**Hon Chris Hipkins**
MP for Remutaka
Minister for COVID-19 Response
Minister of Education
Minister for the Public Service
Leader of the House

Harold
fyi-request-17877-0f44bec3@requests.fyi.org.nz

Ref: CHOIA192

Dear Harold

Thank you for your request under the Official Information Act 1982 (the Act) on 8 December 2021. You asked for a copy of the following documents:

> *"1. (3-Sep) COVID-19 therapeutics supply managements (ref: 20211968)*
> *2. (22-Sep) Internal review of the June Sydney to Wellington Traveller Case 2021 (ref: 20211771)*
> *3. (28 Sep) Health system readiness for reopening: parameters in light of Delta (ref: 20212079)*
> *4. (29-Sep) The in-MIQF transmission risk mitigation map: findings & ongoing work programme (ref: 20212083)*
> *5. (1-Nov) COVID-19 Health System Response: Oxygen supply and environmental Issues (ref: 20212282)*
> *6. (4-Nov) Changes to implement shorter stay MIQ and self-isolation (ref: 20212389)*
> *7. (11-Nov) Oxygen Supply Programme update briefing (ref: 20212282)*
> *8. (12-Nov) Testing case investigation and contact tracing (ref: 20212470)*
> *9. (18-Nov) Public health settings for medium-risk pathway (ref: 20212528)."*

I have identified nine documents within scope of your request. All documents are itemised in Appendix 1 and copies of the documents are enclosed. Where information is withheld, this is outlined in the Appendix and noted in the document itself. I have considered the countervailing public interest in release in making this decision and consider that it does not outweigh the need to withhold at this time.

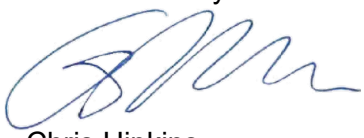
It is important to note that many of these documents reflect current information at a particular point in time, during a rapidly evolving global situation. For the most updated information and advice on COVID-19, please refer to the following sources:

- Ministry of Health www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus
- Unite against COVID-19 www.covid19.govt.nz/

Private Bag 18041, Parliament Buildings, Wellington 6160, New Zealand
+64 4 817 8706 | c.hipkins@ministers.govt.nz | beehive.govt.nz

I trust this information fulfils your request. Under section 28(3) of the Act, you have the right to ask the Ombudsman to review any decisions made under this request. The Ombudsman may be contacted by email at: info@ombudsman.parliament.nz or by calling 0800 802 602.

Yours sincerely



Chris Hipkins
**Minister for COVID-19 Response**

**Appendix 1: List of documents for release**

| # | Date | Document details | Decision on release |
|---|---|---|---|
| 1 | 3 September 2021 | Briefing: COVID-19 therapeutics supply managements 20211968 | Released with some information withheld under section 9(2)(a) of the Act – to protect the privacy of natural persons. |
| 2 | 22 September 2021 | Briefing: Internal review of the June Sydney to Wellington Traveller Case 2021 20211771 | Refused under section 18(d) of the Act as the information requested will soon be publicly available. |
| 3 | 28 September 2021 | Briefing: Health system readiness for reopening: parameters in light of Delta 20212079 | Released with some information withheld under section 9(2)(a) of the Act. |
| 4 | 29 September 2021 | Briefing: The in-MIQF transmission risk mitigation map: findings & ongoing work programme 20212083 | Released with some information withheld under the following sections of the Act:<br>• section 9(2)(a)<br>• section 9(2)(k) to prevent the disclosure or use of official information for improper gain or advantage. |
| 5 | 1 November 2021 | Briefing: COVID-19 Health System Response: Oxygen supply and environmental Issues 20212282 | Released with some information withheld under section 9(2)(a) of the Act. |
| 6 | 4 November 2021 | Briefing: Changes to implement shorter stay MIQ and self-isolation 20212389 | Refused under section 18(d) of the Act as the information requested will soon be publicly available. |
| 7 | 11 November 2021 | Briefing: Oxygen Supply Programme update briefing 20212282 | Released with some information withheld under section 9(2)(a) of the Act. |
| 8 | 12 November 2021 | Briefing: Testing case investigation and contact tracing and appendices 20212470 | Released with some information withheld under the following sections of the Act:<br>• section 9(2)(a)<br>• section 9(2)(b)(ii) where its release would likely unreasonably prejudice the commercial position |

| # | Date | Document details | Decision on release |
|---|---|---|---|
| | | | of the person who supplied the information<br>• section 9(2)(j) to enable a Minister or any public service agency to carry on negotiations without prejudice or disadvantage (including commercial and industrial negotiations). |
| 9 | 18 November 2021 | Briefing: Public health settings for medium-risk pathway 20212528 | Refused under section 18(d) of the Act as the information requested will soon be publicly available. |

# Briefing

## COVID-19 Therapeutics supply management

| | | | |
|---|---|---|---|
| **Date due to MO:** | 3 September 2021 | **Action required by:** | N/A |
| **Security level:** | IN CONFIDENCE | **Health Report number:** | 20211968 |
| **To:** | Hon Chris Hipkins, Minister for COVID-19 Response<br>Hon Andrew Little, Minister of Health | | |
| **Copy to:** | Hon Ayesha Verrall, Associate Minister of Health<br>Hon Peeni Henare, Associate Minister of Health<br>Hon Aupito William Sio, Associate Minister of Health | | |

## Contact for telephone discussion

| Name | Position | Telephone |
|---|---|---|
| **Maree Roberts** | DDG System Strategy and Policy | s 9(2)(a) |
| **Ian Town** | Chief Science Advisor | s 9(2)(a) |

## Minister's office to complete:

☐ Approved ☐ Decline ☐ Noted

☐ Needs change ☐ Seen ☐ Overtaken by events

☐ See Minister's Notes ☐ Withdrawn

Comment:

# COVID-19 therapeutics supply management

| | | | |
|---|---|---|---|
| **Security level:** | IN CONFIDENCE | **Date:** | 2 September 2021 |
| **To:** | Hon Chris Hipkins, Minister for COVID-19 Response<br>Hon Andrew Little, Minister of Health | | |



## Purpose of report

1. This report describes management of medicines supply for treatment of COVID-19 in light of heightened risks and pressures, and additional measures being developed to proactively manage access to therapeutics now in development.

2. This report discloses all relevant information and implications.

## Summary

3. Continuity of supply for medicines used to treat COVID-19 is at heightened risk globally, with one of the few treatments for moderate to severe COVID-19, tocilizumab, in limited supply from now until January 2022.

4. Though the path of the current Auckland outbreak is uncertain, modelling suggests that the number of people hospitalised with COVID-19 over the course of the outbreak is likely grow to between 120 and 280. The majority of these people are likely to meet clinical guidelines for use of tocilizumab, and potentially other therapeutics.

5. Based on these projections, it is uncertain whether supplies of tocilizumab will be sufficient for treatment of all hospitalised people with moderate to severe COVID-19 over the current outbreak as well as for continued treatment of people with severe autoimmune conditions who would not tolerate changing treatments. People who have options other than tocilizumab for autoimmune conditions will likely have changes to treatment until additional supplies are available.

6. Pharmac is working with:

   - Roche Pharmaceuticals and wholesalers to identify any possible avenues to secure further tocilizumab supplies
   - suppliers of COVID-19 treatments to identify available alternatives to tocilizumab
   - suppliers to source alternative treatments for those with autoimmune conditions
   - clinical groups to determine criteria for allocation of existing stock
   - the sector to redirect stockholdings to where needed for COVID-19 treatment.

7. The Ministry is working with the sector, a therapeutics technical advisory group, Te Pūnaha Matatini and Pharmac to understand likely treatment needs as the outbreak continues and to ensure treatment guidance adapts for optimal use of therapeutic

products and available supply. Advice on emerging therapeutics is also being considered on a weekly basis by the therapeutics technical advisory group.

8. Supply issues with COVID-19 therapeutics will be inevitable with the greater impacts of the Delta variant across the world. Active anticipatory and responsive approaches have been put in place to manage COVID-19 supplies including supplies for treating and managing COVID-19. Nevertheless, additional measures may be needed in view of the challenges and equity concerns, especially for Pacific people, becoming evident in the current outbreak.

9. The Ministry is examining additional measures to bolster future supplies, both in the near term for this current outbreak and in the longer term with Reconnecting New Zealanders and ongoing response to changes through the pandemic.

## Recommendations

We recommend you:

a) **Note** that supplies of tocilizumab are being reserved mainly for COVID-19 patients and are likely to be exhausted over the course of the current outbreak **Yes / No**

b) **Note** that officials are working rapidly to ensure optimal use of current supplies and to investigate any sources of further supplies, including supplies of alternative treatments, during 2021 **Yes / No**

c) **Note** that Pharmac will update you on progress with supply management and use of tocilizumab and alternative treatments during the Auckland outbreak, by mid-September **Yes / No**

d) **Note** that the Ministry will provide advice on additional measures to proactively manage supply of future COVID-19 therapeutics by the end of September. **Yes / No**

Ashley Bloomfield
**Te Tumu Whakarae mō te Hauora**
**Director-General of Health**
Date:

Hon Chris Hipkins
**Minister for COVID-19 Response**
Date:

Hon Andrew Little
**Minister of Health**
Date:

# COVID-19 therapeutic products supply management

## Background / context

1. Supply constraints have been a feature of the pandemic with massive global demand for therapeutic products, medicines and medical devices including PPE equipment.

