences, such as:

    a. Additional people being (temporarily) taken out of the available workforce. Although from a science perspective having fewer potentially infectious people at work could reduce workforce pressures, these people may be late in the course of their infection. This option would also need to be combined with some form of test to release, to not inadvertently detain people who are no longer infectious.

    b. A negative RAT early in a person's infectious period does not indicate that they do not have COVID-19 (and could simply be due to poor technique when the sample is taken such that a RAT will only test positive when the viral load is very high). Recommending testing for a person who is visiting a vulnerable person may risk exposing the vulnerable person to infectious people who are falsely reassured that they do not have COVID-19 and so they may forgo precautions such as mask wearing and physical distancing.

    c. People can be at risk of severe illness from COVID-19 from a wide range of factors. Recommending anyone who is visiting, or spending extended periods of time in contact with, a vulnerable person would significantly increase the amount of asymptomatic testing.

46. Emphasising the principle of recommending that people get tested and stay home if they are symptomatic remains, and particularly if they are planning to be in contact with vulnerable members of the community.

Equity

47. COVID-19 continues to worsen pre-existing health inequities for many groups, particularly those underserved by the existing system, despite efforts to equitably allocate resources. This is often due to overlapping social, clinical, or occupational risk determinants. Any reduction in CPF settings or in its overall effectiveness as an outbreak management tool will have a disproportionate effect on those more at-risk in the population. This includes Māori and Pacific People, disabled, and older people.

48. As shown above, older people already face an increasing threat during winter across all four regions, especially for Māori and Pacific Peoples aged 65+. This group is more likely to be hospitalised. It is expected that the virus will take longer to move through this

[12] Note that this requirement was previously in force and was removed in February 2022.

population due to this group having fewer social interactions. This may lead to a higher hospitalisation burden over a longer period during winter.

49. Pasifika continue to be disproportionately affected by COVID-19. Many face other challenges that compound the impact of COVID-19 i.e. housing-related. Moreover, Pacific Peoples undergo long-standing inequitable health outcomes and service use, including considerably less COVID-19 booster and paediatric vaccinations. This is shown in data that Pasifika with COVID-19 have a mortality rate 4 times greater than European or Other ethnicities. This is further compounded by the severity of the 2022 flu season.

50. From 18 July 2022, criteria changes have allowed greater Pasifika and Māori access to antiviral medication to prevent the more severe health impacts of COVID-19 and hospitalisation. Following this change there was 65.5 percent increase in the courses of antiviral medication dispensed over the week ending 24 July 2022.

51. Those who suffer high deprivation have a COVID-19 mortality rate 3.1 times higher than those with low deprivation[13]. Further, booster uptake is lower in high deprivation areas[14]. This emphasises the impact of the pandemic on equitable health outcomes for economically disadvantaged New Zealanders.

52. Disabled people and those with underlying medical conditions are also more likely to be negatively impacted by COVID-19. These people are more likely to be hospitalised or require medical intervention/support if they test positive with COVID-19. Equally, those who need assistance with everyday living, are affected when their carers or support workers contract COVID-19 and are unable to provide essential support and this issue has been reflected in feedback from the disability community.

Te Tiriti o Waitangi Analysis

53. Demonstrating a commitment to and embedding the Te Tiriti and achieving Māori health equity remain a key COVID-19 health response priority. This is heightened by the threat that COVID-19 poses to Māori and is particularly critical following the release of the Waitangi Tribunal's *Haumaru: the COVID-19 Priority Report*.

54. That report found breaches of Tiriti principles of active protection, equity, options, tino rangatiratanga, and partnership which put Māori at disproportionate risks of infection and wider COVID-19 impacts. As well as reaffirming those principals as relevant to the COVID-19 response, it noted that the Crown must further support and resource Māori providers, whānau, hapū, iwi and hapori Māori.

55. Therefore, the targeted drivers and actions contained in Manatū Hauora's Māori Protection Plan released in December 2021 remain relevant. These include actions to improve Māori vaccination rates, building community resilience to protecting Māori health and wellbeing, and positioning communities to recover.

56. While the equity gap has narrowed significantly for first and second vaccination rates for Māori compared to non-Māori and non-Pacific since December 2021[15], emerging data

[13] Age-standardized and controlled for vaccination status but is affected by lower case reporting in highly deprived areas.
[14] This is related to those who are eligible to take up boosters by deprivation status.
[15] The second dose equity gap has decreased from 14.2 percent as of 26 December 2021 to 8.2 percent as of 1 April 2022 - *May 2022 COVID-19 Māori Health Protection Plan Monitoring Report*.

continues to highlight the disproportionate impact on Māori. Persistent inequities remain in infection[16] and hospitalisation rates, boosters, and child immunisation rates.

57. Māori mortality rates of those with COVID-19 are 2.8 times higher than the European or Other ethnicity group. Data collected in May 2022 shows that Māori are currently overrepresented in delays for receiving planned care, making up 17 percent of all patients waiting more than four months. Work is needed across the system to protect whānau, hapū, iwi and hapori Māori from the impacts of COVID-19.

58. Given that this memo recommends no changes to existing CPF or isolation settings, the Māori Protection Plan's two key drivers remain critical. Related response initiatives should also have a positive impact for Māori, including the Winter Package measures, such as free medical and N95 masks to schools, kura, and vulnerable communities, access to antivirals for those that are eligible[17], and COVID-19 and flu vaccinations. However the Committee may need to further consider measures to assist Māori if infection rates and hospitalisations do not improve in the interim.

59. The first key driver in the Māori Protection Plan's to boost broader immunisation uptake will remain integral to protecting Māori health and wellbeing, and includes:

    a. work underway to improve vaccination access and uptake for Māori across the various immunisation programmes, and

    b. a focus on supporting vaccination services that meet Māori where they are.

60. The second key driver, focused on building the resilience of whānau, hapū, iwi and hapori Māori, will better position communities to recover from the impact of the pandemic. This includes through Care in the Community delivering wrap-around and culturally appropriate services for whānau and a wider community-based model of care being further developed to support services delivery through winter and beyond.

61. Te Whatu Ora was unable to complete engagement with Māori on the potential changes to isolation and quarantine requirements. However, given that the Committee does not recommend changes now but to signal a potential step-down in requirements over time, it will enable more comprehensive engagement. This is important, as previous engagement showed strong opposition to any requirement reduction due to the potential impact on whānau. This engagement also requires Māori-specific impact modelling to inform their input, which was not available then.

62. Monitoring the COVID-19 impact on Māori is essential to ensure the ongoing response of the health system gives effect to the principles of Te Tiriti. Manatū Hauora continues to monitor the impact of COVID-19 on Māori, and this will be formally reported on in the next COVID-19 Māori Health Protection Plan Monitoring Report in late 2022.

[16] Since the Delta outbreak in August 2021, Māori have been 75 percent more likely to contract COVID-19 (201.6 cases per 1,000 Māori compared to 116.4 cases per 1,000 non-Māori non-Pacific). After accounting for age, Māori were 2.4 times more likely to contract COVID-19 (330.5 cases per 1,000 Māori compared to 136.3 cases per 1,000 non-Māori non-Pacific) - *May 2022 COVID-19 Māori Health Protection Plan Monitoring Report*.

[17] In the week ending 24 July 2022, nine percent of antiviral courses went to Māori while they accounted for 10 percent of reported COVID-19 cases.

s 9(2)(h)

Next Steps

66. Pending your approval, this memo will be provided to the Department of the Prime Minister and Cabinet to be included in its overarching advice to COVID-19 Ministers in the week beginning 1 August 2022 and to the Minister for COVID-19 Response's office.

Recommendations

It is recommended that you:

1.	**Note** that on 27 July 2022, the COVID-19 Protection Framework Assessment Committee (the Committee) met to consider: i. COVID-19 Protection Framework (CPF) colour settings, and ii. isolation and quarantine periods for cases and household contacts.	**Noted**
2.	**Note** that the Committee considered evidence that showed: i. Current modelling suggests that COVID-19 cases may have peaked at approximately 11,000 cases in mid-July 2022 ii. Case rates across all age groups have plateaued over the past week but are highest for those who are aged 65 years or older iii. The current hospitalisation rate is 15.2 per 100,000, up seven percent for the week ending 24 July 2022 iv. Wastewater quantification levels have tapered slightly and are still close to the levels during the Omicron peak in March 2022 v. Overall mortality rates have increased and are at the highest level for 2022, which is expected to continue in the coming weeks due to the trend of mortality rate rises trending behind case rates rises.	**Noted**
3.	**Note** that at this time, based on the available evidence and analysis the Committee has recommended: i. the ***entire country should remain at the Orange CPF setting*** ii. ***no changes should be made to isolation and quarantine settings*** for cases or household contacts iii. to signal a clear transition plan with proposed timings for removing household quarantine requirements and refining isolation advice iv. that it would not be appropriate to recommend or require people test: a. if they have been in contact with someone who has tested positive for COVID-19, or b. if they are visiting a vulnerable person.	**Noted**
4.	**Agree** that at this time, based on the available evidence and analysis above: i. the entire country should remain at the Orange CPF setting	**Yes**

	ii. no changes should yet be made to isolation and quarantine settings for cases or household contacts	**Yes**
	iii. to signal a clear transition plan with proposed timings be established for removing household quarantine requirements and refining isolation advice	**Yes**
	iv. that it would not be appropriate to recommend or require people test: **Yes** a. if they have been in contact with someone who has tested positive for COVID-19, or b. if they are visiting a vulnerable person.	
5.	**Note** that the next CPF Assessment Committee is scheduled for mid-to-late August 2022 but could occur earlier (or later) if required.	**Noted**
6.	**Note** that culturally-appropriate engagement with Māori and Pacific Peoples (particularly on isolation requirements) cannot be rushed and requires appropriate modelling which has previously been a key barrier to engagement for the recent reviews of isolation settings.	**Noted**
7.	**Agree** to forward this memo to the Department of the Prime Minister and Cabinet to inform advice to COVID-19 Ministers due the week of 1 August 2022 and the Minister for COVID-19 Response's office for its awareness.	**Yes**

Signature_____ Date: 2 August 2022

Dr Andrew Old
Deputy Director-General, Public Health Agency
Manatū Hauora

Signature_____ Date: 2 August 2022

Dr Diana Sarfati
Director-General of Health
Manatū Hauora

Appendix 1: Current CPF settings at Red and Orange

	Orange	Red
Definition	At Orange, there is community transmission of COVID-19, with increasing **or significant** risks to vulnerable communities, and pressure on the health system **from COVID-19**.	At Red, **we need to take action** to protect our vulnerable communities and health system **from COVID-19**.
Gathering / capacity limits	• *Gathering limits* - no gathering limits indoors or outdoors.	• *Capacity limits* - based on 1-metre physical distancing rule in public facilities, retail businesses or services other than transport station retail business or services, and tertiary education providers. • *Fixed capacity limits* - of up to 200 people (or based on 1m distancing, whichever is the lesser) - for indoor hospitality venues, gyms, gatherings, and events. • *Hospitality* – all customers/clients to be seated and separated 1 metre from other tables, and as far as possible physically distanced by 1 metre or more when not seated. • *No outdoor gathering limits.*
Face masks	• *Face masks* - required for any person over 12 years of age: - on public transport, school transport, arrival, and departure points for public transport service - parts of premises that are open to the public at: retail business or service, public facilities (excluding swimming pools), pharmacies, veterinary services or animal health and welfare services, court or tribunal, specified social service, NZ Post premises, premises operated by a central government agency, a local authority, or the New Zealand Police - at the premises of a health service, but only if the person is not a patient or worker of the health service. • Medical-grade face masks required for workers (only when working with the public) at: - hospitality businesses - close-proximity businesses - election workers at a voting place - workers at an event - border workers.	• *Face masks* – required as at Orange, with the addition of: - visitors to ECE centres - school settings (Year 4 +) - tertiary settings (in public areas and/or during formal teaching/ learning activities) - people on premises of close-proximity businesses - delivery workers where they are in close proximity to a client or customer - attendees at permitted gatherings (except where defined indoor space used exclusively for the gathering) - attendees at events - people on hospitality premises - when on public transport or school transport service if they are aged 8 years or over or a student in year 4 or above. • Medical-grade face masks required as at Orange, with the addition of: - workers at gyms - staff members working to provide, or support the provision of, education services to students at a registered school.
Exceptions	• The same set of face mask exceptions (eg where exempt, eating, outdoors, emergencies, exercising etc) apply at Red and Orange.	• The same face mask exceptions (eg where exempt, eating, outdoors, emergencies, exercising etc) apply at Red and Orange.

Appendix 2: Outbreak analysis and modelling

Current outbreak status

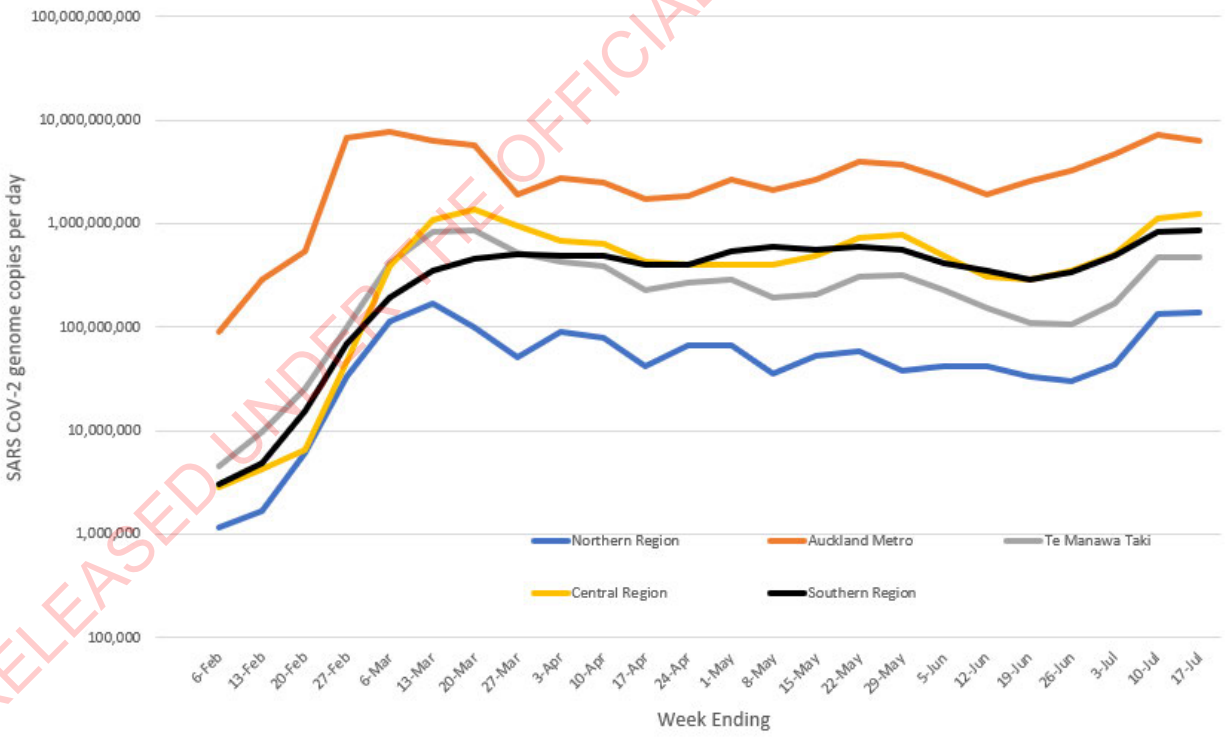
Community cases have increased for the past four weeks but tapered slightly in the last two weeks

1. For the week ending 24 July 2022, the national weekly case rate was 12.0 per 1,000 population. This is a 12.4 percent decrease from the previous week, which was 13.7 per 1,000 people. This suggests that we may be reaching the peak of the current wave, as modelling suggests but more time is needed to confirm this.
2. Comparison of community cases to routine healthcare worker testing continues to indicate a substantial under reporting of community cases. This suggests that over half of cases (52 percent) are likely to be not reported (24 per 1,000 vs 12.4 per 1,000).
3. In the past week, only one district (Taranaki) experienced an increase in COVID-19 case rates, mirroring the tapering of case rates in the general population.