2. With the Delta variant now dominant across the world, rising hospitalisations, even in countries that have achieved reasonably high vaccination, have massively increased demand. This is particularly so for products recommended by the World Health Organization (WHO), who publish regularly updated guidance https://www.who.int/publications/i/item/WHO-2019-nCoV-therapeutics-2021.2

3. Good supplies are available in New Zealand for most therapeutic products and equipment for the COVID-19 health system response (including PPE, ventilation equipment and devices, consumables, testing kits). However, supplies of some medicines, particularly those recommended for treatment of COVID-19 disease in hospital care, are vulnerable.

4. An overview of COVID-19 therapeutic agents is attached.

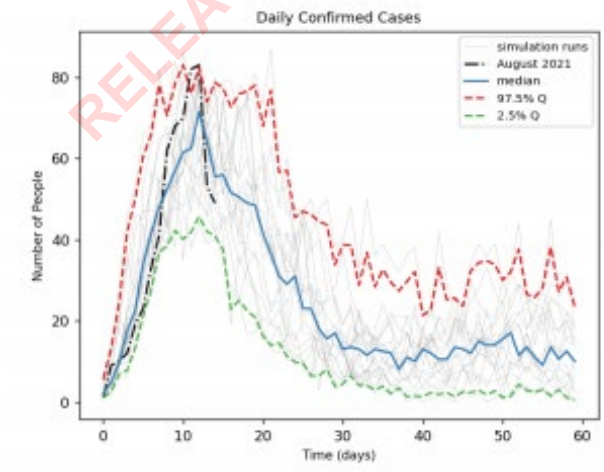
## Current Auckland outbreak and likely hospitalisation and treatment needs

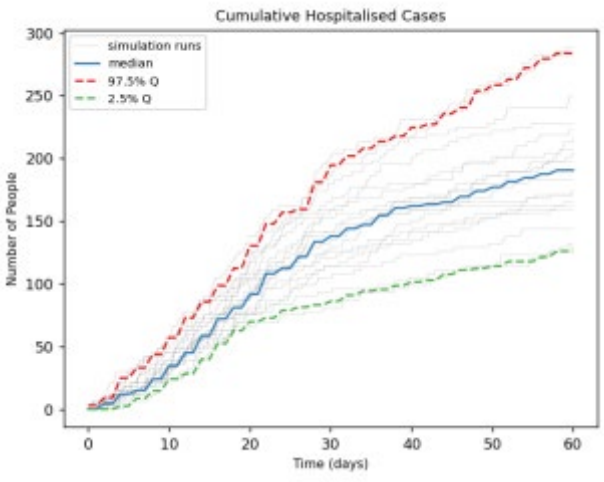
5. As predicted for the Delta variant, the current COVID-19 outbreak in Auckland is much faster growing than the previous Auckland outbreak of August 2020.

### Te Pūnaha Matatini modelling

6. Modelling by Te Pūnaha Matatini has suggested the current outbreak is likely to result in somewhere between 120 and 280 hospitalisations over the coming six weeks or so. This high range is partially driven by the high numbers of Pacific people affected by the outbreak. Pacific communities include higher numbers of people at heightened risk of more severe COVID-19, with up to three times the likelihood of needing hospital care.

7. Preliminary modelling charts below show rough ballpark estimates for COVID-19 case incidence and projected hospitalisations. If case numbers fall more slowly than projected, hospitalisations could exceed these projections. Note these are early estimates and will be updated as input data and modelling assumptions are refined.



### Treatment and care

8. Clinical guidance for COVID-19 treatment in New Zealand is based on international best practice and draws on "living guidance" regularly updated by WHO and health authorities in Australia, the UK, US and others.

9. Treatment of milder COVID-19 is supportive with close monitoring, as no prevention or early intervention treatments are yet established. Care for hospitalised patients in New Zealand is informed by the Counties Manukau Health treatment guideline which is being used as a basis to develop nationwide guidance.

10. All guidance will continue to require frequent updates as evidence on effective clinical management emerges.

### Medicines currently used for treatment

11. Treatment options already available and being used in New Zealand include dexamethasone, tocilizumab, remdesivir and budesonide.

12. Dexamethasone and budesonide are readily available, as they are funded for other conditions. Stocks of remdesivir are available, and Pharmac is working with the supplier to secure further stock in case it is needed for the current outbreak.

## Equity

13. People living in New Zealand who are at highest risk of more severe COVID-19 disease and poor outcomes include those who are older and/or have multiple or serious health conditions, especially where they are also living in crowded conditions, have a high number of close contacts with others and/or have contacts with people at heightened risk of COVID-19 through their work.

14. Pacific communities are at especially high risk – 18% of cases to date have been of Pacific ethnicity, and this unadjusted incidence does not take into account prior travel, age structure in the population or severity. It appears likely that, of people living in New Zealand, Pacific communities are at highest risk of poor outcomes from COVID-19 disease. Māori are also at risk.

15. Prevention of COVID-19 through continued public health measures and vaccination, along with community engagement and the provision of financial, housing, business, employment and social support that enable adherence to these, remain the most important promoters of equitable health outcomes through the pandemic.

## Supply management

16. Pharmac is actively managing supplies of COVID-19 therapeutics to promote best practice management of patients needing COVID-19 treatment and assure access.

### Current supply shortage - Tocilizumab

17. The Minister of Health received an urgent no surprises update from Pharmac on Friday 27 August, for an upcoming shortage of tocilizumab (Actemra®, Roche Pharmaceuticals). Roche NZ had previously assured Pharmac of continuity of supply (for arthritis patients) up until 19 August when Roche suspended global supply to New

Zealand. Roche predicted that New Zealand would be out of stock for three months beginning in October, based on prior usage patterns.

18. Tocilizumab is an immune modulator used to treat certain forms of arthritis and other autoimmune conditions, and also now a widely used COVID-19 treatment since it received Emergency Use Authorisation from the United States FDA in June 2021 and a strong recommendation for use by WHO in July 2021. Prior to the current outbreak, it had been used for treatment of three COVID-19 patients in New Zealand; since the outbreak more than 18 patients had received it by earlier this week.

19. Given that the Roche decision was made just as the Auckland outbreak was starting, Pharmac has been discussing supply for COVID-19 treatment with Roche NZ, without success so far. Roche advised its decision was made in response to high global demand despite doubled production.

### Action to manage tocilizumab supplies

20. Pharmac is working closely with Roche and DHB hospitals to manage supply allocation of tocilizumab to enable use for the treatment of COVID-19. This week, Pharmac has sought advice from relevant experts about possible alternative treatments for current patients on tocilizumab and measures to preserve the remaining stock. Following that, Pharmac will advise clinicians prescribing tocilizumab to their patients of the shortage and share the advice from their experts

21. Pharmac is working with Roche Pharmaceuticals and wholesalers to identify any possible avenues to bolster New Zealand's tocilizumab supply for use in COVID-19 treatment in the current outbreak.

22. Pharmac is also working with suppliers of alternative COVID-19 treatment products to identify and assess suitability of treatments and access supplies, and with the sector to redirect stockholdings to where needed for COVID-19 treatment.

23. Pharmac is working with clinicians to consider alternative treatments for patients using tocilizumab for arthritis and other autoimmune conditions, to free up tocilizumab for Covid patients.

24. The Ministry is working with the sector and Te Pūnaha Matatini to understand likely treatment needs during the current Auckland outbreak. Modelling early in the outbreak suggested that more than 80 people were likely to be hospitalised, this has now been revised upwards. As most will be in quarantine as symptoms emerge, early recognition of worsening symptoms will enable prompt treatment to be used.

25. The Ministry and Pharmac are working to:

- regularly update emerging evidence and guidance in light of supply constraints
- ensure treatment guidance adapts to reflect optimal use of therapeutic products as demand and supply shifts in the pandemic.

## Longer term management of COVID-19 therapeutics supply

26. Globally, development efforts for COVID-19 treatments have been significant with firm clinical use recommendations now emerging. Though attracting perhaps one 20$^{th}$ of the international investment seen in vaccine development, much research is underway into preventive, early interventive and especially severe COVID-19 treatment.

27. A range of pharmaceuticals have been trialled with some popularised substances found to be ineffective or actually harmful (eg, hydroxychloroquine, certain antivirals, ivermectin). Increasing numbers of products are in or have completed phase 3 clinical trials and are now being conditionally approved by medicines regulators.

28. As new products become established and recommended by authorities, demand can be predicted to grow rapidly and supply shortages to occur as is being seen with tocilizumab. The Ministry is working with Pharmac, the sector and other governments to proactively consider and manage options for ongoing COVID-19 therapeutics supply.

29. Of particular interest will be preventive and early interventive treatments to slow or halt progression of COVID-19 symptoms, lowering severity and hospitalisation needs. One example is an oral antiviral medicine being developed by Pfizer to prevent progression of COVID-19 – phase 2 trials on lower risk patients started this week.

30. See the attachment for more detailed information on COVID-19 therapeutics that are further through clinical trials and for which evidence is becoming firmer.