Wastewater levels have also tapered slightly and are close to the Omicron peak in March 2022

4. Wastewater detections of the virus in all regions have plateaued after increasing steadily in the past weeks. However as shown in **Figure 1** below, in all regions, the wastewater levels are like the levels seen in March 2022.

Figure 1 - Regional wastewater trends in SARS-CoV-2 genome quantification weeks 6 February – 17 July 2022



Case rates across all age groups plateaued over the past week with rates for 65+ increasing

5. In the week ending 17 July 2022, case rates for all ethnicities aged 65+ increased. Case rates increased eight percent for Asian, four percent for European or Other, three percent for Māori and 40 percent for Pacific People.

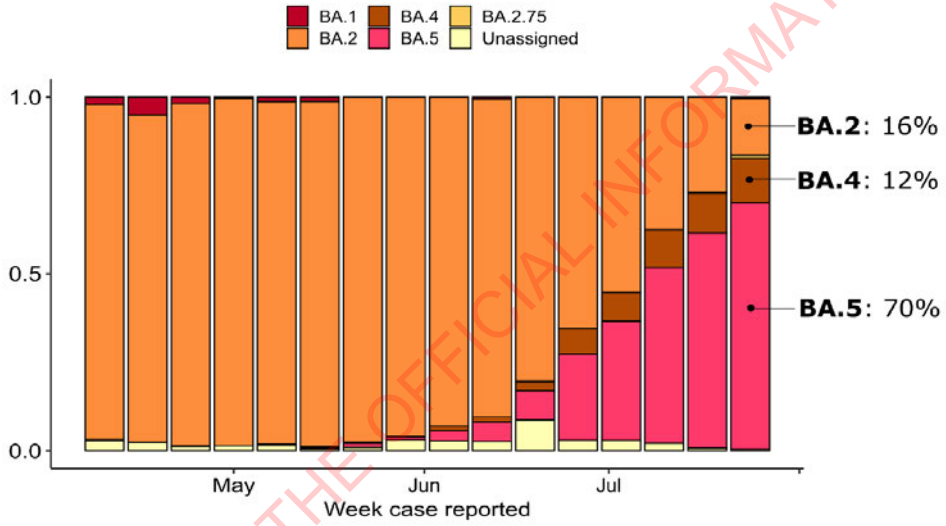
6. In the same period, regional trends of cases across all ethnicities aged 65+ mostly increased, except in the Northern region with decreased by 3.4 percent. In Te Manawa Taki cases increased by 13.9 percent, in the Central region by 4.5 percent, and in Te Waipounamu by 7.8 percent.

These trends continue to be driven by the BA.5 Omicron sub-variant

7. As shown in **Figure 2** below, BA.5 accounts for 70 percent of sequenced community cases in the past week. It also shows BA.5's increasing frequency in community samples over the past few weeks. As expected, in New Zealand is seeing a (relative) growth advantage of BA.5 over other variants. BA.4 is holding steady at 12 percent.

8. Modelling continues to suggest BA.5 will account for 90 percent of all community cases in New Zealand by early August. Its dominance may be due to it having a greater rate of reinfecting individuals who have already had earlier COVID-19 variants.

Figure 2- Frequency of Variants of Concern in New Zealand community cases



BA.2.75 is being closely monitored but its impact is not yet well understood

9. While the new subvariant BA.2.75 appears to be gaining a global foothold there have been a very small number of reported cases in New Zealand (fewer than 20). Most of these are linked to the border but two have no clear epidemiological link to the border.

10. It is probable that small numbers of BA.2.75 are transmitting within the New Zealand community. However, it remains highly uncertain what impact, if any, this will have on case numbers, reinfection and spread relative to BA.5.

Hospitalisations are likely to continue increasing in the coming weeks

11. Despite case rates decreasing over the week ending 24 July 2022, over the same week the national daily average hospital occupancy for inpatients with COVID-19 increased to 15.1 per 100,000 population.

12. This was an increase of 6.1 percent from the week prior. This may be attributed to the significantly increased proportion of Pacific People aged 65+ with COVID-19 and of people aged 65+ more broadly, over the same period.

13. Hospital occupancy average rates increased across all regions in the past week, except for the Northern Region. The Northern region (14.3 per 100,000) decreased by 5.7 percent, Te Manawa Taki (14.4 per 100,000) increased by 23 percent, Central region (15.3 per 100,000) stayed the same in the past week and Te Waipounamu (16.9 per 100,000) increased by 23 percent.

14. Tertiary hospital admission positivity has been plateaued with a 7-day rolling average of 4.6 percent (589/ 12,758) for the week ending 24 July. Preliminary analysis indicates a large majority of cases who are admitted to hospital, test positive and are confirmed as a case on the day of their hospitalisation.

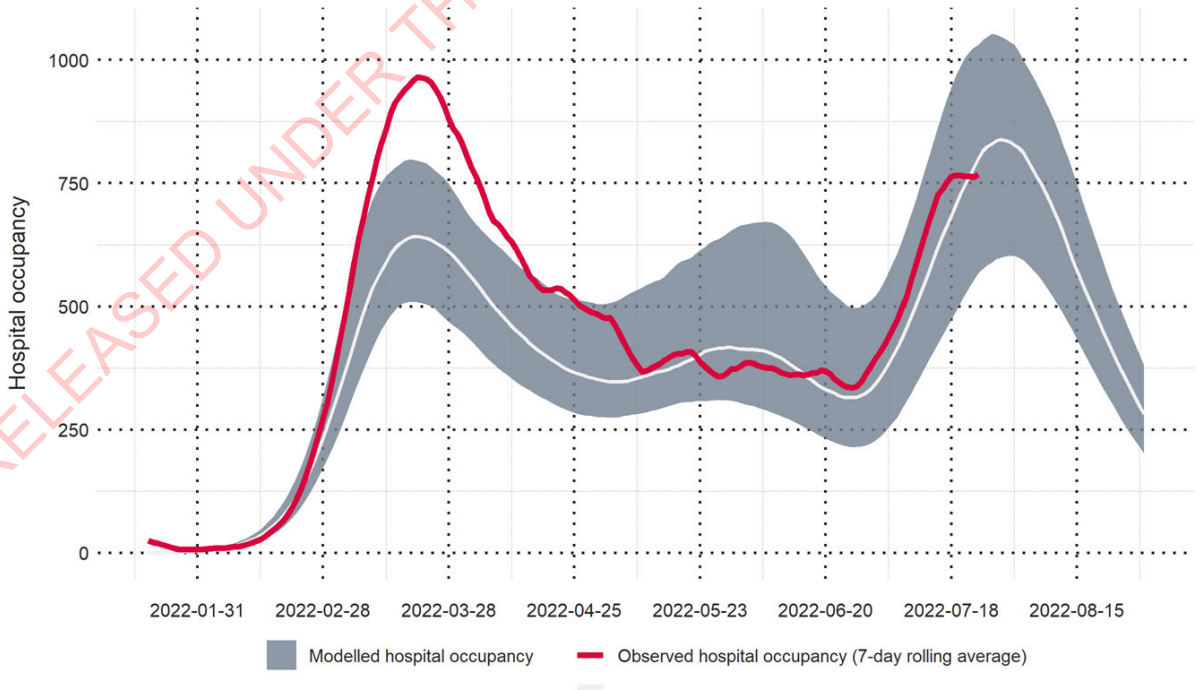
15. This means that a large proportion of cases admitted to hospital are not carrying out their own testing and getting access to therapeutics before their symptoms become severe. Initiatives are underway to increase access to testing and therapeutics are more widely being dispensed, which will help to reduce the numbers of cases being admitted to hospital.

16. While the capacity of the health service is currently impacted by winter illness, rates of COVID-19 infection are primarily being driven by the development of new variants which are mostly independent of seasonality and their emergence is difficult to predict.

17. Hospital occupancy average rates increased across all regions in the past week. Northern region: increased by 31 percent, Te Manawa Taki increased by 11 percent, Central region increased by 38 percent, and Te Waipounamu increased by 31 percent.

18. Updated Covid Modelling Aotearoa (CMA) scenarios in **Figure 3** below indicates that hospital bed occupancy will peak this week at approximately 800 beds occupied a day (12,000 daily cases). However, it is too soon to confirm whether hospitalisations have already peaked, as indicated by the grey areas of the predication.

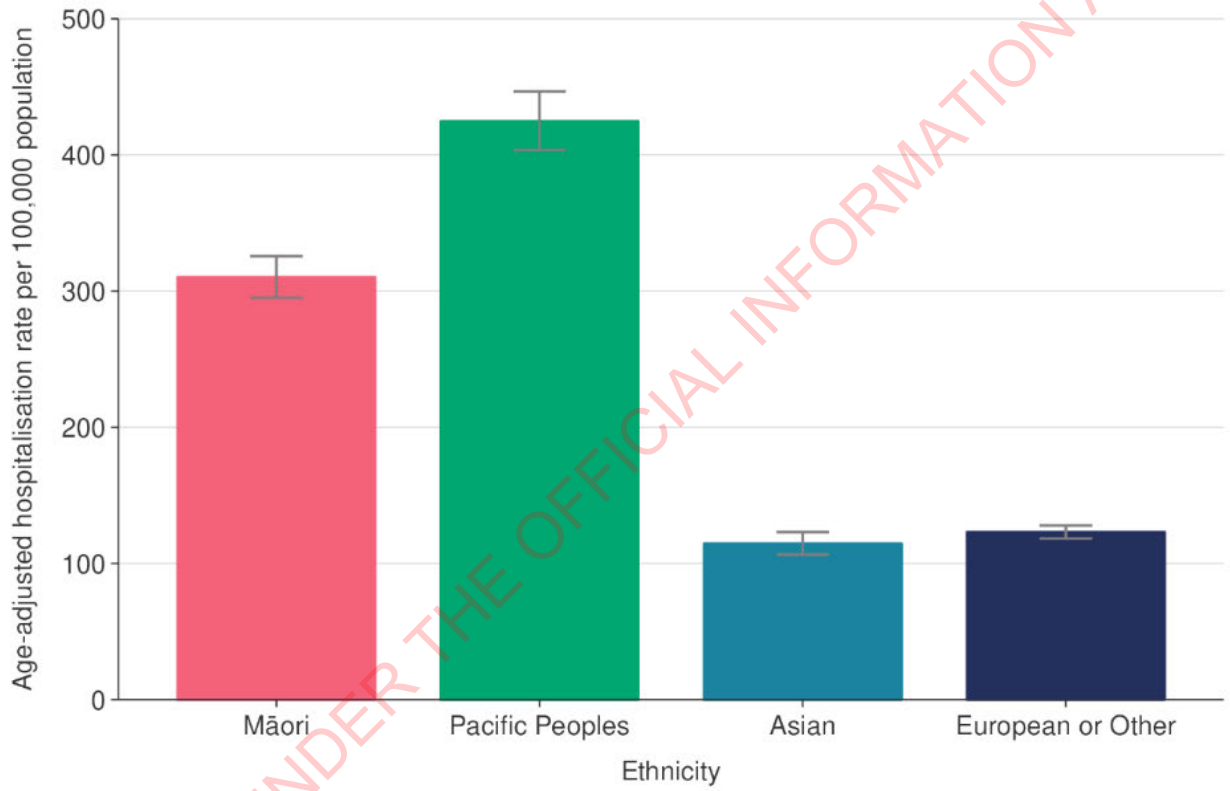
Figure 3 – CMA BA.5 scenarios for hospital occupancy



19. Analysis undertaken to assess hospitalisation risk from COVID-19 has found that Pacific Peoples have the highest rate of hospitalisation with COVID-19 (424.7 per 100,000) followed by Māori (310.2 per 100,000) and then Asian and European or Other at the same level, between 114 and 124 per 100,000. The analysis was age-standardised to compare ethnic groups with different age structures.

20. Similarly, total COVID-19 attributed mortality rates by ethnicity, Pacific Peoples have the highest rate (25.8 per 100,000) followed by Māori (17.8 per 100,000) and then Asian and European or Other at the same level, between five and eight per 100,000. All the age-specific rates are higher for Māori and Pacific compared with European and Other.