## Current management approach for emerging therapeutics

31. The current management approach involves:

- horizon scanning and initial product assessment by the Ministry's COVID-19 Science and Technical Advisory team on a rolling basis, to synthesize emerging evidence on therapeutic products in development
- review of emerging evidence and potential for clinical use in New Zealand by the Ministry's therapeutics technical advisory group
- review of evidence on the risks, benefits, efficacy and safety of therapeutic products with potential use in New Zealand by Pharmac, with Medsafe input as required, to clinically evaluate treatments, make funding decsisions and determine access criteria
- supply chain facilitation and contract management by Pharmac, using COVID-19 funds to acquire supplies for clinical use in New Zealand, keeping Medsafe informed and involved and working with suppliers to ensure regulatory obligations are met
- providing up-to-date clinical guidance on use of therapeutics informed by the Ministry's therapeutics technical advisory group.

## Expert advice

32. The Ministry has established a COVID-19 Therapeutics Technical Advisory Group (COVID-19 Therapeutics TAG) to provide expert technical advice on therapeutics for use for patients with COVID-19 including:

- identifying therapeutics which may be beneficial in the management of COVID-19 through horizon scanning activities
- providing advice to Pharmac on what therapeutics to consider
- developing appropriate guidelines for clinical use.

33. Pharmac is also establishing an expert advisory group to evaluate clinical evidence and provide evidence-based recommendations on COVID-19 therapeutics and how their use can be optimised for New Zealand. Pharmac's role is to clinically evaluate treatments,

make funding decisions, and determine access criteria for COVID-19 therapeutics, as well as procure supply.

## International approaches

34. The WHO Access to COVID-19 Tools Accelerator (ACT-A) supports global access to treatments for COVID-19 through research (including research in developing countries), analysis, assessment and guidance as development progresses, and a global fund which has provided oxygen and dexamethasone across the developing world.

35. Several countries have established taskforces to promote development, production and supply of therapeutics, similar to their vaccine taskforces. For example, the UK assembled a COVID-19 therapeutics taskforce early in the pandemic to co-ordinate research on the use of safe and effective therapeutics as well as the end-to-end production and provision of treatments for COVID-19 across the UK.

36. Australia has established a 'National COVID-19 Clinical Taskforce' made up of clinical experts who regularly evaluate evidence and provide up-to-date evidence-based recommendations to guide care of people with COVID-19. Australia is now negotiating advance purchase arrangements with suppliers of promising therapeutics.

## Potential additional approaches for New Zealand

37. Early in the pandemic it was hoped that a full elimination strategy would minimise the direct impacts of COVID-19 until immunity could be achieved through vaccination. A rapid response adaptation of Pharmac's standard processes, with additional COVID-19 response funds and partnerships, was put in place to source the needed supplies of therapeutic products. Pharmac is part of the cross-sector critical supply monitoring group and has worked with specific suppliers of critical care medicines to build additional stock in New Zealand and develop processes to rapidly deal with emerging supply issues.

38. Now, with the emerging information about the delta variant and vaccine efficacy, it appears that numbers of people requiring treatment for COVID-19 will be higher than previously thought. A more active interventionist approach is now being taken to ensure supplies of therapeutics will be available, especially once further changes to QFT and isolation requirements occur with Reconnecting New Zealanders.

39. The Ministry is working with Pharmac and MFAT to identify options for more actively accessing therapeutics supplies for treating COVID-19 in New Zealand.

40. Options being explored include:

- Enhancing sponsorship of the engagement of New Zealand clinicians and researchers in treatment **clinical trials** – while patient recruitment limited by low numbers of patients in New Zealand through much of the pandemic, New Zealand clinical and research leads have been actively engaged and their contributions could be a platform for increasing attention and engagement, including at earlier stages in product development
- Intensifying the current approach to actively **facilitate entry** to New Zealand of products newly evidenced and approved internationally that have clinical support for use (within or outside clinical trials)

- Increasing active interest **signals for suppliers** with products in development – how best this could proceed would require careful judgment about the strength of signals, a focus on development and clinical goals rather than commercial, and positioning the lead so as to protect the benefits of Pharmac's established relationships and/or MFAT's global head office connections and preserve attention to meeting current supply chain challenges during the pandemic
- Building **closer international liaison** with other countries' Health ministries, therapeutics taskforces, regulators and purchasers, and clinical guidelines groups
- Building on these more active international links, including research, clinical, regulator and supplier links to promote **collaborative approaches to managing supply** of therapeutics
- Examining the potential for **pooled advance purchase opportunities**, both multilateral (similar to what the COVAX Facility is providing for vaccines) and potentially bilateral (such as negotiating arrangements with a larger advance purchase partner).

## Next steps

41. Pharmac will update you on progress with supply management and use of tocilizumab and alternative treatments during the Auckland outbreak, by

42. The Ministry will provide advice on additional measures to proactively manage supply of future COVID-19 therapeutics by the end of September.

**ENDS.**

# Briefing

## Health system readiness for reopening: parameters in light of Delta

| | | | |
|---|---|---|---|
| **Date due to MO:** | 28 September 2021 | **Action required by:** | N/A |
| **Security level:** | IN CONFIDENCE | **Health Report number:** | 20212079 |
| **To:** | *Reconnecting New Zealanders* Ministerial Group | | |

## Contact for telephone discussion

| Name | Position | Telephone |
|---|---|---|
| **Dr Ashley Bloomfield** | Director-General of Health | s 9(2)(a) |
| **Robyn Shearer** | Acting Chief Executive | s 9(2)(a) |

## Minister's office to complete:

☐ Approved ☐ Decline ☐ Noted

☐ Needs change ☐ Seen ☐ Overtaken by events

☐ See Minister's Notes ☐ Withdrawn

Comment:

# Health system readiness for reopening update: parameters in light of Delta

| | | | |
|---|---|---|---|
| **Security level:** | IN CONFIDENCE | **Date:** | 28 September 2021 |
| **To:** | *Reconnecting New Zealanders* Ministerial Group | | |



## Purpose of report

1. The report outlines a high-level direction for health system readiness for reopening based on lessons from the Delta outbreak. The settings proposed in this paper are mapped out to ensure that future incursions through more open borders can be kept to manageable levels.

## Summary

2. New Zealand has been recognised internationally for success in managing COVID-19. The Elimination Strategy has provided a reliable and adaptive framework for blocking the virus at the borders and managing the few incursions into the community. Throughout this time the health system has remained agile in responding to and planning for the changes in the virus, adjusting public health measures and to managing specific risks.

3. To protect the hard-won gains, there is significant work required in the next few months to prepare our health system for the reopening. The preparation for the next phase of our COVID-19 response needs to account for the learnings from our journey so far, particularly the lessons from the Delta outbreak.

4. Critical to our reopening and ongoing response in the short-term is maximising vaccination uptake which will reinforce protection for our population and health system by reducing serious illness and disease.

5. The other significant priority for the Ministry of Health (the Ministry) is to build health system readiness so it can manage COVID-19 in a sustained and sustainable manner. The key objective in reconfiguring the health system to manage COVID-19 cases in the community will be two-fold:

    a. Keep the number of people who get COVID-19 as low as possible.

    b. Manage people with COVID-19 with the lowest level of appropriate input to meet health and social needs.

6. A 'health system readiness' work programme (the programme) has been set up at the Ministry that intends to coordinate work across the New Zealand health system to make

sure that there are sustainable plans in place to manage any recurring community resurgences of COVID-19.

7. The key areas of the programme include workforce capacity and innovation, testing and surveillance, hospital readiness and capacity, facility and equipment supply, data and digital, equity challenges, and primary and community level models of care for the management of COVID-19, and equitable distribution of resources across communities and regions in New Zealand. In the long-run, the programme aims to create a COVID-19 response model that will align with and deliver on the aspirations for the 'health and disability system transformation'.

8. Based on international experience and modelling scenarios, it is likely that even with high levels of vaccination in New Zealand, any transition towards more open borders should be gradual, carefully balancing goals and risks, to ensure that an increase in cases and hospitalisations can be managed by the health system without compromising other care.

9. Therefore, intrinsic to New Zealand's ability to open its borders is the health system. This will allow us to reduce harm and protect the capability and capacity of our health system and the community well-being it serves.

10. This paper provides a high-level outline of how the health system might best be adapted based on what we know from the Delta outbreak. Further, more comprehensive advice will be provided in the November *Reconnecting New Zealanders* Cabinet paper.

## Recommendations

We recommend you:

a) **Note** that the health system has succeeded in responding system-wide to outbreaks and it must continue to remain agile, vigilant, and responsive to the ever-changing threat of COVID-19. **Yes/No**

b) **Note** that further significant investment in the health system is required to ensure that future incursions through more-open borders can be kept to manageable levels without causing an unacceptable level of harm to health. **Yes/No**

c) **Note** that high vaccination uptake among all population groups remains the best means of keeping virus infections to manageable levels. Therapeutics will also play an increasing role in supporting COVID-19 response. **Yes/No**

d) **Note** that key areas of focus for health settings reconfiguration will include boosting workforce, testing and other surveillance; community level management of COVID-19 cases; and equitable distribution of health resources to diverse communities and regions of New Zealand. **Yes/No**

e) **Note** that opening New Zealand's border, even with a highly vaccinated population, is likely to cause an escalation in cases, disease, and deaths **Yes/No**

f) **Note** that the Ministry of Health is progressing a significant programme of work to prepare New Zealand's health system and readiness for reopening, including the National Health Resilience Plan. **Yes/No**

g) **Note** that the required health system reconfiguration for reopening New Zealand will require significant investment and building greater community participation, both of which will take time. **Yes/No**

h) **Note** that decisions around desired settings for New Zealand reconnection will be critical in mapping out the detailed health system requirements. **Yes/No**

i) **Note** that the Ministry of Health will report back with a more detailed health system readiness plan in the November *Reconnecting New Zealanders* Cabinet paper. **Yes/No**

Dr Ashley Bloomfield
**Te Tumu Whakarae mō te Hauora**
**Director-General of Health**
Date:

Rt Hon Jacinda Ardern
**Prime Minister**
Date:

Hon Grant Robertson
**Minister of Finance**
Date:

Hon Chris Hipkins
**Minister for COVID-19 Response**
Date:

Hon Nanaia Mahuta
**Minister of Foreign Affairs**
Date:

Hon Kris Faafoi
**Minister of Immigration**
Date:

Hon Michael Wood
**Minister of Transport**
Date:

Hon Peeni Henare
**Associate Minister of Health (Māori Health)**
Date:

Hon Dr Ayesha Verrall
**Associate Minister of Health**
Date:

Hon Aupito William Sio
**Associate Minister of Health (Pacific Peoples)**
Date:

Hon Meka Whaitiri
**Minister of Customs**
Date:

# Health system readiness for reopening update: parameters in light of Delta

## Opening New Zealand's borders and reconnecting with the world poses a significant challenge to the health system

11. New Zealand has been recognised internationally for success in managing COVID-19. The health system has remained agile in responding to and planning for the changes in the virus, adjusting public health measures and managing specific risks.

12. Delta is highly transmissible, more so than the original COVID-19 and Alpha strains. It has required us to rethink the settings under the Elimination Strategy and to tighten our public health controls, particularly at lower Alert Levels wherein there are fewer restrictions on movement and socialising.

13. The outbreak has highlighted areas that require significant investment in our health system and has demonstrated that the existing system is not adequately equipped to respond sustainably to a lasting incidence of COVID-19 in the community and to increasing threats of incursions, particularly as we reopen the borders.

14. Once New Zealand starts to loosen border controls and reconnect with the world, it can be expected - based on the experiences of comparable countries such as Australia and Singapore - that even with high levels of vaccination, COVID-19 will enter our community steadily. However, the settings at the border will continue to maintain controls against the entry of COVID-19 into New Zealand, including risk-based entry pathways.

15. In a reconnected future, responding to individual cases as we do now will not be possible. Therefore, it is to be expected that even the anticipated low-level presence of COVID-19 in the New Zealand community would lead to an escalation in cases, disease, and deaths, and an increased pressure on our health and welfare systems.

### Vaccination and therapeutics have the potential to provide significant protection

16. Overseas evidence has shown that vaccination results in a significant reduction in serious illness from COVID-19 infection. Minimising this serious illness is vital to lowering the burden on our healthcare system.

17. The COVID-19 Immunisation Programme has the potential to significantly reduce the risk and impact of COVID-19 for New Zealand. High uptake continues to be key to providing a level of personal protection and preventing severe outcomes from COVID-19, including associated hospitalisation and death.

18. The success of the Immunisation Programme will be measured by several key factors and not just achieving a vaccination target. This reflects both the uncertainty around COVID-19 and the evolving risk but also our developing understanding of the effectiveness of vaccines. Maintaining an efficient, equitable, safe, and positive vaccination experience for New Zealanders will ensure success not only in 2021 but also if COVID-19 vaccination needs were to change in the future, as expected.

19. Even then, children under age 12 and some communities with vaccination rates lagging the national average will remain at risk, so the health system must improve other prevention, mitigation, treatment, and social support measures for those who become infected or are impacted by illness and related disruption.

20. Therapeutics have the potential to play a much bigger role in mitigating these consequences in future. To date, therapeutics have enabled better care for people with moderate to severe and critical COVID-19 in hospital and ICU care. Within the coming months to a year or so, they could provide substantial protection for those for whom vaccination is not fully effective or not able to be used.

### COVID-19 will continue to impact on all aspects of our health system

21. The current priority for the Ministry of Health (the Ministry) is to ready the health system to make it more agile, better equipped, and more vigilant and responsive to the ever-changing threat of COVID-19. This readiness work will require significant investment, as well as building community participation and public buy-in, all of which will take time.

## Learning from the Auckland outbreak: building health system resilience and readiness for reopening

22. Throughout 2020 and the first half of 2021 the health system adapted well to what it was learning from the early response here and lessons from other countries. The Elimination Strategy, with its four pillars of 'keep it out', 'prepare for it', 'stamp it out' and 'manage the impact' provided a reliable and adaptive framework for blocking the virus at the borders, containing the few incursions beyond MIQ and all the while building capability and capacity to manage larger incursions.

23. As the Delta outbreak in Australia demonstrated, this variant of concern changes the risk calculus. New Zealand's response to the August 2021 Delta outbreak has further highlighted system constraints that need to be addressed to build a more resilient and durable health system prepared to manage the increased cases in the community expected in a reconnected New Zealand in a sustained and sustainable manner.

### Regional distribution of health resources will be key

24. Opened borders and increased travel will attract tourists to regions significantly less resourced than Auckland. Given what we have seen in Auckland, a similar outbreak in any other region could threaten both the system and communities there.

25. Currently, the health system is supporting Auckland in this outbreak. With a wider geographical spread of COVID-19 likely in the future, regional distribution of health resources will become more important to responding effectively, consistently, and equitably to an outbreak wherever it might occur.

### Public health control measures will remain critical to protect against COVID-19

26. If we cannot keep the virus at a manageable level within the community the health system could become overwhelmed. Auckland's experience under the current Delta outbreak demonstrated this risk and has thrown light on how the system as a whole can prepare for future incursions of this or more harmful variants of concern.

27. For the health system to cope, it is likely a greater emphasis will be placed on control measures at lower alert levels. Ongoing mask wearing in wider contexts may be necessary, limitations on gathering sizes may need to continue in higher-risk settings, and the emphasis on scanning will need to continue. These will, however, support wider community activities with greater confidence the risk of virus spread is being minimised.

## Workforce remains a key pressure point across all COVID-19 response settings

28. Responses to COVID-19 will place demands on different parts of our health workforce and at different times. In the early elimination approach, testing and tracing, along with MIQ facilities, required the most workforce resource. More recently the scaling up of the vaccination programme has required an augmentation of the capacity for the pre-Delta rollout, meaning staff performing non-COVID-19 health functions had to be redeployed.

29. Similarly, staff for testing and contact tracing have in many cases been redeployed from other activities. One result has been a demand surge for those pre-outbreak services when Alert Levels de-escalate, and patient access again became possible.

30. Once the current outbreak demands reduce, ongoing health impacts – including mental health - are likely to increase. This will place further pressure on an already stretched workforce, including hospitals outside of Auckland and primary care services that have been peripheral to, or spared by, the response. If a later outbreak were to cause sustained transmission in multiple regions, the impacts would be distributed across the entire health system; the capacity to shift staff from outside of Auckland to reinforce the workforce there would be limited.

31. The Ministry is considering strategies to address the ongoing challenges of workforce capacity and capability, and prepare for the influx of cases following border reopening. These strategies include:

    a. Maximising productive use of the existing workforce, including preparing people for working in different roles and specialities, to match evolving needs in different regions.

    b. Reducing the demand on the workforce, especially as cases become endemic in the community. It will be important to ensure that people impacted by COVID-19 but who do not require acute, or specialist healthcare are supported to be treated and to recover in their homes and communities.

## Management of COVID-19 needs to be rebalanced in favour of community and primary care

32. While it is important to ensure there is sufficient capacity and capability at secondary and tertiary care level (e.g., sufficient ICU capacity, personal protective equipment), international evidence and the experience in Auckland have shown that whilst community cases will require management and monitoring of symptoms, most will not require admission to hospital.

33. However, communities must feel confident in managing COVID-19 locally in order to minimise that impact on the overall system. The most effective and efficient way to manage COVID-19 locally will be to:

a. enable families and communities to manage mild illness

b. enable primary care to manage moderate illness

c. identify those who need hospital care early

d. facilitate access to hospital for those who need it

e. discharge as early as possible to appropriate community care.

34. Understanding the key risks faced by different communities, and the gaps in the overall government response to COVID-19, is a key part of managing COVID-19 and keeping communities engaged in the COVID-19 response. It is also integral to the government meeting its obligations under Te Tiriti o Waitangi, in particular the principles of active protection and equity.

## Impacts on diverse communities of New Zealand need to be managed appropriately

35. COVID-19 impacts on the diverse communities of New Zealand in several ways:

a. Some communities are more at risk than others of exposure to COVID-19, and therefore have been subject to greater restrictions and requirements. For example, the border workforce has many Māori and Pasifika staff, many of whom live close to border entry points where border outbreaks have begun.

b. Similarly, some communities, including Māori and Pasifika, are more at risk of developing severe illness should they contract the virus compared to the community as a whole.

c. Some communities are more negatively impacted by measures to contain spread when outbreaks occur, including people in less stable accommodation and employment and lower socioeconomic areas. Denser occupancy and poorer quality of housing are more common in these circumstances.

36. Individuals and communities can experience one or more of these impacts concurrently - particularly Māori and Pasifika, who are over-represented in many of these categories as evidenced during the Delta outbreak. The Ministry is actively working with Te Tiriti partners and key stakeholders from across the Māori and Pasifika health sector network to understand and address emerging challenges and opportunities related to the current COVID-19 outbreak.