Figure 4 - Age-standardised cumulative incidence (and 95% confidence intervals) of hospitalisation with COVID-19 by ethnicity, March 2020 to 24 July 2022

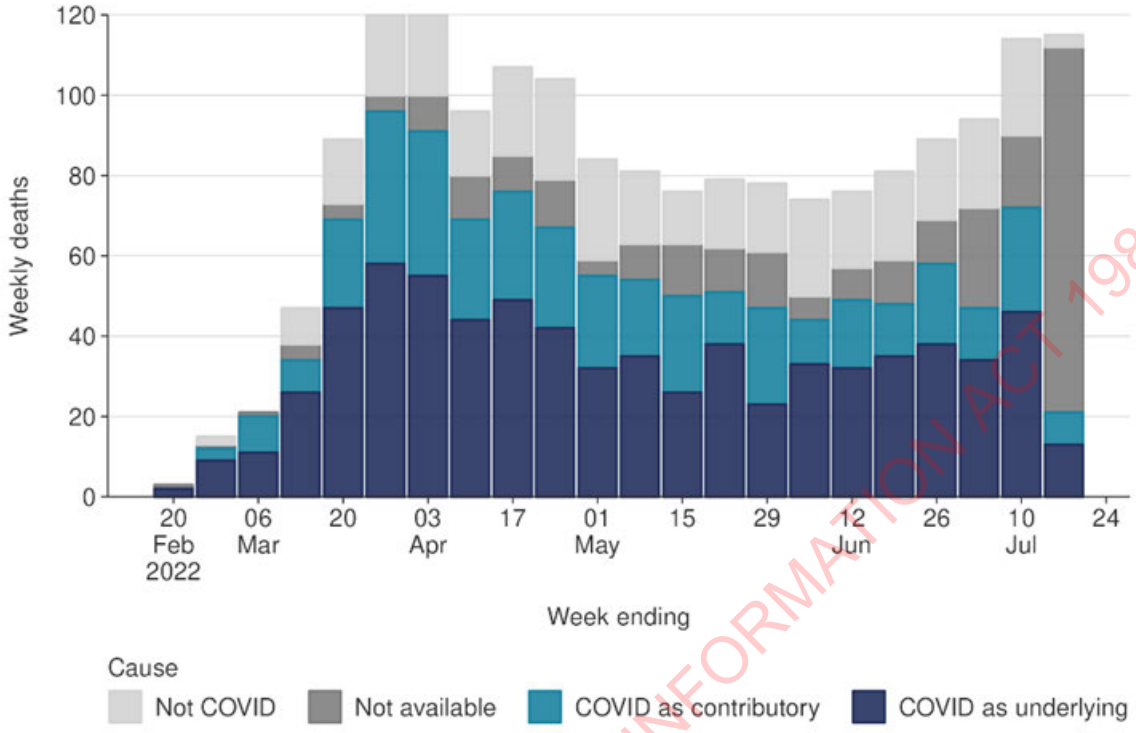


Mortality rates are at their highest level this year and are likely to continue increasing

21. Mortality rates are likely to continue increasing in the coming weeks due to the trend of mortality rate rises trending behind case rates rises. As of 20 July 2022, 1,868 people have died within 28 days of being reported as a case and/or with COVID-19 being attributed to the cause of death.

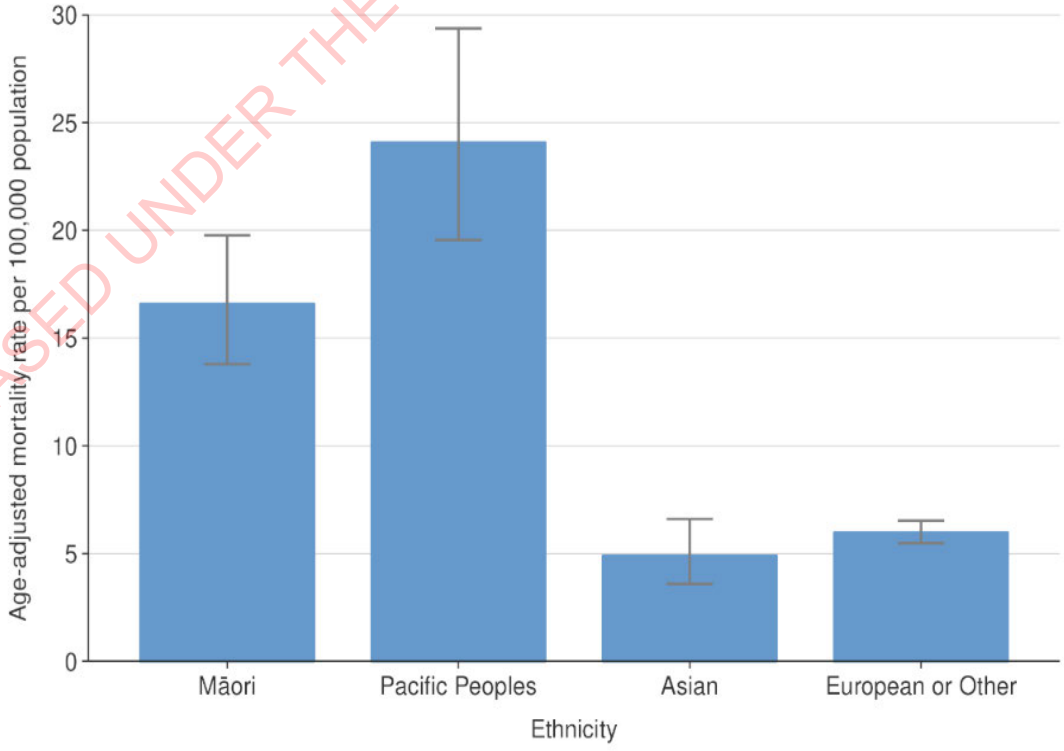
22. A review of some of these cases indicated COVID-19 was the underlying cause of 861 (50 percent) of deaths and a contributing factor to a further 465 deaths (27 percent).

Figure 5 – Weekly death attributable to COVID-19 or not



23. Total deaths rates are lower in Māori (16.5 per 100,000) than European/Other (26.7 per 100,000), despite having higher rates in all age groups. However, Māori and Pacific mortality rates, after age standardising, were 2.8 and 4.0 times greater, respectively, than European/Other.

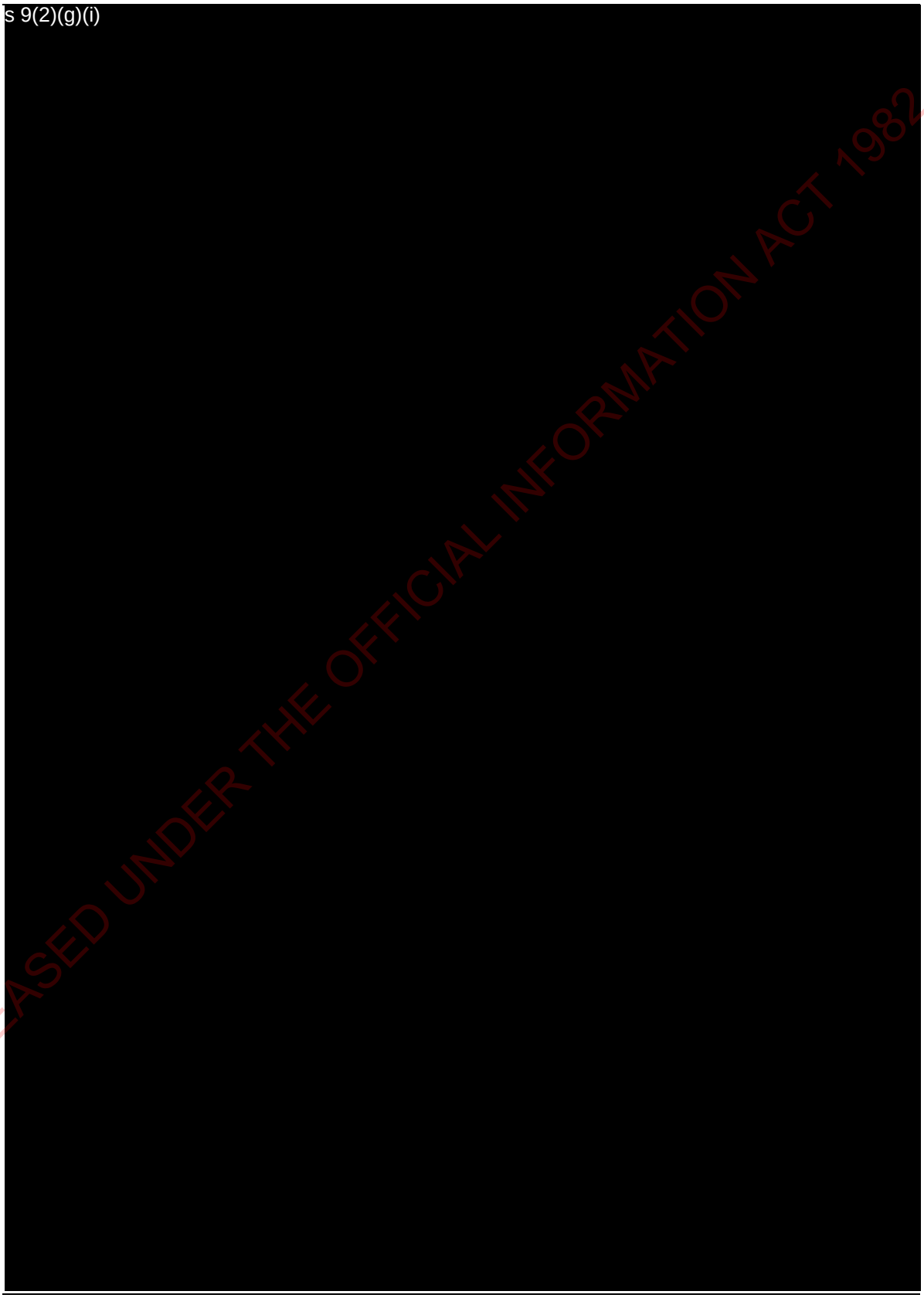
Figure 6 – Age-adjusted mortality rate per 100,000 population by ethnicity



Appendix 3: Regional Resilience Leads Feedback

1. There were varying views from the four regions whether a shift to Red was needed based on their capacity to respond to COVID-19 and non-COVID-19 demand for health services.

s 9(2)(g)(i)



Appendix 4: Isolation and quarantine settings and options

Current settings

1. The purpose of Isolation and quarantine requirements for cases and contacts is to reduce ongoing transmission, by preventing infectious (or potentially infectious) people from having contact with others within the community.

2. People who test positive for COVID-19 are required to isolate for 7 days and their household contacts are required to quarantine for the same period[18]. Households are managed as a bubble, counted from the first case's day 0, with the whole household released on the case's day 8. If a household contact tests positive during that period, they must isolate for a further 7 days from the day they test positive.

3. Household contacts who are critical workers in healthcare and other sectors have established pathways to allow them to continue to work throughout their quarantine period (if they are well) if service provision is at risk. Cases who are critical healthcare workers are also able to return to work if well and if service provision is at risk. Other sectors can apply for a temporary exemption for critical workers who are cases.

Options considered by the Committee

4. The Committee considered two options for changes to isolation and quarantine settings:

Option	COVID-19 cases	COVID-19 household contacts	Modelling[19]
1	• Maintain the legal isolation requirement for COVID-19 cases at 7-days, with no test-to-release requirement.	• Remove the legal requirement for household contacts to quarantine • Replace quarantine with a recommendation to employ strong public health precautions for 7 days • Recommend that household contacts test daily with a RAT for 7 days (from when the first case in the household receives a positive result).	• 15% - 41% of cases potentially infectious at release • Average time in isolation (days) – 7 days
2	• Decrease to the legal isolation requirement for COVID-19 cases to 5 days, and • introduce a requirement for one RAT to release (or a maximum of 7 days isolation, whichever comes first).	• Remove the legal requirement for household contacts to quarantine • Replace quarantine with a recommendation to employ strong public health precautions for 7 days • Recommend that household contacts test daily with a RAT for 5 days (from when the first case in the household receives a positive result).	• 21% - 50% of cases potentially infectious at release • Average time in isolation (days) – 5.7 – 6.4 days

[18] COVID-19 Public Health response (Isolation and Quarantine) Order 2020 https://www.legislation.govt.nz/regulation/public/2020/0241/latest/LMS401667.html

[19] CMA modelling for the two options, impact approximately one month after any change.

Appendix 5: Current settings for asymptomatic testing for elevated risk settings or situations

1. Current settings in relation to asymptomatic testing are as follows:

General public

2. Test if they are symptomatic. Household contacts and recent arrivals from overseas are currently the only groups of people who are recommended or required to test asymptomatically.

Aged Residential Care (ARC)

3. Residents are initially tested via a RAT and may receive a confirmatory PCR by clinical discretion. Staff and visitors are advised to stay home if unwell, and staff who are asymptomatic contacts are recommended to do a daily RAT prior to starting their shift.

Hospitals including emergency departments

4. *Patients* - testing is recommended by clinical discretion as per local hospital guidelines.

5. *Staff* – PCR for symptomatic healthcare workers, and daily RAT to work as part of the CCES/test to return.

Recent review of Testing Plan guidance for each setting

6. A group of subject matter experts across the Public Health Agency and Te Whatu Ora recently reviewed the Testing Plan guidance for each setting and recommended no changes to test-to-enter for high-risk settings.

7. Public health advice is that, with the expected high number of cases over the next few weeks, people should be advised to take all reasonable steps to protect their vulnerable friends and whānau (eg someone with cancer, frail elderly, or a newborn baby) by staying home if sick, wearing a mask indoors, coughing into their elbow, physical distancing, and taking a COVID-19 test if they have any COVID-19 symptoms.

Memo

Public Health Risk Assessment of COVID-19 mandated response measures, 3 October 2022

Date:	12 October 2022
To:	Dr Diana Sarfati, Director-General of Health
From:	Dr Nicholas Jones, Director of Public Health, Public Health Agency Dr Andrew Old, Deputy Director-General, Public Health Agency
For your:	Decision

Purpose of report

1. This memo provides you advice from the Director of Public Health following the 03 October 2022 Public Health Risk Assessment (PHRA). The PHRA considered whether the remaining mandated (and other) COVID-19 response measures are proportionate to the risk posed by the current outbreak.
2. This paper seeks your agreement to the recommendations arising from that meeting. The agreed recommendations will inform a paper on the future management of COVID-19 that the Minister for COVID-19 Response will take to Cabinet on 17 October 2022.

High level summary of key considerations

Previous PHRA recommendations

3. Advice provided to you following the 17 August 2022 PHRA recommended the removal of several mandatory measures based on public health advice that they were no longer proportionate and/or justified. Subsequently, requirements to wear masks in settings other than healthcare, and quarantine requirements for household contacts were removed, along with testing requirements for international arrivals.
4. Their removal was considered an appropriate response given New Zealand's COVID-19 outbreak at that time was waning, with reducing case numbers, hospitalisations, and deaths. The proportionality of many mandated response measures significantly reduced due to the changing context of the outbreak at that time.
5. It was agreed the remaining measures – the retention of case isolation, face masks in healthcare settings and electronic provision of contact details – would be kept under review and assessed again at the next PHRA. This stepped approach was considered a judicious way to manage the transition from mandatory measures. It also provided the opportunity to assess the impacts of these changes across key indicators to determine if it was appropriate to remove the mandates underpinning two of the four key pillars – masking, separation, vaccination and isolation – to our COVID-19 response.

Outcome of 3 October 2022 PHRA

6. Given the current domestic and international context, the PHRA recommendations represent a continuation of current measures, with some minor modifications. This assessment builds on evidence and recommendations from previous assessments (including the 17 August PHRA, and the CPF Assessments that preceded it).

7. Key to our ongoing precautionary approach is the need to protect vulnerable populations and reduce inequities.[1] COVID-19 morbidity and mortality data continue to highlight the disproportionate risks to Māori, Pacific, socio-economically disadvantaged and disabled communities.

8. Concerns were expressed that lifting mandates for case isolation and masking in healthcare facilities, could result in disproportionate impact on these groups. Requiring cases to isolate remains our most effective measure to reduce transmission of COVID-19, retaining case isolation will materially reduce transmission. Its retention also allows for the management of the response while removing or reducing other measures.

9. s 9(2)(g)(i) [redacted]

10. Five days isolation with test to release is not recommended. Whilst less time in isolation is undeniably beneficial, this needs to be carefully balanced against the multi-faceted public messaging associated with introducing a negative test to release requirement, the potential increase in cases infectious at release, expectations around compliance and the recording of test to release results.