## Enhanced surveillance and testing will be a key feature of the future response

37. Testing has been critical in early detection of cases, managing the Delta outbreak and providing the evidence required to act in a targeted, decisive fashion. However, the outbreak has also exacerbated the strain on the testing workforce and laboratory capacity.

38. In the next phase of living and dealing with COVID-19 once borders reopen, we need a high level of surveillance that will support early identification of cases; targeted responses to potentially escalating case numbers will be key.

39. The Ministry's COVID-19 Surveillance Strategy has been refreshed and will act as a baseline for an iterative process of continuous improvement and adaptation to the changing context as New Zealand reopens.

40. It is expected that testing will move from a focus on travellers and the border to the community, entailing more testing in community settings (though border testing will remain an important control).

41. To support this transition, significant investment in new testing technologies as well as more testing capacity including testing workforce and laboratories will be needed.

## Work is underway to prepare New Zealand's health system and readiness for reopening

### The health system readiness plan is underpinned by two key objectives

42. The potentially endemic presence of COVID-19 in our community will shape our approach to managing cases, and it is likely our key objective within this context will be two-fold:

    a. Keep the number of people who get COVID-19 as low as possible.

    b. Manage people with COVID-19 with the lowest level of appropriate input to meet their needs.

### The Ministry is continuing to map out the detailed health system requirements

43. Significant work is underway across the New Zealand health system to make sure that there are plans in place to manage any recurring community resurgences of COVID-19. The Ministry's health system readiness work programme (the programme) is coordinating activities required to manage responses in a sustainable way. **Appendix 1** contains a high-level overview of the programme plan.

44. The Auckland response has shown that the most immediate pressures are in resource capacity, primarily our health workforce, but also our physical capacity. While there needs to be some short-term solutions, it is imperative the health system readiness planning takes into consideration a long-term view to ensure that the system remains agile, equipped to manage ongoing risk of COVID-19.

45. Significant investment and funding, both in the short and long-term will be critical in enabling this readiness programme. The programme will:

    a. consider capacity and capability across care settings, including public health, primary and community care, hospital, and critical care services.

    b. take a functional view to make sure dependencies across care settings are identified and factored into planning. This includes aspects across workforce training, models of care and physical environment (facilities and supplies).

    c. engage with Māori and Pasifika to ensure our measures for priority populations are planned for, and equity of access to services is a central consideration when planning activity.

*Short-term priorities (next 6 months)*

46. The next six months will focus on tactical strategies to expand core health system capacity, including targeted investment for facilities and equipment, initiatives for growth and training development of the health workforce, and further development of models of care to optimise our collective health system responses.

47. Alongside the immediate response efforts, work to develop a *National Health Resilience Plan* is underway starting with the Northern Region. This plan has a longer horizon and will make sure our health system can manage any community resurgences in a sustainable way. The plan will consider care settings broadly, including public health, primary and community care, and hospital care.

*Long-term priorities (12-24 months)*

48. A key element of building long-term resilience is strengthening the capability and capacity of the public health system. The public health system will be at the core of strengthening the overall readiness of the health system and evolve its settings (eg surveillance and testing) to respond to ongoing threat of COVID-19.

49. As part of the health and disability system reforms, the public health operating model is currently being developed. It sets out the key public health functions and how they will be carried out across the system. It will be in place by July 2022. At the same time, establishment of the interim Public Health Agency has commenced. Key elements of this work are how population health will be embedded across the system and bolstering the public health knowledge system to respond to health threats in a timely way.

## Our approach to responding to COVID-19 in the community determines the health system capacity required

50. Decisions around our strategic approach to response will impact on both the scale of the health system capacity required, and also on the weighting of capacity across different elements of the health system.

51. There is a series of key inputs within the strategic approach that will feed into and shape the Ministry's ongoing work on preparing the health system to be as successful as possible. These key inputs include:

    a. expectations around vaccination uptake generally and in vulnerable communities

    b. evidence about the impact of vaccination on serious illness and transmission

    c. clear intent and direction on the use of control measures in different contexts at lower Alert Levels

    d. the ongoing approach to surveillance and testing, including resourcing levels – both residual and surge.

52. These and other inputs are needed to produce clear modelling to contribute to a baseline of understanding for determining the capacity and capability that may be needed to get our health system ready for a reconnected New Zealand.

## Equity

53. The risk of negative health and non-health impacts of COVID-19 will disproportionately affect at-risk populations such as older people, disabled people, Māori, Pacific peoples, and those in low socioeconomic areas, who are likely to experience co-morbidities, and already face inequities in both access to health care, and overall health outcomes. These are likely to be exacerbated and need to be proactively managed through equitable distribution of our health system resources.

54. We must also take into consideration the downstream effects of health system capacity to address issues other than COVID-19, including cancer, diabetes, and cardio-vascular disease, immunisation, will have further significant impacts on Māori and Pacific people. Other broader impacts of COVID-19 include delays to seeking healthcare due to insufficient staffing, healthcare staff contracting COVID, resulting in staff shortages, high occupancy rates in hospitals that are already at capacity.

## Next steps

55. The Ministry will further refine and finalise the advice on New Zealand's health system readiness plan for reopening, including the health system readiness plan and explore in more detail the interdependencies highlighted in the response, implications for easing the border, and options available to Ministers for investment in the health system. This advice will be provided for consideration as part of the Reconnecting New Zealanders Cabinet paper in November.

# *Appendix 1:* Health System Readiness Programme overview

**Vision:** Ensuring safe and sustainable healthcare delivery as Aotearoa

**Purpose:** The health system is more agile, better equipped, more vigilant and increasingly responsive to the changing threat of COVID-19.

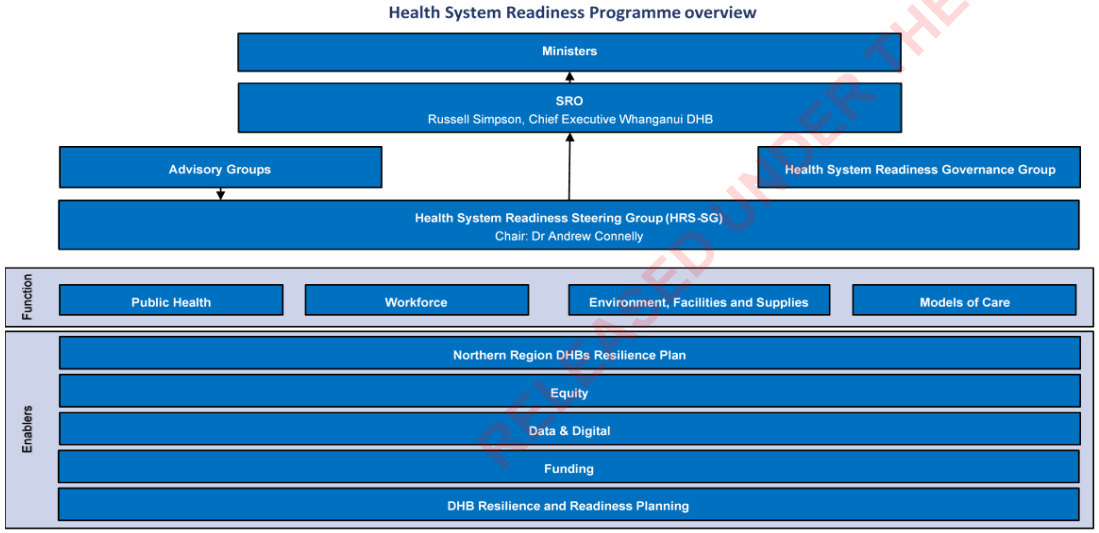
### Desired outcomes

- Future pandemic response is geared towards actively protecting, preventing and mitigating the impacts on Tangata Whenua and Tangata Tiriti.
- Tangata Whenua partnership and capability to support the expression of tino rangatiratanga is embedded into ways of working.
- Collaboration and coordination continues across government and sectors to maximise wellbeing and achieve equitable outcomes.
- Health continues to be a key partner across strategic, policy, and operational activities across wellbeing domains.
- Systems maintain institutional knowledge, infrastructure and resources gained through our response.
- Learnings from COVID-19 are integrated into building a stronger health system.
- Health system readiness is delivered in a culturally appropriate way that recognises and supports the expression of hauora.

### Objectives:

The key objectives in reconfiguring the health system to manage COVID-19 in the community is twofold:

- Keep the number of people who get COVID-19 as low as possible
- Manage people with COVID-19 with the lowest level of appropriate input to meet their needs.