11. Further changes to border requirements: the removal of the requirement to provide contact details for contact tracing purposes[2]; and modifications to testing guidance for new arrivals were also considered.

    a. As contact tracing is not currently a feature of the COVID-19 response, the requirement to collect information for contact tracing purposes is no longer required. If the response changes, for example in response to a new variant, then contact tracing information may be sought again. The current requirement for collection via NZTD can be removed.

    b. The request to test on arrival currently applies for all passengers. The recommendation is this is modified to apply specifically to passengers who either arrive with, or develop symptoms, during their stay.

Outbreak status

Domestically, at the time of the PHRA, the current outbreak appeared to have stabilised

[1] Ministry of Health. 2022. COVID-19 Mortality in Aotearoa New Zealand: Inequities in Risk. Retrieved from https://www.health.govt.nz/publication/covid-19-mortality-aotearoa-new-zealand-inequities-risk

[2] Currently via the New Zealand Traveller Declaration (NZTD).

12. The PHRA considered data to the week ending 25 September 2022, which showed all measures used to monitor the COVID-19 epidemic as stable or reducing.

13. However, as of the week ending 7 October 2022, case counts have started to increase slightly in the context of likely lower reporting/testing and overall lower case ascertainment (although other key measures, including hospitalisations and deaths, remain stable):

    a. there is currently an average of 1,598 new reported[1]cases per day nationally (7-day rolling average to 9 October 2022); this was a 12 percent increase on the previous week

    b. the 7-day rolling average of reported case rates was 32.2 per 100,000 population for the week ending 9 October; this was 11 percent higher than the previous week, which was 28.6 per 100,000

    c. hospital occupancy trends from COVID-19 have stabilised in the week ending 09 October and levels of viral particles in wastewater have been relatively constant in the recent weeks to 02 October. The trend varied somewhat regionally, with some regions experiencing increases and some decreases.

14. Note that a Ministry of Health COVID-19 hospitalisation data review has identified a coding error which has resulted in potentially a significant number of COVID hospitalisations not being captured in the official count. The coding team are working through the issue. However, the technical issue appears to affect hospitalisations uniformly over time and appears not to impact trends in the data. Therefore, it is unlikely that the data error has impacted current recommendations, as the error is in miscounts distributed across the entire outbreak period from 2020 to present day and does not indicate a substantial change in the current risk profile. This error did not impact the daily/weekly reporting of number in hospital.

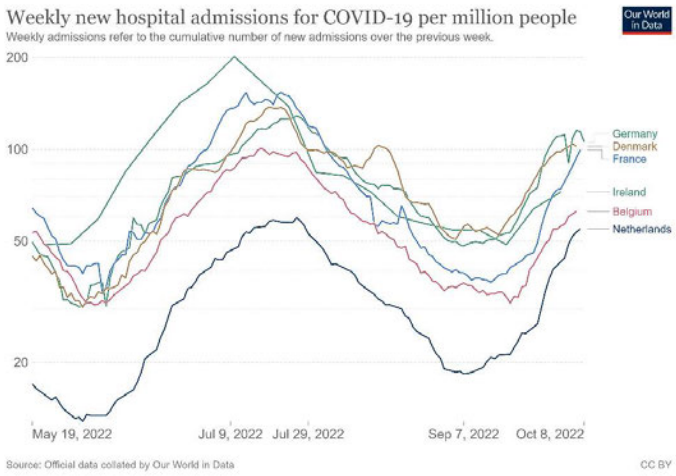
Following new data and intelligence over the past week, it is likely that New Zealand will experience a further wave by the end of 2022

15. Modelling developed for and discussed at the PHRA, showed a slow rise through the end of the year. However, this modelling was based on immune waning alone and not on the arrival of new variants.

16. It is likely that New Zealand will experience an increase in cases by the end of 2022, either due to waning, new subvariants, and/or behaviour change. However, data is very preliminary and as such the impact on cases, hospitalisations and deaths is unknown.

17. As indicated by Figure 1 below, hospitalisations are rising in many counties in Europe.

Figure 1: Weekly new hospital admissions for COVID-19 per million people (log scale)



18. The data from the UK suggests that, at this time, this is due primarily to seasonality factors (eg, returns to indoor settings, school/office) and immune waning (eg, due to time since previous Omicron wave and boosting).[3] Subvariants are not currently thought to be the primary driver of the increase in hospitalisations and cases in Europe, due to the prevalence of these new variants being too low at this time.

19. However, the collection of new subvariants is expected to be associated with an increase in cases in the future. The impact of the new variants on hospitalisations is unknown. It would be expected that booster vaccinations against the new subvariants would still maintain substantial protection against severe disease and hospitalisation, but no vaccine effectiveness data is available that is specific to these new subvariants.

There are a number of subvariants circulating domestically and internationally that appear to have a growth advantage over our predominant variant - BA.5

20. The data on subvariants is very uncertain and preliminary. However, bodies such as UKHSA report with low confidence that new subvariants have a growth advantage and may cause an increase in cases. Subvariant BA.2.75 appears to show initial signs of increasing in prevalence across New Zealand in both WGS and wastewater, and we have detected our first case of BQ1.1 in the last few days. It is unknown what impact the new variants will have on cases, hospitalisations and deaths.

21. Several subvariants may have a growth advantage over the current predominant variant, BA.5. However, generally a growth advantage of approximately 10 percent or more per day is thought to be required to be associated with a variant-driven wave of cases. Data are very preliminary, but it is thought based on European data that the growth advantage of at least one of the new subvariants (BQ.1.1) is between 10-15 percent. If this is correct, we would expect to see a rapid increase in the case numbers, sufficient to cause a wave.

    a. BQ1.1 is a sub lineage of BA.5 with additional mutations that likely make it more immune evasive.

    b. Similarly, BA.2.75.2 is a sub lineage of BA.2 with immune evasion potential. It is likely that the immune evasion properties are responsible for the growth advantage.

[3] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1109820/Technical-Briefing-46.pdf

However, it is unknown if there will be an increase in hospitalisations or cases due to BQ.1.1 or any of the new variants, as this has not been observed in international data to date; only that the growth rate relative to other variants is elevated.

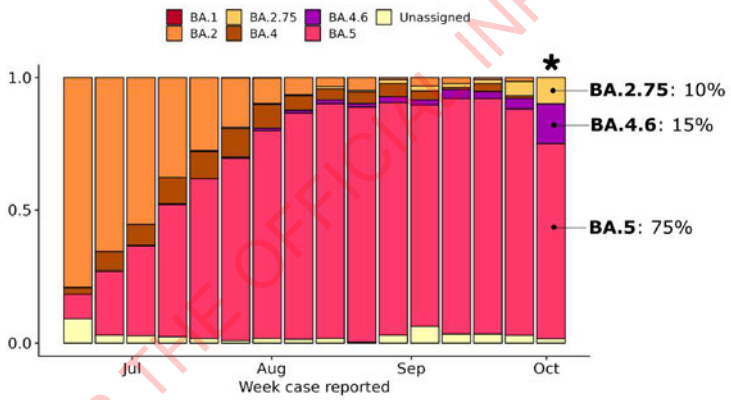
Subvariants such as BA.4.6 and BA.2.75 increased in the community in the most recent data from New Zealand samples that have undergone whole genome sequencing (WGS)

22. The most recent data from samples that have undergone WGS has found:
    a. BA.5. the dominant variant, accounts for ~75 percent of community individual WGS cases, in the week 17-30 September with BA.4.6 comprising an additional 15 percent.
    b. Therefore BA.4 and 5 account for about ~90 percent of cases.
    c. BA.2.75 has increased and accounts for ~10 percent.
23. Of note since the PHRA, the Institute of Environmental Science and Research (ESR) have now reported the first detection of BQ1.1 in New Zealand.

New Zealand wastewater testing indicates an increasing proportion of samples are not BA.5

24. As indicated by Figure 2 below, there has been a recent increase in the proportion of wastewater samples that are (sub)variants other than BA.5.

Figure 2: Frequency of variants/lineages in the past 16 weeks[4]



25. In summary:
    a. Wastewater testing (WWT) estimates of the prevalence of BA.4/5 agrees with that of individual WGS; BA.4/5 accounts for 90 percent of viral material in the WW (as of 02 October), which gives more confidence that the combined underlying prevalence of BA.5 and BA.4 in the community is likely truly ~90 percent, and is decreasing.
    b. WWT is unable to distinguish between BA.4 and BA.5, and therefore cannot identify increases in prevalence of BA.4.6 specifically.
    c. WWT also agrees that there is an increase in BA.2.75; BA.2.75, accounting for ~7 percent of viral material in the WW, which aligns with the 10 percent from individual

[4] Frequencies >1% are annotated in the last week. Note, data for the most recent fortnight is preliminary as it will be updated as cases reported within these weeks are converted into genomes. Data from the week marked with an asterisk represents all sequenced cases, before this reporting week border-related cases are excluded. Cases classified as Omicron (Unassigned) are typically partial genomes where it is difficult to be definitive regarding variant/lineage. Source: COVID-19 Genomics Insights (CGI) Report #24, 6 October 2022. https://www.esr.cri.nz/our-expertise/covid-19-response/covid19-insights/genomics-insights/

WGS. This indicates that BA.2.75 may be increasing in prevalence in the community. Monitoring of BA.2.75 includes the monitoring of sublineage BA.2.75.2.

d. BQ.1 has now been detected in New Zealand and would be expected to have a growth advantage based on overseas experience.

26. WWT for variants is not influenced by the changes in the individual WGS testing patterns.

Recommendations

27. It is recommended that you agree to the following:

Air travel to New Zealand	1. **Remove** the requirement for air travellers to New Zealand to provide information for COVID-19 contact tracing purposes prior to departure.	Yes
	2. **Note** that the Customs (Arriving Passenger and Crew Declarations) Amendment Rules 2022 will come into force on 5 November 2022 requiring air travellers to provide digital contact and travel history information that can be shared with Health agencies for contact tracing purposes as necessary under the Health Act 1956.	Noted
Post-arrival testing	3. **Modify** the post-arrival testing guidance for all travellers to test if symptomatic only.	Yes
Isolation and quarantine	4. **Retain** the current requirement for all cases to isolate for 7 days	Yes
Household contacts	5. **Continue** with guidance for all household contacts to test daily for five days, and if symptomatic beyond those five days.	Yes
Face masks	6. **Retain** the current face mask requirements for visitors[1] on the premises of health services, including aged and disability-related residential care and disability support services.	Yes
Further work to improve equity outcomes	7. **Agree** that the variants of concern preparedness work programme include measures to improve equity outcomes for Māori, Pacific, and disabled communities.	Yes
Next PHRA	8. **Agree** any remaining requirements are reviewed at the next PHRA.	Yes

	9. **Agree** that a further PHRA will be held in the last week of November to again review remaining mandatory measures.	Yes
Next steps	10. **Agree** to forward this memo to the Department of the Prime Minister and Cabinet (DPMC) to contribute to the paper for Cabinet on 17 October 2022.	Yes
	11. **Note** that once you approve this memo, we will provide it to Te Whatu Ora, Te Aka Whai Ora, and Whaikaha and suggest they provide any feedback to DPMC to reflect in the Cabinet paper noted above.	Noted
	12. **Note** that the advice contained in this memo may inform work to change COVID-19 policy settings, such as the amendment or revocation of COVID-19 orders.	Noted

Detailed discussion of the recommendations

Case isolation and requirements for household contacts

Current requirement	Mandatory 7-day self-isolation of COVID-19 cases
Director Public Health recommendation	**Retain** the current requirement for all cases to isolate for 7 days.
Public health rationale	*Requirements for case isolation and associated supports remain critical* Case isolation remains a cornerstone of our response to limiting transmission COVID-19 within the community. Isolation of cases can break the chain of transmission by preventing infectious people from having contact with, and infecting others within the community. Without required case isolation and associated supports, it is highly likely that adherence to guidance to isolate would be lower, leading to more infectious cases in the community, leading to increased community cases. *Removing case isolation and associated supports is likely to increase health inequities* It is likely that the increase in community cases would affect some communities and population groups more than others. Specifically: • There is an acknowledged differential exposure to COVID-19 risk related to socioeconomic status.[5] People in lower socioeconomic groups are more likely to work in jobs with greater risk of exposure, to live in larger

[5] Beale S, Braithwaite I, Navaratnam AM Virus Watch Collaborative, *et al*
Deprivation and exposure to public activities during the COVID-19 pandemic in England and Wales *J Epidemiol Community Health* 2022;**76:**319-326.

	and typically more crowded houses, and to have underlying risk factors. If there are more infectious people circulating in a community with more baseline contacts, this increases the likelihood of onward transmission. • People who are socioeconomically deprived are more likely to face challenges in being able to isolate compared to people with greater access to socioeconomic benefits. This includes differing access to sick leave, income loss, and potential pressure from employers to return to work. Earlier return to work comes at the cost of increasing transmission, which is likely a more significant effect on health outcomes and ability to work due to illness. • As a result, people who experience higher levels of socioeconomic deprivation may be more likely to not test, not report results, or break isolation, potentially causing further cases and further inequities. • These inequities would likely be exacerbated, rather than mitigated, if requirements for self-isolation and associated supports (such as Care in the Community and the Leave Support Scheme) – which are vital for enabling people in these communities to practically be able to isolate - were removed. Feedback from sector stakeholders echoed many of the concerns above: • Compromising equity aims – the Leave Support Scheme (LSS) is closely tied to isolation mandates. Loss of the LSS would present risks for vulnerable populations and workforces with fewer protections. • Coercion to return to work particularly for the most vulnerable - Strong concern was expressed that if the isolation mandate was removed, employees may be pressured to return to work even if not fully recovered. Equity concerns were central to this feedback, particularly what this change might mean for Māori and Pacific communities. • Increased transmission because of relaxed requirements - Removing the isolation mandate will almost certainly result in increased transmission, due in part to the message it sends regarding the importance of isolation and because of the inability of people to isolate due to the two factors above. Again, equity concerns were raised as any increase in cases will impact the priority populations most. *COVID-19 continues to pose a substantial public health risk, which is different from other respiratory and communicable diseases* • Disease burden: To date, 2,055 deaths have been attributed to COVID-19 (9 October) out of approximately 1.7 million reported cases. Most of this burden has fallen on the elderly. The disease burden also falls disproportionately on Māori and Pacific communities, and those with prior conditions including disabilities, and those in low socio-economic conditions, among other groups. With respect to hospitalisation, the overall population rate is 0.6 per 100,000 (18 September). Older people have substantially higher hospitalisation rates and, within each age group, Māori and Pacific communities also have higher hospitalisation rates.

- Post-infection sequelae: This includes long COVID, and increased risk factors for a range of other conditions (for example, cardiovascular disease,[6] neurologic and psychiatric disorders,[7] changes in brain structure,[8] and diabetes).[9] The data on long COVID is developing but there are still many unknowns and we need to continue to monitor the risk.
- The best way to reduce overall burden and protect vulnerable communities is via a combination of targeted measures (eg, additional precautions in Aged Residential Care facilities) and reduction of overall transmission in the community. Isolation and quarantine measures are among the most effective public health tools at reducing overall levels of community transmission.

A legal requirement to self-isolate is a cornerstone of the public health response

The best practice approach to managing infectious notifiable diseases transmitted through the droplet or airborne route is to require isolation of cases during their period of infectivity. This is the most effective tool for controlling disease transmission. The high transmissibility of COVID-19 reinforces the need for case isolation, which has been a cornerstone of the public health response throughout the pandemic.

While there has been a reduction of isolation requirements over the course of the outbreak, we have reached what is probably the minimum threshold for self-isolation to remain an effective intervention.

Other control tools, such as requiring masks or physical distancing are significantly less effective than isolation. Furthermore we note that to be effective these tools are most effective when utilized across the entire population. We note also that it is important to see these tools as a suite of protections that work together. Each tool can be dialled up or down. We have been able to recommend removing or reducing some of those other tools in part because isolation has remained in place. However, there is no combination of other mechanisms that would come close to producing the public health benefit that required self-isolation does.

Available evidence suggests that most people remain willing to isolate

Available data indicates that – currently – most people are willing to isolate, and do isolate.

- In July, 88 percent of people surveyed indicated they were willing to isolate if they had COVID-19, were symptomatic, or if a household member tested positive.[10]
- In an online survey of 1505 adults undertaken 15-20 September 2022, 8% of participants had tested positive for COVID-19 in the past two

[6] Xie, Y., Xu, E., Bowe, B. *et al.* Long-term cardiovascular outcomes of COVID-19. *Nat Med* **28**, 583–590 (2022). https://doi.org/10.1038/s41591-022-01689-3

[7] Wise J. Covid-19: Increased risk of some neurological and psychiatric disorders remains two years after infection, study finds BMJ 2022; 378 :o2048 doi:10.1136/bmj.o2048

[8] Douaud, G., Lee, S., Alfaro-Almagro, F. *et al.* SARS-CoV-2 is associated with changes in brain structure in UK Biobank. *Nature* **604**, 697–707 (2022). https://doi.org/10.1038/s41586-022-04569-5

[9] Xie, Y. & Al-Aly, Z. *Lancet Diabetes Endocrinol.* https://doi.org/10.1016/S2213-8587(22)00044-4 (2022).

[10] The Research Agency (TRA). *July 2022 DPMC Behaviour & Sentiment Topline.*

weeks and 9% of participants were self-isolating in the same two week period The survey sample is representative of Aotearoa New Zealand and suggests that currently adherence to self-isolation is high.

- In the same survey, 83% of participants indicated they were likely or very likely to self-isolate for the 7 day period if they were to test positive for COVID-19 in the future. This intention remained high (78%) for participants who had already tested positive for in the past two weeks.

It is very clear that compliance will be significantly higher with a mandate than with a recommendation

Evidence from overseas suggests that a legal requirement to isolate will have significantly greater adherence than a recommendation to isolate. In the UK, there was a significant drop in compliance with isolation requirements after the legal requirement to self-isolate was dropped on 24 February 2022. Based on survey data of people who tested positive for COVID-19, 80 percent were fully compliant in February, dropping to 64 percent in early March, and 53 percent in late March.[11]

This concern is supported by the significant drop in people wearing face masks on public transport since the removal of the mandate in September – despite it remaining a recommendation that people do so.

Modelling results (CMA)

Modelling suggest that the current mandatory isolation policy is approximately preventing 450 hospitalisations and 50 deaths in the short term compared to guidance with a reduction to 5 days. Over a year, it is estimated to prevent 1000 hospitalisations and 300 deaths.

When current settings are compared to mandatory with test to release from 5 days, the model estimates that current settings are preventing 40 hospitalisations and 50 deaths in the short term. Over a year, it is estimated to prevent 250 hospitalisations and 30 deaths.

Accurate domestic data on the behavioural impact of shifting from mandatory isolation to guidance is lacking. However, data from the UK infection survey (based on adherence rates to guidance in the UK) suggests potentially larger increases in cases and hospitalisations from such a change.

Key limitations of the isolation model are that it assumes RAT sensitivity to be constant over the duration of illness and does not account for increased sensitivity at day 5. This means that the proportion of cases released who are infectious may be overestimated. Another limitation is that incomplete isolation under mandatory requirements is not fully accounted for. Both of these limitations would tend to overestimate the magnitude of increase associated with changes to the status quo. Furthermore the modelling does not account for a new variants which could substantially increase infections.

Modelling results are described in more detail in **Appendix 1**.

[11] https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandwellbeing/bulletins/coronavirusandselfisolationaftertestingpositiveinengland/17to26march2022

	It was noted that further change, such as the introduction 5-day self-isolation plus test to release, is likely to create additional uncertainty and confusion. People are more likely to adhere if isolation is mandatory. However, we have no accurate estimate of the proportion of people following the mandatory required. Behavioural data indicate 88% of those surveyed (July 2022) would follow isolation rules if they tested positive. Operational providers have reported that they believe the most critical factor is not whether isolation is mandatory or recommended, but rather whether people are adequately supported to do so.
Other comments	*System of supports to enable cases to isolate* In order to limit the likelihood of further increases in inequity, it is critical that the system of supports that enables people to test, isolate, and reduce risk of onward transmission are maintained. Specifically: • *Leave Support Scheme (LSS)* - is closely tied to the retention of mandatory isolation. While not a consideration for the PHRA, there was strong support for the retention of the LSS, or a revised support scheme to replace it. The LSS is regarded as a key enabler to prevent cases returning to work when they are unwell and/or still infectious. The LSS is currently under review by Treasury and the Ministry of Social Development (MSD) – it may be that consideration be given to the most appropriate means of providing the necessary supports for populations which are most negatively impacted by mandatory self-isolation requirements. • *Care in the Community* – specifically, it is important that supported isolation is available for families who need to isolate away from another vulnerable member of the household. • *Availability of free masks and RATs for the general public.* • *Availability of free N95 type masks for people at high risk of severe outcomes.* *Essential Permitted Movements* The Chair requested a paper on Permitted Movements be developed for the next PHRA meeting, to allow further consideration of the issue. Advice has been provided to the Minister to allow parents and caregivers who are cases to drop their dependents off at school. A further category includes allowing people to return to their usual place of residence to isolate if they are on holiday elsewhere and can do so safely. *Regulation of point of care testing* Currently, the importation, manufacture, supply, sale, packaging or use of point of care tests is regulated under the COVID-19 Public Health Response (Point-of-care Tests) Order 2021. The purpose of this regulation is to ensure that point of care tests that are relied upon to establish whether a person is subject to mandatory self-isolation requirements are accurate and reliable. It is appropriate to maintain the regulation of point of care testing, so long as mandatory self-isolation requirements remain in place.

	Other countries that have retained some level of required isolation for cases • Legally mandated isolation for a subset of higher-risk workers: Australia (from 14 October 2022). • Legally mandated isolation with test to release from 5 days: Germany.[12]

Guidance for household contacts of COVID-19 cases

Current requirement	All household contacts of COVID-19 cases are recommended to test daily for five days.
Director Public Health recommendation	**Continue** with guidance for all household contacts to test daily for five days, and if symptomatic beyond those five days.
Public health rationale	The recent removal of quarantine requirements does not appear to have significantly altered case and hospitalisation numbers. Based on this experience and the current outbreak context, 5-day daily testing of household contacts continues to provide a sufficient risk mitigation.
Other comments	Members of the Committee noted the following concerns with the possibility of changing from the current approach: • change at this time may result in confusion and change fatigue for the public • data does not exist on adherence with the status quo. If most contacts are not following the 5-day testing recommendation a change to recommending testing on symptom onset may have little impact on risk.

Face masks

Current requirement	The requirements for masks are set out in the COVID-19 Public Health Response (Masks) Order 2022. The Order specifies that: • masks are legally required for visitors[13] in a wide range of health service settings including primary care, urgent care, pharmacies, hospitals, aged residential care (ARC), disability-related residential care, allied health, and other health service settings • there are exclusions for: patients and people receiving residential care, health service staff, and visitors to specific health services (psychotherapy, counselling, mental health and addiction services). Requirements for patients and workers of health services are determined locally, based on local assessments in line with Infection Prevention and Control Guidance.

[12] https://handbookgermany.de/en/coronavirus-general-info
[13] COVID-19 Public Health Response (Masks) Order 2022, section 5(1)(a): "A person must wear a mask when they are at the premises of a health service unless the person is a patient or worker of the health service".

Director Public Health recommendation	**Retain** the current requirement as described above.
Public health rationale	The evidence that mask wearing decreases the rate of transmission of COVID-19 (and other airborne respiratory viruses) is substantial. An earlier briefing (HR20221311) provides an overview of the evidence base in relation to mask use, and mask mandates. The effectiveness of mask mandates as a public health intervention will depend on several factors – including the level of community transmission at the point in time, the nature of the settings in which masking is required, cultural and geographical norms around masking, correct mask use, and the extent to which improvements to ventilation/filtration have been enacted as systemic primary prevention. Health service settings have a series of characteristics that elevate the risk of transmission and/or the risk of severe disease. These settings typically: • are more likely than other settings to have people present with undifferentiated viral illness, either because they are seeking help for symptoms or because they have a co-existing medical emergency • are also more likely to have people present who are vulnerable, either due to advanced age, underlying conditions, or to being unwell at the time - facility-level mask requirements lean against inequity, to ensure that people who are at higher risk can access health services without *avoidable* additional risk[14] • have variable ability to improve crowding, indoor ventilation and/or air filtration[15] • hospital-acquired COVID-19 infections are more likely to have poorer outcomes than community-acquired COVID-19 infections.[16] While adherence to mask requirements may be waning or patchy in some health service settings, **it is possible that adherence would drop further if the mandate was removed**. This is evidenced by the decrease in people masking on public transport in the past month (which has remained recommended by the Ministry of Health). Mask requirements lean against inequity, to **ensure that people who are at higher risk can access health services without *avoidable* additional risk**. A conservative estimate is that one in every six New Zealanders is at

[14] A conservative estimate is that one in every six New Zealanders is at higher risk of severe illness if they contract COVID-19 ('Options for improving respiratory protection against aerosolised viral particles for vulnerable and priority populations' (HR20220682), 29 April 2022). Mask mandates in health service settings have two benefits for people in this group: it means that they will (a) be less likely to actually be infected, and (b) be more likely to feel able to continue to safely access healthcare. In many cases people accessing health services are unable to choose not to do so.

[15] Many health service settings don't have good design or engineering so that the added value of masks to protect the vulnerable (patients, staff and visitors) become really important when there is frequent introduction of infection into those environments. This is especially true of healthcare settings in the community, but also remains a real issue in many hospitals. Many older wards are predominantly multibed rooms (often 4-6 bed), shared bathrooms and no doors on rooms. In this context, it is often hard to isolate and improve air filtration.

[16] In Victoria, Australia, 7.6 percent of hospital-acquired COVID-19 infections resulted in death, compared to 0.14 percent of reported cases in the general population in the same period. This demonstrates that infections in hospital settings are associated with significantly (over 50-fold) higher mortality. Victoria Department of Health. 2022. Chief Health Officer Advice to Premier, 29 August 2022. Retrieved from https://www.health.vic.gov.au/publications/chief-health-officer-advice-to-premier

	higher risk of severe illness if they contract COVID-19.[17] Mask mandates in health service settings have two benefits for people in this group: it means that they will (a) be less likely to actually be infected, and (b) be more likely to feel able to continue to safely participate in basic activities of daily life, such as accessing healthcare. In many cases people accessing health services are unable to choose not to do so. Removing mask mandates in health service settings may lead to an **increase in cases of hospital-acquired COVID-19**. Feedback from two districts has noted possible links between visitors and hospital-acquired cases of COVID-19.[18] There is still **value in trying to prevent infections, even for highly transmissible variants.** While it may not be possible to get R_e to below 1 with highly infectious variants/subvariants, there is still significant value in trying to prevent infections where possible, as each new infection (or reinfection) effectively 'rolls the dice' for one or more post-acute sequelae that are known to occur such as long COVID, and increased risk of long term (up to 1 year) cardiovascular complications compared to individuals without COVID-19.[19] Long COVID and other post-acute sequelae have personal costs, but also broader impacts on society, in terms of outcomes such as increased disability, increased welfare and health costs, and reduced workforce participation.[20]
Other comments	*Other options considered* If the mask mandate for visitors to health service settings was removed, it may create some operational challenges, which would need to be worked through at a facility level: • If health care facility is still requiring mask use on site (or in certain higher risk areas within their site) but this is not covered by a mandate, it may result in security/conflict resolution situation for staff to manage if members of public do not wish to follow facility rules. Currently, health services can use the Order to compel visitors. Without mandate, it may be more difficult to deal with a visitor who refuses to wear a mask, and this may become a more common event. Evidence that enforcement of mask policy would be more difficult than mask requirements under an order is limited.

[17] The Ministry of Health does not have precise figures for the number of New Zealanders who meet the definition of being at higher risk. However in April 2022, the number of 'clinically vulnerable' people (which is defined more narrowly than 'high risk') was estimated at 800,000. 'Options for improving respiratory protection against aerosolised viral particles for vulnerable and priority populations' (HR20220682), 29 April 2022.

[18] *"Anecdotally, visitors have featured in many in-hospital transmission events in many units, especially geriatrics/rehab wards which have a high proportion of vulnerable patients. This may have been due to lapses in mask compliance by visitors during the visit (eg, sharing a cup of tea, or kissing/hugging patient)." "We have had a number of clusters and outbreaks here and when COVID is everywhere, it is difficult to attribute outbreak sources with any degree of certainty. The relevant ward nurses felt that several of our events were likely caused by infectious visitors. At the time, mask wearing behaviour by visitors was frankly poor and some visitors became abusive when asked to wear masks."*

[19] See Ballering AV, van Zon SKR, olde Hartman TC, Rosmalen JGM. 'Persistence of somatic symptoms after COVID-19 in the Netherlands: an observational cohort study'. The Lancet. 2022;400(10350):452-61; and Xie Y, Xu E, Bowe B, Al-Aly Z. Long-term cardiovascular outcomes of COVID-19. Nature Medicine. 2022;28(3):583-90.

[20] For example an August 2022 report from the Office for National Statistics in the UK estimated that 1.8 million people living in private households were experiencing self-reported long COVID (symptoms continuing for more than four weeks after the first suspected COVID-19 infection that were not explained by something else) see https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/prevalenceofongoingsymptomsfollowingcoronaviruscovid19infectionintheuk/4august2022.