### Scope

The key areas of scope within the HSRP include:

- workforce capability and capacity
- innovation opportunities
- testing and surveillance
- hospital readiness and capacity
- facility equipment and supply
- data and digital solutions
- equity challenges
- primary and community models of care for the management of COVID
- equitable distribution of resources across communities and regions in New Zealand

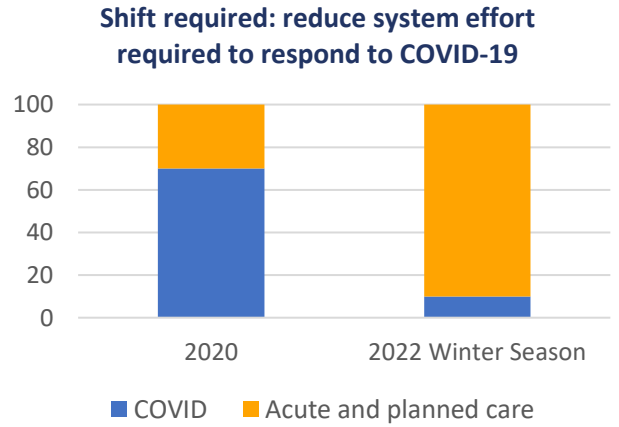
### Out of scope

Rest of system support and advice, for example:

- Reconnecting New Zealanders Strategy
- MIQF and Border settings

### Key messages

- The Reconnecting New Zealanders Strategy acknowledges that as community vaccination rates increase there are more options for managing COVID-19.
- The public health options change from a reliance on lockdowns and strong border restrictions to include more relaxed border controls targeted to high-risk passengers; broader surveillance programmes; self-isolation models; and more targeted public health interventions at a local and regional level.
- The reconnection pathway is unlikely to be linear or one way and there is no set timeline for the shift to the management of COVID-19 as an endemic disease, however it should be assumed that most future requirements need to be in place for the 2022 winter season.
- The HSRP is in two parts; the Ministry-led "top down" approach will be informed and complemented by the "bottom-up" approach through the development of a Northern Region Resilience Plan. This work is supported by the DHB Chief Executives. The immediate focus is to identify future requirements and lessons learnt in the current outbreak.



# Briefing

## The in-MIQF transmission risk mitigation map: findings and ongoing work programme

| | | | |
|---|---|---|---|
| **Date due to MO:** | 29 September 2021 | **Action required by:** | N/A |
| **Security level:** | IN CONFIDENCE | **Health Report number:** | 20212083 |
| **To:** | Hon Chris Hipkins, Minister for COVID-19 Response | | |
| **Copy to:** | Hon Dr Ayesha Verrall, Associate Minister of Health | | |

## Contact for telephone discussion

| Name | Position | Telephone |
|---|---|---|
| **Bridget White** | Deputy Chief Executive, COVID-19 Health System Response | s 9(2)(a) |
| **Shona Meyrick** | Group Manager, Border and Managed Isolation | s 9(2)(a) |



## Minister's office to complete:

☐ Approved ☐ Decline ☐ Noted

☐ Needs change ☐ Seen ☐ Overtaken by events

☐ See Minister's Notes ☐ Withdrawn

Comment:

# The in-MIQF transmission risk mitigation map: findings and ongoing work programme

| | | | |
|---|---|---|---|
| **Security level:** | IN CONFIDENCE | **Date:** | 28 September 2021 |
| **To:** | Hon Chris Hipkins, Minister for COVID-19 Response | | |

## Purpose of report

1. This briefing presents the findings of a full review of all controls that are currently in place to mitigate the risk of transmission of COVID-19 from the Managed Isolation and Quarantine environment to the community, with specific consideration to the risks that Delta may pose.
2. This work has produced a 'In-MIQF transmission risk mitigation map' (the map) which will be reviewed and updated quarterly, and summarises the 'in-progress' and high impact 'gaps/opportunities' that were identified during the review.
3. A key element of managing risk within the Managed Isolation and Quarantine environment is ensuring there is a well resourced and trained MIQ health workforce and this briefing also provides an update on work underway to further address this.
4. This report discloses all relevant information and implications.

## Summary

5. Preventing transmission of COVID-19 to returnees, staff, or to the wider community from within Managed Isolation and Quarantine Facilities (MIQF) is a critical public health objective within our Elimination Strategy.
6. There is a broad range of public health and infection prevention and control (IPC) risk mitigations in place across the MIQ system which work to collectively reduce the risk of in-MIQF transmission. The Ministry of Health (MoH) and the Ministry of Business, Innovation and Employment (MBIE) have undertaken an end-to-end mapping exercise of these mitigations, with support and input from a wide range of public health, IPC, and operational stakeholders across the MIQ system.
7. The in-MIQF transmission risk mitigation map that resulted from this exercise is a living document that will be updated over time as our system evolves, as part of our continuous improvement approach.
8. The map provides a comprehensive overview of the range of existing public health and IPC mitigations in place (or in-progress), their rationale, and the level of evidence that support them. It also provides high-level analysis of the operational challenges and implications of the mitigations, as well as an assessment of their effectiveness. Finally,

the map identified gaps/opportunities where additional or amended transmission risk mitigations could add value to the system, particularly in the light of the Delta variant.

9. Overall, 44 key controls were identified across the system, 17 of which are in-progress. An additional 15 gaps/opportunities to strengthen the system were also identified. A summary of all of these mitigations is provided in **Appendix 1**.

10. These collectively form the basis of our ongoing work programme to strengthen the in-MIQF transmission risk controls across the MIQ system. This work programme is presented below in paragraphs 23 and 24.

11. Workstreams related to supporting the MIQF health workforce remain critical to this ongoing work programme, as many of the in-progress risk mitigation measures and gaps/opportunities identified in the map are enabled by the health workforce. Accordingly, an update on the progress of the following workforce-related workstreams is provided in paragraphs 25 – 53:

- Remote health checks.
- Review of health assessment processes in MIFs.
- Implementation of an acuity tool to identify high needs returnees.
- Optimising the skill-set across the health workforce.
- Incentivising the health workforce.
- Launch of MBIE's #treatmefairly initiative.

## Recommendations

We recommend you:

a) **Note** that we have developed an end-to-end map of the suite of public health and IPC transmission risk mitigation measures we have in place to reduce the risk of in-MIQF transmission. **Yes/No**

b) **Note** that the in-MIQF transmission risk mitigation map is a living document that will be updated on a quarterly basis as our measures are strengthened. **Yes/No**

c) **Note** that the in-progress mitigations and the high impact gaps/opportunities identified in the map form the basis of our ongoing programme of work to strengthen the in-MIQF transmission risk mitigations across the MIQ system. **Yes/No**

d) **Note** that we will continue to keep you updated on progress of this work programme through our weekly reporting. **Yes/No**

e) **Note** that the health workforce is the key enabler of many of the risk mitigation measures outlined in the map, and that as a result key work streams have been developed to respond to the need to relieve pressures in the short term and rationalise the way in which staff are deployed: **Yes/No**

- Remote health checks.
- Review of health assessment processes in MIFs.

- Implementation of an acuity tool to identify high needs returnees.
- Optimising the skill-set across the health workforce.
- Incentivising the health workforce.
- Launch of MBIE's #treatmefairly initiative.

Bridget White
Deputy Chief Executive
**COVID-19 Health System Response**
Date: 24/9/21

Hon Chris Hipkins
**Minister for COVID-19 Response**
Date:

# The in-MIQF transmission risk mitigation map: findings and ongoing work programme

## Background

12. Preventing in-MIQF transmission (transmission within MIQFs between those not in the same bubble) is key to the 'keep it out' pillar of the Elimination Strategy, as preventing returnees from exiting MIQFs while infectious is critical to preventing onward transmission of COVID-19 to the community.

13. Broadly speaking, in-MIQF transmission is driven by three key factors:

- **Factor 1:** the likelihood that an individual in the MIQF is infectious with COVID-19.
- **Factor 2:** the likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).
- **Factor 3:** Host determinants of susceptibility to infection (e.g. vaccination status or immunity from past infection).

14. We have a broad range of public health and IPC risk mitigations in place across the system – spanning pre-arrival to post-departure – which address these factors and work to collectively reduce the risk of in-MIQF transmission. This suite of risk mitigations has been progressively built upon as the system has learned from and responded to risks and incidents as part of our continuous improvement approach since the establishment of the first MIQFs around 18 months ago.

15. The MIQ system has since evolved into a mature and complex system. Given the MIQ system will continue to support the Reconnecting Aotearoa New Zealand strategy [MBIE briefings 2021-4107, 2122-0483, and 2122-1013 refer], and in the context of ongoing work to understand how the MIQ system could be modified (e.g. the use of 'short-stay MIQ') to support the Reconnecting Aotearoa New Zealand work programme, there is a need to have end-to-end oversight of the entire suite of public health and IPC risk mitigations in place.

16. From July 2021, the Ministry of Health (MoH) and the Ministry of Business, Innovation and Employment (MBIE) undertook an end-to-end mapping exercise of the suite of public health and infection prevention and control (IPC) measures in place across the entire MIQ system.

17. The results of this exercise were reviewed and refined by a wide range of stakeholders involved in the system, including stakeholders from District Health Boards (DHBs), Public Health Units (PHUs), the MIQ Technical Advisory Group (MIQ TAG), and operational leaders from across the MIQ system.

18. The result of this exercise is the 'in-MIQF transmission risk mitigation map' (the map) – a living document that will be updated over time as our system evolves, as part of our

continuous improvement approach. A high-level summary of the map is provided in **Appendix 1**.

## The purpose of the in-MIQF transmission risk mitigation map

19. The maps' purpose is to:

- Provide a comprehensive view of the range of existing public health and IPC mitigations in place, their rationale, and the level of evidence that support them.
- Identify any challenges or operational costs (e.g. workforce burden) associated with these mitigations.
- Clarify how and why the mitigations reduce the risk of in-MIQF transmission, and how the mitigations fit together as part of a comprehensive end-to-end approach to mitigating risk.
- Provide a high-level assessment of the effectiveness of these mitigations.
- Identify gaps and opportunities where additional or amended mitigations could be valuable.