	• Health services would need to consider implications on patients/residents exposed to visitors, and the potential for an increase in patients developing hospital-acquired COVID-19 infections. • If the mask mandate for visitors is removed and most visitors are not wearing masks, one service reported that they may need to consider implications for staff mask requirements. They considered that it could be hard to defend mask use around patients if other (non-staff) people entering the clinical zone are not required to wear them. *Clear public communication is critical under all options* Key to success of any of the options is the clear communication of the strategy to the public and to healthcare workers. It is also important to signal that we may need more widespread use of masks again if community transmission increases. *Health services situated within other settings* The Committee reaffirmed that where a health service that is situated entirely within a non-health service (eg, a pharmacy within a supermarket, or a physio within a gym) the health service is expected to comply with the Order.

Provision of information using the New Zealand Traveller Declaration for contact tracing prior to departure

Current requirement	Air travellers coming to New Zealand are required to declare, before they arrive, their contact details and travel history through the NZTD for the sole purpose of COVID-19 contact tracing, should they need to be urgently contacted in response to a serious new variant of concern. This requirement is the only substantive remaining health requirement in the COVID-19 Public Health Response (Air Border) Order 2021.
Director Public Health recommendation	**Remove** the requirement under the Air Border Order, with effect from 05 November 2022, for air travellers to New Zealand to provide information using the NZTD for COVID-19 contact tracing purposes prior to departure.
Public health rationale	The mandatory requirement is not considered proportionate in the current context. The requirement relates to a potential future risk and not an immediate or likely variant requiring action shortly. However, having air traveller contact details and travel history electronically collected using the NZTD supports a more efficient and accurate dataset of passenger information should contact tracing be required. While the likelihood of needing to stand-up contact tracing of air passengers is considered low in the current context, the rate at which SARS-CoV-2 continues to mutate means that we need to ensure our systems remain prepared. Given the value of this measure, NZ Customs have indicated the requirement can be continued under the Customs and Excise Act 2018 should there no longer be a public health rationale to do so.

	Continuing the requirement under Air Border Order until the amended Customs (Arriving Passenger and Crew Declarations) Rules 2022 comes into force on 5 November means that there will be a seamless transition and the ability to contact passengers in the intervening period will be retained.
Other comments	The most likely scenario where contact tracing may be required would be a new variant that has high severity, high immune escape and low transmissibility. Contact tracing is likely to be of limited value in response to a serious new variant of concern in the absence of other restrictive measures (such as border closures, pre-departure testing, post-arrival isolation).

Testing of arrivals at the air border

Current requirement	Air arrivals are encouraged to do a RAT on the day of arrival (0 or 1) and on day 5 or 6 and to report a positive test result via phone or My Covid-Record. If positive, they are encouraged to get a free polymerase chain reaction (PCR) test from a community clinic or GP, so this can be available for whole genome sequencing.
PHRA recommendation	**Modify** the post-arrival testing guidance for all travellers to test if symptomatic only.
Director Public Health recommendation	Advising all international arrivals at the air border to test on day 0 or 1 and on day 5 or 6, when asymptomatic, is not proportionate given the lower prevalence of COVID-19 currently circulating globally, the relatively high impost on travellers, the cost of providing and distributing the RATs at the airport and the risk of false positives. *Relative effectiveness* Post-arrival testing provides additional (early) surveillance of new variants that may be entering the border. However, the 1-to-2-week lag time from the point of arrival to having a result from a positive PCR genomically sequenced means testing at the border is unlikely to detect new variants arriving in the country before community spread of these variants occurs. Moreover, based on the drop off in PCR testing numbers, it is assumed adherence to this guidance is low. *Equity* There are equity concerns around the testing performance of large groups of asymptomatic people because of the testing performance of RATS. For testing performance of RATS:[21] [22] • the false positivity rate is approximately 1%-2%

[21] Ministry of Health. 2022. *Approved RATs and how to use them (as at 26 May 2022*), viewed on 5 October 2022 https://www.health.govt.nz/covid-19-novel-coronavirus/covid-19-health-advice-public/covid-19-testing/rapid-antigen-testing-rat#regulatory.

[22] *Indelicato AM, Mohamed ZH, Dewan MJ, Morley CP. Rapid Antigen Test Sensitivity for Asymptomatic COVID-19 Screening. PRiMER. 2022 Jun 22;6:18. doi: 10.22454/PRiMER.2022.276354. PMID: 35812789; PMCID: PMC9258726. /*

	• only have a 50% sensitivity rate of detecting COVID-19 in an asymptomatic person • have an 80-90% sensitivity rate of detecting COVID-19 in symptomatic people. This will result in isolation of individuals who do not have COVID-19, while some people with an acute COVID-19 infection may not be identified in surveillance testing using RATs (even when compliance is high). *Cost* s 9(2)(g)(i) [redacted]
Other comments	*Support at airports* s 9(2)(g)(i) [redacted] *Maritime border requirements* Arrivals from the maritime border are not advised to test if coming ashore. Instead, they are encouraged to follow community testing guidelines, that is, to test if symptomatic.

Other recommendations from the PHRA

28. There were other recommendations arising from the PHRA. They primarily related to actions or information that could support future PHRA discussions. These include:

- 9(2)(f)(iv) [redacted]
- 9(2)(f)(iv) [redacted].
- Explore options for any improvements for data and modelling related to reporting on vulnerable populations (Māori, Pacific, disabled, and high deprivation) to improve

decision making. It was requested this updated information be provided at the next PHRA.

- Related to the above, the impacts of long COVID need to be included in the data and modelling to provide a more comprehensive assessment of the risks and impacts of COVID-19.

Equity and Te Tiriti considerations

Impact of COVID-19 on vulnerable populations

29. Demonstrating a commitment to the achievement of health equity and Te Tiriti o Waitangi remains a critical priority in the COVID-19 public health response. COVID-19 has exacerbated pre-existing health inequities for many groups, particularly those underserved by the existing system. This is often due to overlapping social, clinical, and occupational risk determinants.

30. As shown in **Appendix 1**, older people are more likely to be hospitalised and this is reflected in the latest data. As the virus takes longer to move through this population due to this group having fewer social interactions it may lead to a higher hospitalisation burden over a longer period.

31. The *COVID-19 Mortality in Aotearoa New Zealand: Inequities in Risk* report, released 30 September 2022 highlights the disparity of the impacts of the pandemic. Overall mortality continues to decline. However, after adjusting for age, comorbidities and vaccination status, the report showed that the risk of COVID-19 mortality in Māori is 2.2 times higher than that of European and Other group, while for Pacific Peoples the risk was 2.8 times higher.[23]

32. Pacific Peoples continue to be disproportionately affected by COVID-19. Moreover, they continue to experience long-standing inequitable health outcomes and service use. Recent data shows Pacific Peoples are the demographic most hospitalised for COVID-19.[24]

33. Disabled people and those with underlying medical conditions are more likely to be hospitalised or require medical intervention/support if they test positive with COVID-19. While deprivation is a proxy, the Committee noted that there is no data and modelling of hospitalisation and mortality data for disabled communities.

34. While cases and hospitalisations continue to trend downwards overall, several Committee members expressed strong reluctance to removing self-isolation and mask requirements, without focused modelling on how this would impact Māori, tāngata whaikaha Māori and disabled people. Current modelling on potential policy changes forecasts impacts such as case numbers, hospitalisations and mortality for the general population, but it does not forecast impacts of policy changes for vulnerable groups. The Committee therefore made its recommendations using the precautionary approach. Development of modelling to specifically assess equity impacts will assist in addressing this issue.

35. Mandatory self-isolation requirements provide an important safeguard against workers with COVID-19 returning to work before they have recovered. The Māori Regional Coordination Hub has indicated that wider consultation should accompany any removal of the self-

[23] Ministry of Health. 2022. *COVID-19 Mortality in Aotearoa New Zealand: Inequities in Risk.* Wellington: Ministry of Health
[24] Ibid.

isolation requirements as it would disproportionately affect the Māori community. Recommending the retention of self-isolation requirements would help to ensure that those most vulnerable continue to be able to rest and recover while ill, and do not spread the virus further among their potentially vulnerable community. Retention of the Leave Support Scheme will help mitigate these risks.

36. Committee members highlighted that the more distant disproportionate impacts of long COVID on vulnerable groups must be considered when assessing the public health risk of stepping down measures. Māori, Pacific Peoples, disabled people and elderly are at greater risk of developing long COVID and suffering worse health outcomes than the general population. Māori, for instance, may suffer long COVID for longer than non-Māori. In one study, 75% of Māori participants had long COVID for more than three months, compared to only 65% of non-Māori.[25]

Stakeholder engagement and key issues and themes emerging

37. Across the board there was strong support for retaining the current mandated measures to protect vulnerable communities. The move away from the Elimination Strategy and removal of other mandatory requirements were considered to put these communities at greater risk.

38. The removal of border restrictions and the threat of new variants easily entering the community is a particular concern for groups with already compromised immunity, limited access to anti-viral medication and concerns about the relative effectiveness of vaccinations against new variants.

39. The changes have caused anxiety in these communities, especially amongst disabled people. People are choosing to make individual risk assessments that have resulted in ongoing isolation or limited interactions with others in their community. Assurances are also being sought from providers concerning the vaccination of their staff and the ability to require face masks for home visits.

40. More generally, there is a concern that the community at large may not take the risk of COVID-19 seriously and put vulnerable populations at greater risk. As noted previously, there is a strong preference among vulnerable communities for the elimination of COVID-19. Emerging from this is a desire to build "borders" around these vulnerable populations through either differentiated public health responses or the retention of current requirements to ensure that people exercise the behaviours necessary to limit the mortality and morbidity amongst these populations.

Addressing equity concerns

41. It is important that the measures are not viewed in isolation. The new approach to managing COVID ("prepared, protective, resilient, and stable") is predicated on using a suite of voluntary and enforceable measures to address both general and specific risks. A package of measures could be developed that provides for an effective and proportionate response to manage the risk of COVID-19 and improve equity outcomes for Māori, Pacific and disabled communities.

42. For example, based on the feedback received at both the PHRA and from stakeholder engagement, significant gains can be made through improved communications and

[25] Ministry of Health. 2022. *Long COVID Evidence Update - 11 August 2022*. Wellington: Ministry of Health. 16.

programmes targeted to those communities. Other system supports like the Leave Support Scheme could also prove crucial to encouraging the behaviours being sought.

43. Enforceable or mandatory measures can also be re-introduced if the COVID-19 situation significantly changes. This would be an effective and proportionate response to a worsening risk profile. While such rights limiting measures may be more controversial than they have been in the past regarding the social licence, the legal test remains the same.

44. Therefore, it is recommended that a work programme be developed that seeks to lessen the adverse impacts of COVID-19 on Māori, Pacific and disabled communities. This could include exploring potential data and modelling improvements for vulnerable populations recommended by the Committee. It could also encompass the effects of long COVID which was also recommended that more work be done on. This work will provide assurance to the Committee and others of:

    a. how we can best meet our Te Tiriti and other obligations

    b. provide certainty about our future response to any changes to the risk presented by COVID-19, and

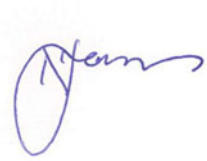
    c. how we might differentiate the measures used to address the risk profiles for different communities.

s 9(2)(h)

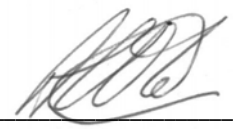
s 9(2)(h)

Next steps

52. Pending your approval, this memo will be provided to the Department of the Prime Minister and Cabinet to inform the overarching paper the Minister for COVID-19 Response will take to Cabinet on 17 October 2022.

Signature  Date: 12 October 2022

Dr Nicholas Jones
Director of Public Health
Public Health Agency
Manatū Hauora

Signature  Date: 12 October 2022

Dr Andrew Old
Deputy Director-General
Public Health Agency
Manatū Hauora

Signature  Date: 12 October 2022

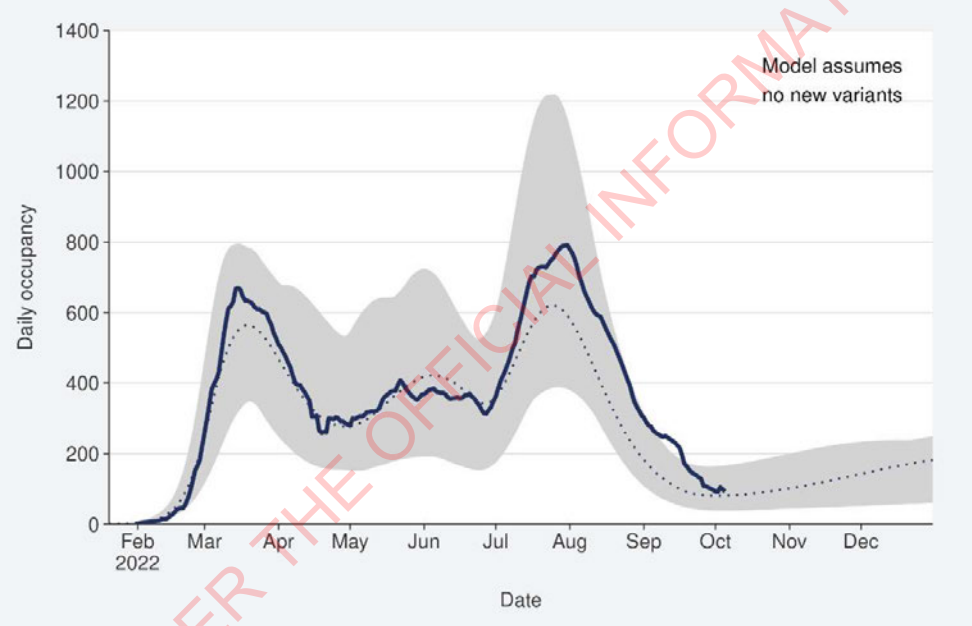
Dr Diana Sarfati
Director-General of Health
Manatū Hauora

Appendix 1: Current outbreak status and summary of modelling

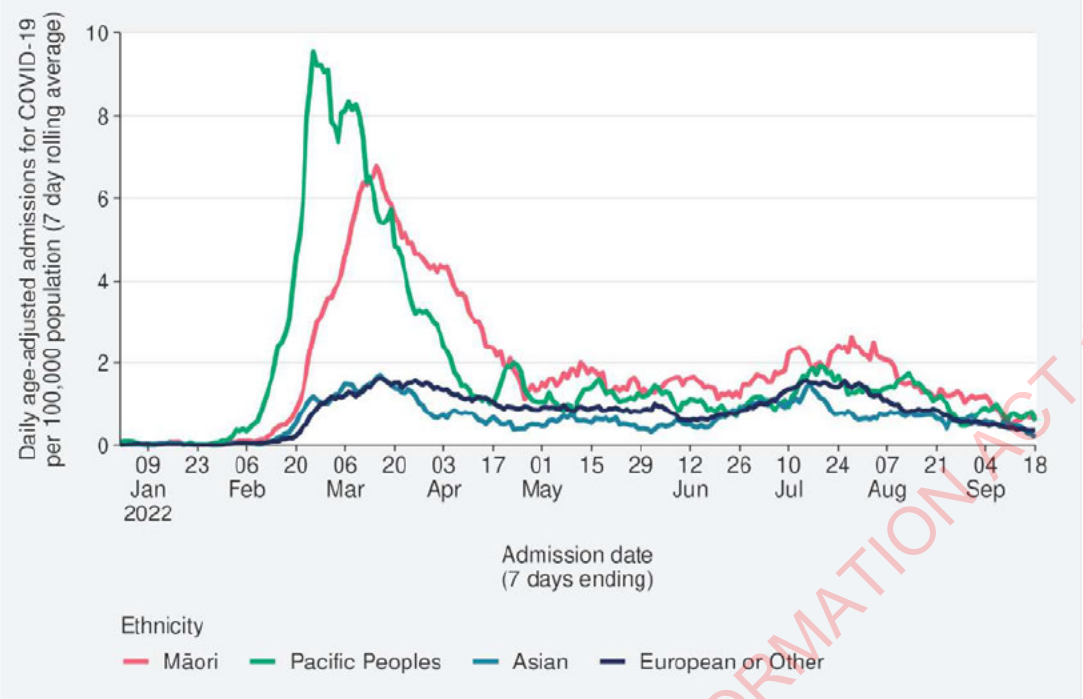
1. The 7-day rolling average of reported case rates was 32.2 per 100,000 population for the week ending 09 October. This was a 11% increase from the previous week, which was 28.6 per 100,000.

2. All evidence continues to support stabilisation in incidence in the community: reported case rates and levels of viral ribonucleic acid (RNA) in wastewater have been declining since 10 July but both measures have been relatively constant in the recent weeks to 02 October. The trend was similar for all regions.

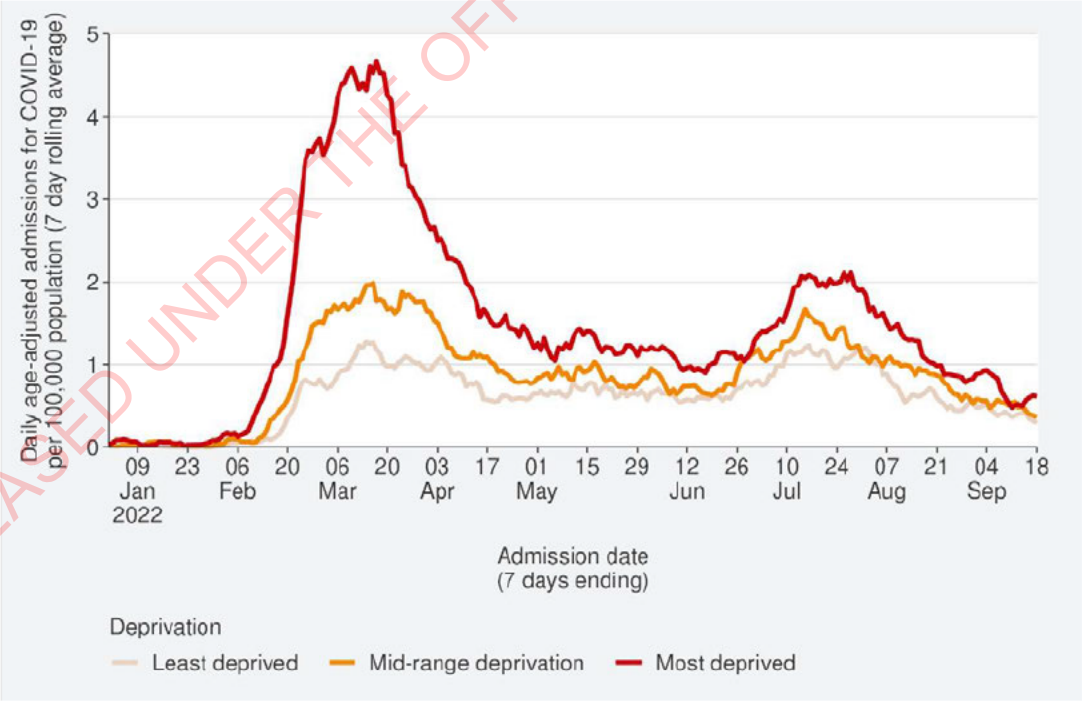
3. Modelling scenarios suggest that current hospital occupancy is tracking near the higher range of the prediction for the past two months. It is now tracking closer to the median projection and is expected to remain stable or slightly increase in the coming months. Modelling scenarios account for changes in masking and contact quarantine on 12 September and assume no new variants.



4. The age-standardised Māori cumulative hospitalisation rate for COVID-19 is 2.1 times higher than European or Other. Pacific Peoples have the highest cumulative rate of hospitalisation with COVID-19 which is approximately 2.8 times higher than European or Other.



5. Those most deprived communities have had, and continue to have, the highest rates of hospitalisation, both recently and cumulatively during 2022. Those most deprived communities have had 2.1 times the risk of hospitalisation compared with those who are least deprived.



6. As of 09 October, there were 2,055 deaths attributed to COVID-19. The weekly number of deaths attributed to COVID-19 has stabilised.

7. The modelling results have been produced rapidly to help inform policy advice. They should be considered as indicative as there are significant uncertainty around the impact of policy changes and the level of immunity in the population and population behaviour.

8. Modelling has considered a range of scenarios to reflect this uncertainty by estimating pessimistic, middle, and optimistic scenarios, reflecting different levels of compliance with **guidance on isolation,** specifically to estimate the effect of shift away from mandated isolation requirements, should the Epidemic Notice be lifted.

9. Within the first month, shifting isolation **requirements** to 5-days guidance **no** test to release (TTR) is modelled to **increase cumulative hospitalisations by roughly 450 to 1040 and increase deaths by 50 to 170**, relative to no change in policy. Over a year, these **increases are 7900 to 8900 for hospitalisations and 1860 to 2160 for deaths.**

10. Within the first month, **shifting to a requirement** to TTR after 5 days for a maximum of 7 days is modelled to **increase hospitalisations by roughly 45 to 640 and increase deaths by 6 to 120. Over a year, these increases are 7900 to 8050 for hospitalisations and 1870 to 1900 for deaths.**

11. Moving to 5-days TTR maximum 7-days guidance is modelled to **increase hospitalisations by roughly 300 to 890 and increase deaths by 40 to 150**, relative to no change in policy. Over a year, these **increases are 7900 to 8600 for hospitalisations and 1870 to 2080 for deaths**.

12. Across the scenarios**, for-covid hospital occupancy peaks at between 200 and 304 beds**, compared to a peak of 700 beds in the BA.5 wave. When looking at the high confidence limit of these estimates, for-covid hospital occupancy still peaks below the BA.5 wave peak at around 402 beds.

13. **Importantly,** the model assumes no new variants, therefore the long-term results do not reflect the likely path of the pandemic. If an immune escape variant should arise, the estimates for above will change and the modelled results will no longer be valid.

14. In general, the short-term peak in cases and hospitalisations can be mitigated by phasing policy changes over a longer period of time.

15. **A note on Rt sensitivity and asymptomatic cases**: Given the sensitivity of RATs through time, a rule that says to only test on the first day of symptoms will miss a large number of cases. Additionally, 30-40% of infections are asymptomatic.

16. An important caveat is the equity impacts of these changes have not been modelled, in part due to limited available data, but also limitations of the models. However, observations of prior disease burdens for COVID-19 and based on general observations across public health, moving some settings from mandates to guidance will **likely lead to inequitable outcomes**.

    a. Māori and Pacific peoples are more at risk of severe negative health outcomes than non-Māori non-Pacific Peoples of the same age, and are also more likely to experience greater disease exposure.

    b. Poorer people are at greater risk of severe negative health outcomes than affluent people of the same age, and are also more likely to experience greater disease exposure.

    c. Shifting to guidance is likely to disproportionately affect those who do not have the ability to choose to follow the guidance. This may include: people in precarious

employment, those unable to work from home, workers with limited sick leave and populations with other socioeconomic disadvantages.

17. Additional supports for people to isolate effectively (such as additional sick leave and maintaining the leave support scheme in some form) could help mitigate these inequitable outcomes and increase the ability for more people to follow guidance on isolation.

How do reductions in the share of cases choosing to isolate affect the reproductive number?

18. Modelling has considered how two factors affect the reproductive number (which drives the level and speed of transmission):

    a. A reduction in the share of infections taking any action to reduce transmission. This could be due to people ignoring their positive result or choosing not to test at all.

    b. A reduction in the average effectiveness of action to reduce transmission. This could be due to people isolating for a shorter period of time, or only avoiding high risk settings.

19. Furthermore with regards to mandatory isolation, the model assumes that 70% of symptomatic infected individuals will be detected and that they take action to reduces transmission outside the household by 90% (ie, a 'case leak rate' of 10%).

20. The table below shows the increase in the reproductive number for a range of different assumptions. It takes into account changes made to masking and contact quarantine settings on the 12 of September. Percentage increases beyond that vary significantly from 2.1% to 16.7%. In general, having a large share of cases taking some action is more effective than some cases taking significant action.

		Reduction effectiveness of actions				
		0%	25%	50%	75%	100%
Reduction in proportion of people taking action	0%	2.1%	5.6%	8.3%	10.4%	12.1%
	25%	6.3%	8.7%	10.4%	12.0%	13.3%
	50%	10.0%	11.5%	12.7%	13.7%	14.4%
	75%	13.7%	14.1%	14.7%	15.2%	15.7%
	100%	16.7%	16.7%	16.8%	16.9%	16.8%

Behavioural impact examples

21. Data from the UK suggests (based on surveys conducted by the UK Office of National Statistics) around a month after isolation requirements were relaxed to guidance, the proportion of people isolating **after testing positive** was just over 50%, while the proportion of people taking precautions **after testing positive** (eg, wearing masks in public, avoiding indoor settings) was just over 40%, both showing significant decreases in transmission mitigating behaviour.

22. If New Zealand follows a "UK-like" scenario, there may be an increase in transmission by around 12.7%.

23. If there was a 50% reduction in the proportion of symptomatic infected people taking action, (compared to September 2022), but no reduction in the effectiveness of the action

taken, then we estimate that the effective reproduction number would increase by 10% (relative to the effective reproduction number in September 2022).

Scenarios considered

24. Modelling has considered adjustments to current mandatory isolation settings as well as moving to guidance for isolation. For scenarios with mandatory isolation, two changes are considered: reducing minimum isolation to 5-days with one negative test required before release and a maximum of 7-days isolation; and reducing isolation to 5-days, with no test to release. Previous modelling suggests that these scenarios would increase the reproductive number by 1.4% and 4.2% respectively.

25. Modelling has also considered scenarios where guidance is used for isolation. Because of the significant uncertainty in how people respond to a removal of mandated case isolation, modelling has considered three scenarios:

    a. An optimistic scenario, with a 7.8% increase in the reproductive number.

    b. A middle scenario, with a 11% increase in the reproductive number.

    c. An upper limit scenario, with a 17.5% increase in the reproductive number. This is slightly higher than the highest increase in the table above, due to small differences in assumed symptomatic testing rates.

26. Finally, modelling has considered a scenario where no changes are made to case settings, but guidance for household contacts is changed to testing every 48 hours if symptomatic. Compared to the status quo of testing daily for five days, this results in a 3.3% increase in the reproductive number.

27. Factors that would shift New Zealand towards the optimistic scenario could include:

    a. achieving high levels of testing in the community

    b. maintaining strong norms that people should work from home if unwell

    c. high voluntary adherence to mask and case isolation guidance

    d. importance of clear communications and assistance (eg, leave support schemes) that would allow people to both understand the importance of these, and be able to do these

    e. advice to employers to encourage work from home where possible for unwell people.

Modelling results

28. Policy changes that increase transmission will tend to have two effects:

    a. In the short-term, a large increase in cases, hospitalisations and deaths. The absolute size of this change will be driven by the level of immunity in the population. This impact wanes over time as infection-induced immunity increases.

    b. In the long-term, a slightly higher steady state level of cases, hospitalisations and deaths. This impact is smaller in percentage terms but is persistent over time.

29. In general, the short-term peak in cases and hospitalisations can be mitigated by phasing policy changes over a longer. This smooths out the peak and allows decision makers to adjust their approach if the path of the outbreak differs from modelled projections.

30. The table below shows the increase in cases, hospitalisations and deaths under these scenarios. In the short-term, there is a large relative increase in cases, hospitalisations and deaths. Relative increases are smaller over the long-term, but larger in absolute terms.

31. Compared to the table presented in the memo on isolation changes, short-term cases, hospitalisations and deaths tend to be higher across all scenarios, including the baseline. This partially reflects the changes are being made on top of policy changes already made in September. In addition, the policy change is occurring during a plateau in cases, compared to the downward trend during September.