20. The map will also provide the foundation for:

- Assessing which mitigations can be enhanced to support system improvements and reduce risk across the system (i.e. high impact mitigations).
- Assessing which mitigations can be removed or amended (i.e. low impact, high burden mitigations), to ensure resources are best directed towards the most beneficial mitigations and activities.
- Evaluating how any new proposed mitigations fit within the existing suite of mitigations, their likely impact on the risk of transmission across the system, and their likely operational cost/burden. Whilst each gap/opportunity identified in the map will reduce the risk of in-MIQF transmission, there is generally a system cost associated with the implementation of these mitigations (e.g. on the workforce), which need to be carefully evaluated against their likely impact on transmission risks.
- Identification of opportunities to maximise efficiency and impact, and reduce the operational burden of mitigations, particularly for the workforce.

21. Alongside the mitigations that are already in-progress, the high impact gaps/opportunities identified in the map form the basis of an ongoing programme of work to strengthen the public health and IPC mitigations we have in place. That work programme is presented below and will be added to as further high impact gaps/opportunities are identified.

22. The map has been endorsed by the MIQ TAG. Note that we are exploring opportunities to have the map independently peer reviewed and will keep you informed of our progress in our regular weekly updates.

## Seventeen in-progress mitigations were identified in the map…

23. The majority of the 'in-progress' mitigations related to either returnee testing and monitoring, or managing returnee movements. Note that work to finalise the completion timeframes for some of the in-progress mitigations is continuing.

| | Transmission risk mitigation actions | Lead | Timeframe |
|---|---|---|---|
| **Border settings** | • Item 2: Establishment of vaccination passports | Customs | Early 2022 |
| **In-transit to Aotearoa New Zealand** | • Item 6: Vaccination of international aircrew | MoH | End of September 2021 |
| **Border and MIQ workers** | • Item 15: increasing the frequency of surveillance testing for MIQ workers | MoH | Early October 2021 |
| | • Item 18: Systematising monitoring and management of symptomatic staff using existing applications | MoH | October 2021 |
| **Transport to a MIQF** | • Item 28: Use of HEPA filters in buses to improve ventilation | MBIE | MBIE is undertaking further work to clarify completion timeframes |
| **Length of stay and overall management** | • Item 31: Increasing the length of stay for cases of COVID-19, in light of the Delta variant | MoH | 30 September 2021 |
| **Returnee testing and monitoring** | • Item 36: Introducing an additional day 6/7 routine test for returnees | MoH | End of September 2021 |
| | • Item 37: Design of a saliva testing pilot for returnees to enable a mixed modality testing regime. | MoH | End of October 2021 |
| | • Item 39: Implementing findings of review of health assessment processes, to improve model of care and reduce staff exposure risk. | MoH | End of September – early December 2021 |
| | • Item 40: Trial of remotely working RNs to support initial health assessments and daily health check processes. | MoH | Ongoing |
| **Managing returnee movements** | • Item 44: Returnee behavioural insights study | MoH | End of 2021 |
| | • Item 45: Investigating opportunities to provide returnees with better fitting masks | MoH | End of 2021 |
| | • Item 47: Use of CCTV as a quality improvement tool for identifying and responding to bubble and IPC procedural breaches | MBIE | MBIE is undertaking further work to clarify completion timeframes |
| | • Item 49: Vaping trial for returnees | MoH | End of 2021 |
| **Ventilation** | • Item 54: Achieving negative pressure in rooms relative to corridors | MBIE | MBIE is undertaking further work to clarify completion timeframes |
| | • Item 55: Use of air filtration units | MBIE/ MoH | Mid October 2021 |
| | • Item 56: Non-sequential door interactions and reducing concurrent/sequential door opening events | MoH | Mid October 2021 |



## … and fifteen gaps/opportunities to strengthen our mitigations were identified in the map

24. Many of these 'gaps/opportunities' were in the 'Border and MIQ worker' section of the map. The 'gaps/opportunities' identified in the map are presented below, ranked by impact/burden and priority. Four low impact gaps/opportunities were identified which will not be progressed at this time – these have been excluded from the table below.

| | Stage in returnee journey | Transmission risk mitigation actions | Owner |
|---|---|---|---|
| **High impact, low burden** | **Border and MIQ Workers** | Item 13: Ensure all Border and MIQ workers are offered other routine vaccinations e.g. MMR, seasonal influenza | MBIE |
| | **Length of stay and overall management** | Item 33: Reviewing capacity of the MIQ system. | MBIE |
| **High impact, high burden** | **Transiting through the airport** | Item 10: Rapid testing at the border | MoH |
| | **Border and MIQ Workers** | Item 12: Booster shot programme for Border and MIQ workers | MoH |
| | | Item 19: Ongoing IPC education and training, ongoing professional development and refresher training | MoH |
| | | Item 20: Establish a programme for upskilling existing MIQ health workforce to become IPC champions | MoH |
| | | Item 21: Consistent contracts with paid sick leave to enable staff to stay home when sick, framing as 'public health' leave. | MBIE |
| | | Item 22: Improving staff recruitment and retention. | MBIE/MoH |
| | **Length of stay and overall management** | Item 34: Improving identification of returnees with language barriers, and improving access to interpreters. | MBIE |
| | **Managing returnee movements** | Item 43: Improve returnee adherence to IPC measures via targeted messaging and education at the beginning of returnees' stays. | MBIE/MoH |
| | **Post-departure** | Item 60: Arranging vaccination post-departure. | MoH |

## The health workforce is a key enabler of many of the risk mitigation measures outlined in the map

25. Work streams related to reducing the burden on and maximising the productivity of the health workforce are critical aspects of the ongoing work programme.

26. The health workforce is the key enabler of many of the risk mitigation measures outlined in the map, and in particular for items 30-53 (Appendix 1). The map plays an important role in providing a consolidated view of the interplay between measures and any unintended consequences, the operational burden, and the sequencing of measures.

27. The clear benefits of introducing new mitigation measures can therefore be evaluated carefully against the additional workload required of an already stretched workforce, particularly in Auckland. The current response to the outbreak in Auckland is adding to the pressures.

*Challenging context for health workforce*

28. The MIQF health workforce is operating in a challenging environment, particularly in Auckland but increasingly in other areas as well. Ongoing pressures include:

- The Delta outbreak, level four/three restrictions in Auckland and facilities operating at capacity (see Appendix 1, item 33) - have further impacted an already fatigued workforce.
- The need to rapidly transition and staff two existing isolation facilities into quarantine facilities to accommodate community cases, as well as planning for a new facility in Christchurch.
- Ongoing recruitment and retention issues.

- The need to recommission and staff the Ramada to accommodate deportees from Australia.
- The complex health and social needs of positive community cases while in quarantine.
- MIQF health staff being stood down as a close contact of a case.
- The unexpected influx of managed repatriation flights from NSW and evacuation flights from Afghanistan.
- Ongoing negative media scrutiny.
- Ongoing need to provide national resourcing to supplement the Auckland MIQ health teams over the next 3 to 6 months given the current challenges in recruiting to MIQ health teams in Auckland.

*Maximising productive use of the MIQF workforce*

29. The current COVID-19 outbreak has meant we have had to reprioritise our work programme and accelerate work to maximise productive use of the existing MIQF health workforce and find alternative ways of providing support to Auckland.

30. Four key work streams have been developed to respond to the need to relieve pressures in the short term and rationalise the way in which staff are deployed. The following five key workstreams are discussed below:

- Review of health assessment processes in MIFs
- Remote health checks
- Use of an acuity tool to identify high needs returnees earlier in their stay
- Optimising the skill mix of the healthcare workforce
- Supplementing Auckland with Registered Nurses and Healthcare Assistants from elsewhere in the country

*Review of health assessment processes in MIFs (Appendix 1, item 39)*

31. Health assessment processes in MIFs have not been subject to a full review since they were rapidly stood up at the beginning of the pandemic in March 2020. Since then, our understanding of how the virus is transmitted has grown and additional mitigations such as more frequent testing (Appendix 1, item 36) and more stringent IPC protocols have been progressively introduced.

32. Because each new mitigation measure is generally added on top of existing measures, this increases the workload for the MIQF health workforce. A review was undertaken to examine health assessment practices to bring them into alignment with current knowledge of the virus, and to ensure they are fit for purpose, do not carry excessive risk and are operationally feasible.

33. Current health assessments for returnees include the arrival health and wellbeing check, daily health and wellbeing checks and the exit health check. Daily health checks for MIF staff include a health and temperature check at the beginning of each shift.

34. Key recommendations from the review include the following:

- Identify and safely manage returnees while reducing the number of face-to-face encounters between returnees and staff – remove temperature checking for non-symptomatic returnees, greater use phone checks and self-reporting, reduce movement around the facility (Appendix 1, items 48 & 50).
- Tailor the level of health/wellbeing surveillance to the level of health need.
- Conduct exit health assessment within 12 hours of departure rather than 3. The current requirement for the exit health check to be completed within 3 hours of release is operationally challenging and does not significantly reduce risk. Given that some cohorts leave the facility between 1 – 6 am, large numbers of returnees need to be woken during the night - this creates a challenge for the health workforce and the risk of rushing the check in order to cover the entire cohort within the timeframe. Increasing the timeframe to 12 hours ensures the health checks can be conducted during daylight hours, with a full complement of staff and time for thoroughness.
- Explore whether the daily staff health check could be self-reported using digital tool (Appendix 1, item 17).

35. A detailed implementation plan has been developed, with the majority of the recommendations expected to be in place by late October. An evaluation plan is also under development including indicators to measure success of the recommendation.