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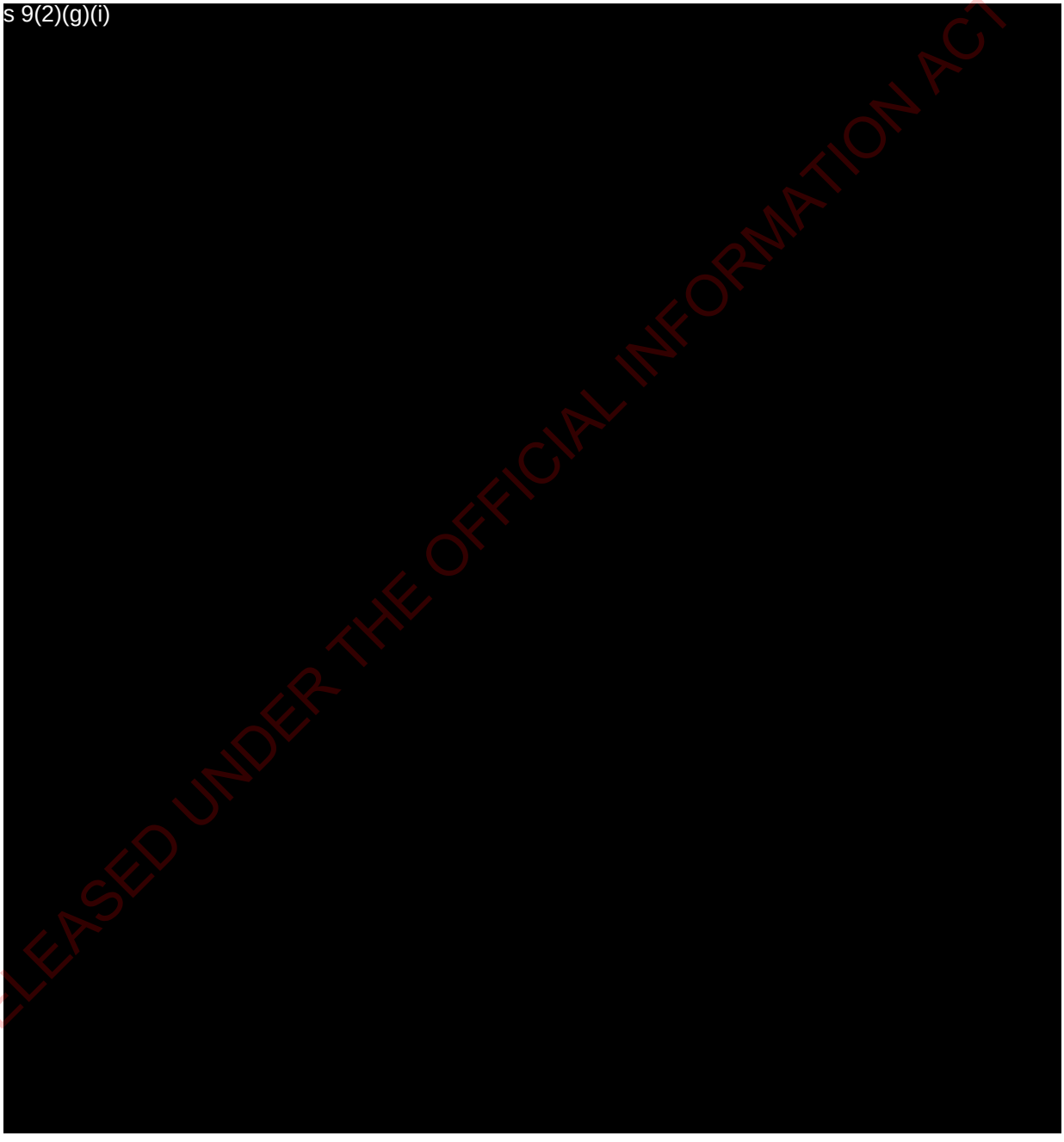
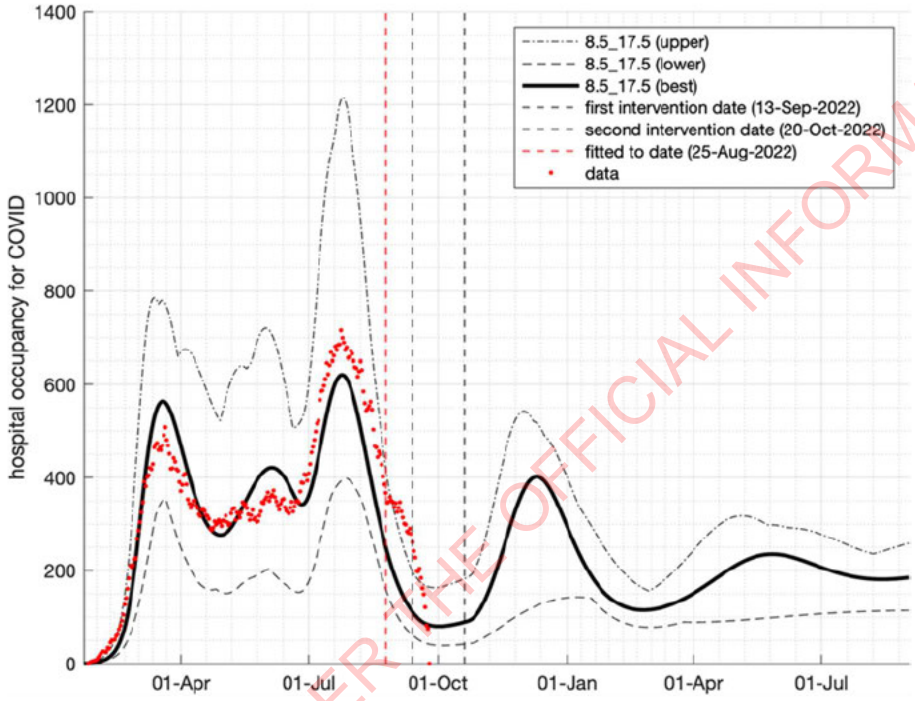


32. The figure below shows for-covid hospital occupancy for the upper limit scenario (other scenarios shown further below). Note these figures may not align reported in the Ministry of Health press release, as those figures include with-covid hospitalisations.

33. The model projects hospital occupancy falling to around 100 occupied beds in early October. The policy change results in an increase in hospitalisations over the following months. The best fit of the model peaks at roughly 400 beds, however the uncertainty around this peak ranges from around 550 occupied beds on the high end, to under 150 beds on the low end. Despite the large increase in transmission, the modelling suggests that accumulated immunity would keep peak hospitalisations below the BA.5 wave peak.

Figure 1: Impact of upper limit scenario on for-covid hospital occupancy



34. The shape of the hospital occupancy curve is broadly similar for the optimistic and middle scenarios (shown further below), but with peak hospital occupancy being around 250 beds (optimistic) and 100 beds lower (middle) than the pessimistic scenario.

Assumptions

35. This modelling uses a large number of assumptions that are important to keep in mind:

    a. **Mask mandate assumptions**. Mask mandates are assumed to reduce mask usage that in turn causes a roughly 20% reduction in transmission outside the home.

    b. **Contact quarantine assumptions**. This modelling uses very similar assumptions to those used in the August monthly review of case isolation and contact quarantine.

    c. **Case isolation assumptions**. With mandated 7-day isolation, it is assumed that 90% of transmission for identified cases is prevented.

d. **Long-term trajectory assumptions**. The model assumes that BA.5 is the prevalence variant for the next 12 months and no changes to vaccination eligibility (eg, third boosters, second boosters for more groups) and no change in available therapeutics.

e. **The model assumes no new variants.** The simulations do not account for new variants of concern and the impact of circulation on case, hospitalisations and deaths.

f. **Peaks and troughs assumptions.** Because this is a single national model, it may not capture the different size, shape and timing of peaks at a district or regional level. Therefore, the model may overestimate peaks and underestimate troughs, if outbreaks in different population groups are not aligned.

g. **Uncertainty around modelled estimates.** The provides confidence intervals around estimates of cases, hospitalisations and deaths. This range reflects unknowns such as the share of infections detected and the speed of waning immunity. The model is fit to data up to 25 August, which reduces some of this uncertainty.

h. **Uncertainty around "guidance" vs "requirements".** It is difficult to say what model parameters to use to model the difference between mandates and guidance. Compliance and behaviours under a 'guidance' scenario will depend not only on what level people are inclined to follow guidance but also the level of communication around guidance. The table above which presents the effect of varying the proportion of symptomatic infections who take action, and the effectiveness of these actions, gives an idea of what moving between different levels of behaviour might look like for a range of assumptions. However, the actual effect of having guidance is between zero, and some unknown at this point.

Appendix

Figure 2: Impact of optimistic scenario on for-covid hospital occupancy

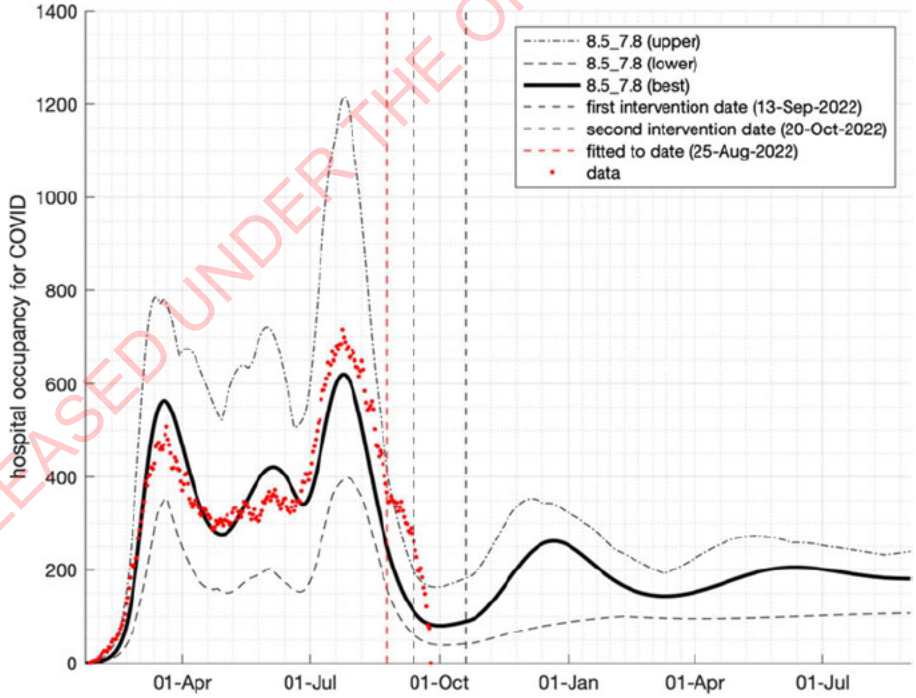
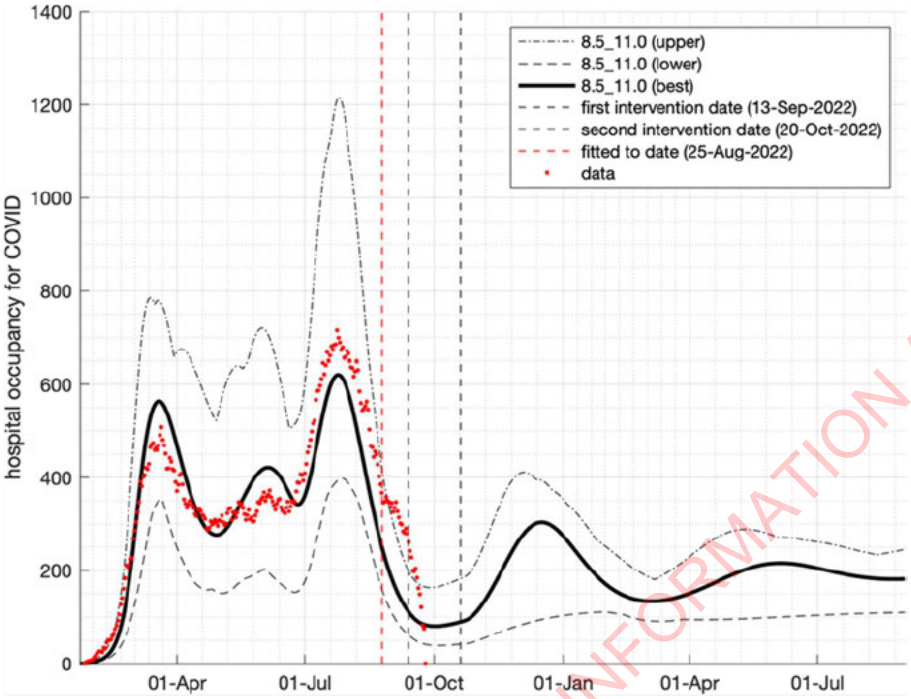
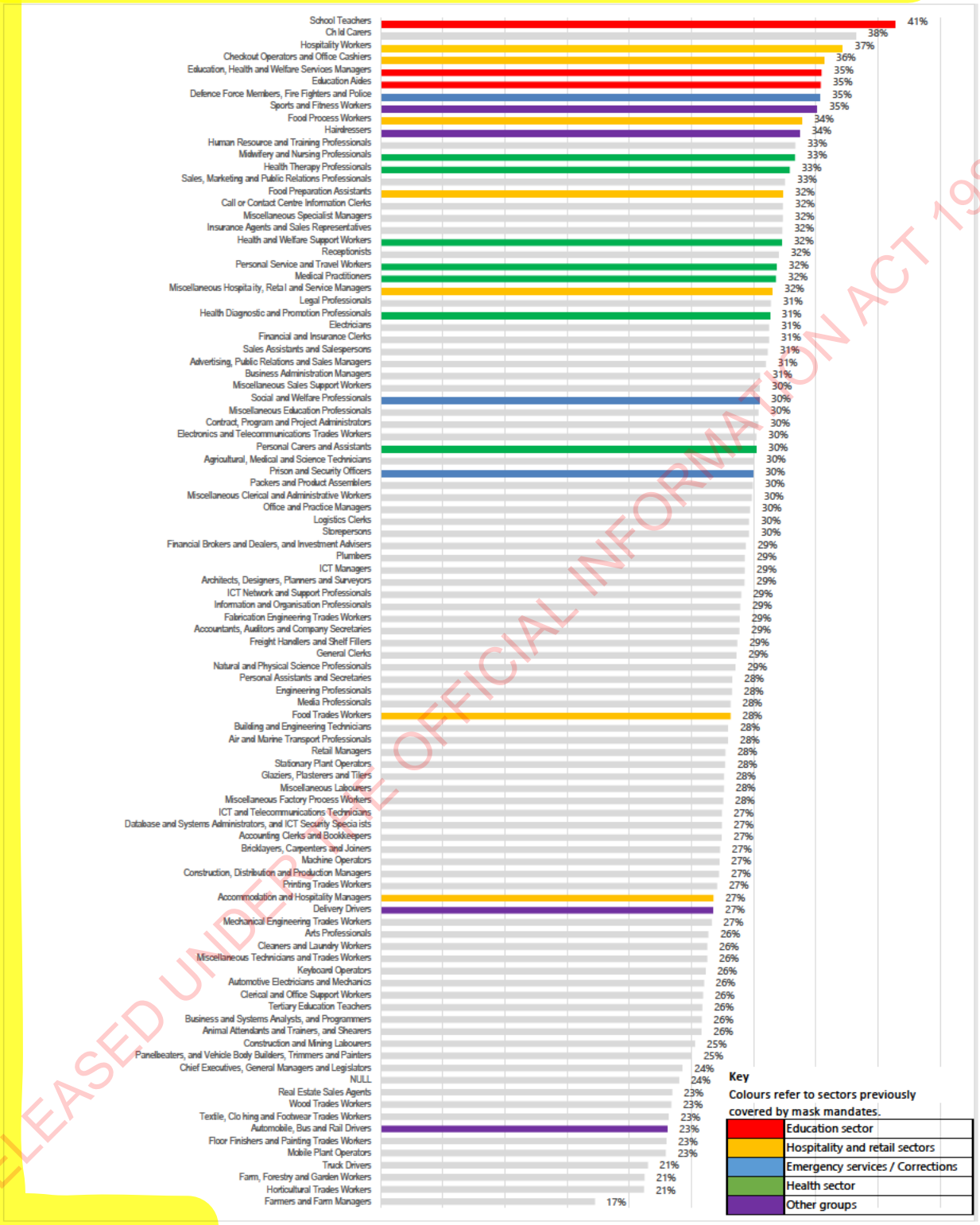


Figure 3: Impact of middle scenario on for-covid hospital occupancy



Document 3

Appendix 2: COVID-19 case rates by ANZSCO L3 occupational group[26]



[26] Data comes from the Integrated Data Infrastructure (IDI) (StatsNZ). These are crude rates and are from self-reported community testing, which may or may not indicate an increased risk of transmission in that setting, but that could indicate an increased risk of workers being infectious in their workplace setting. Occupation relates to the person's primary job. Data includes all cases to 14 August 2022.

ENDS.