*Remote health checks (Appendix 1, item 40)*

36. We have worked with Northern Managed Facilities (NMF) to pilot the use of a remote health workforce to carry out routine health checks for low-risk returnees to free up the Registered Nurses (RNs) on site to deal with higher needs returnees. The results of the health checks are recorded in the border clinical management system (BCMS) and on-site staff are alerted to follow up on any returnees whose health status changes.

37. A supervised pilot involving eight RNs employed by Lakes, Waikato, and Capital Coast DHBs to conduct initial and daily health checks remotely (via phone) took place between 24 July and 25 August 2021. 356 daily health checks and 224 initial health checks were carried out remotely at the request of the Auckland nurse coordination team.

38. This new regime preserves service quality and safety but delivers workload efficiency and opportunities for delegation. Interviews with staff involved in the pilot and suggests the remote health checks have proven popular with staff and returnees and are effective at reducing:

- The workload of the on-site healthcare staff.
- Returnee movements (Appendix 1, item 46).
- Door opening events (Appendix 1, items 53 & 56).

39. Auckland has now taken over the recruitment and management of the remote workforce as a crucial tool to supplement their workforce during the current outbreak. This has now become BAU.

40. Once the current outbreak is under control, we will work with Auckland to expand the scheme to strengthen the national MIQF workforce. Future options to consider include

expanding the remote workforce to include non-MIF trained RNs and other healthcare workers.

*Identifying high needs returnees early in their stay by means of an acuity tool*

41. Some returnees have higher health needs that require more support from the MIQF health team including advanced assessments, clinical interventions, admission to hospital for investigations or assessment and referrals for on-going post-exit care and follow-up. Identifying these returnees early in their stay is critical in terms of both providing for their health needs and determining the most appropriate workforce to provide safe and effective healthcare.

42. NMF has developed the Complexity Acuity Resource Tool (CART) which has been in operation nationally since late August 2021. A CART score, recorded on a daily basis in the BCMS for each returnee, identify the requirement for health care which is represented as the amount of time required to support the returnee over the previous 24-hour period.

43. The total CART score for each facility is used locally to inform daily planning and resource allocation across the region as well as to report and analyse data and trends. This data also enables a view of health workload nationally.

*Optimising skill mix of the healthcare workforce*

44. There remains a significant opportunity to improve consistency of role definition and delegation across MIQF facilities and regions to free up RNs to focus on complex health needs and coordination activities. Opportunities for improvement include:

- Increased delegation to health care assistants (HCAs) and patient care assistants (PCAs) at the discretion of the RN coordinating the shift for activities such as regular health assessments and swabbing (a technical skill which can be learned).
- The need for an on-site RN overnight is variable across the regions and is being reviewed in order to establish the benefits versus the risk of using alternative methods to access 24-hour access to health care.
- Wellbeing coordinators are proving to be extremely valuable in facilities where they are used. By addressing non-health-related wellbeing concerns, RNs are spared for other activities more suited to their skill set.

*Incentivising the healthcare workforce*

45. Given that management of COVID-19 is likely to be required for the foreseeable future, we are examining options to establish a career pathway to attract and retain high quality health professionals to this field. While there is a place for financial incentivisation, there is also an imperative to provide a positive and viable pathway for career progression in this emerging discipline of Novel Communicable Disease Management.

46. Options we are exploring include (Appendix 1, items 19 & 20):

- Partnering with tertiary education institutes to design appropriately credentialled education to prepare and advance health workers in this emerging health specialty.

- Recruiting new graduate nurses into a specially designed IPC education programme to prepare them for rapid response to emerging communicable diseases.
- Sponsoring specialist IPC and public health training for nurses. This training would likely be offered at both the diploma and post-graduate level.
- Working with our partners to promote this work as a viable career in an emerging specialty for health professionals.

*Launch of MBIE #treatmefairly initiative*

47. On 9 July MBIE launched 9(2)(k) [redacted], a new reporting process for MIQ workers to report instances of discrimination or of being treated differently because they work at a MIQF.

48. MIQ workers and families should not be treated differently when accessing services such as health care and education, applying for a job or renting a flat, but we know anecdotally this is not always the case.

49. All reports from MIQ workers are reviewed by the MIQ Resolutions team which sends an acknowledgement and notification of next steps. For more serious incidents, the team will investigate and work both with the complainant and the sector involved to find an appropriate resolution. The Ministry's DHB Sector Support team is handling complaints involving MIQ workers' access to healthcare.

50. The information collected through this initiative will be critical to building our knowledge of MIQ workers' experiences and, more importantly, addressing discrimination and educating the community.

51. To ensure our messaging supports this initiative, the Ministry carried out a review of all public facing communications to ensure they support destigmatisation of MIQ workers and reinforce the importance of the work they carry out to keep New Zealand safe.

*Next steps for the health workforce*

52. We will continue to refine our initiatives to maximise productive use of the existing workforce, but this source of increased productivity is all but exhausted.

53. The focus over the next two months will be working with DHB CEs to design a sustainable national model for health services for the future. This will inform the work MBIE are leading to look at building or buying purpose-built quarantine facilities and the most appropriate operating model to support this.

## Equity

54. We applied an equity lens throughout our development and analysis of the map and identified a range of equity-focussed mitigation measures that were either in-progress or gaps/opportunities, including:

- Appendix 1, item 21 – Gap/opportunity: ensuring consistent contracts with paid sick leave to enable staff to stay home when sick.
- Appendix 1, item 34 – Gap/opportunity: improving access to interpreters for returnees.

- Appendix 1, item 39 – In progress: implementing findings of review of health assessment processes, to improve model of care and reduce staff exposure risk. This will enable returnees with higher clinical needs to be appropriately prioritised by the on-site health team, by ensuring other returnees who require less support are managed remotely.
- Appendix 1, item 60 – Gap/opportunity: arranging vaccination post-departure to ensure that returnees who have not been able to access vaccination while overseas are able to be vaccinated in a timely manner after they finished their required isolation/quarantine period.

55. We will remain equity-focussed as we continue to review and update the map, and as we consider additions to our ongoing programme of work,

## Next steps

56. We are working with MBIE to scope the capacity and capability required to design and the implement the high impact gaps/opportunities identified in the map, including assessing and managing the change impact on the MIQ workforce, returnees, and employers.

57. As the map is a living document, we will review and update it on a quarterly basis. We will provide you with updates on the progress of the ongoing programme of work in our regular weekly reporting.

**ENDS.**

# Appendix 1: High level summary of the in-MIQF transmission risk mitigation map

| | | WHAT | WHY |
|---|---|---|---|
| BORDER SETTINGS | 1. | Restrictions are placed on who is able to cross the border, based on the country they have been in for the previous 14 day. | **Factor 1:** The likelihood that an individual in the MIQF is infectious with COVID-19.<br>By reducing the number of cases coming across the border, the overall risk of in-MIQF transmission is reduced. |
| | 2. | **In progress**: establishment of vaccination passports | **Factor 3:** Host determinants of susceptibility to infection (e.g. vaccination status or immunity from past infection). |
| PRE-DEPARTURE | 3. | Pre departure testing (PDT) | **Factor 1:** The likelihood that an individual in the MIQF is infectious with COVID-19.<br>Identifying COVID-19 positive travellers before they depart and preventing their travel |
| IN-TRANSIT TO AOTEAROA NEW ZEALAND | 4. | **Gap/opportunity:**<br>Strengthening returnee IPC measures during overseas transit | **Factor 1:** The likelihood that an individual in the MIQF is infectious with COVID-19.<br>Decreasing the risk of transmission during transit may reduce the number of cases coming across the border. |
| | 5. | PPE-use on planes | **Factor 1:** The likelihood that an individual in the MIQF is infectious with COVID-19.<br>To prevent transmission between passengers, thereby reducing the number of cases coming across the border. |
| | 6. | **Gap/opportunity:**<br>Vaccination of air crew | **Factor 1:** The likelihood that an individual in the MIQF is infectious with COVID-19.<br>**Factor 3:** Host determinants of susceptibility to infection (e.g. vaccination status or immunity from past infection).<br>To prevent transmission to and from aircrew. |
| | 7. | Aircraft ventilation | **Factor 1:** The likelihood that an individual in the MIQF is infectious with COVID-19.<br>To prevent airborne transmission on flights. |

| | | WHAT | WHY |
|---|---|---|---|
| TRANSITING THROUGH THE AIRPOERT | 8. | Border screening of returnees | **Factor 1:** The likelihood that an individual in the MIQF is infectious with COVID-19.<br>To identify COVID-19 positive returnees before they enter a MIF, so that they can be managed in a more restrictive environment. |
| | 9. | **Gap/opportunity:** Strengthening returnee adherence to IPC measures in the airport | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual). |
| | 10. | **Gap/opportunity:** rapid testing at the border | **Factor 1:** The likelihood that an individual in the MIQF is infectious with COVID-19.<br>To identify COVID-19 positive returnees before they enter a MIF, so that they can be managed in a more restrictive environment. |
| BORDER AND MIQ WORKERS | 11. | Vaccination of Border and MIQ workers | **Factor 3:** Host determinants of susceptibility to infection (e.g. vaccination status or immunity from past infection).<br>To prevent transmission to border and MIQ workers, and onward transmission into the community. |
| | 12. | **Gap/opportunity:** Booster shot programme for Border and MIQ workers | **Factor 3:** Host determinants of susceptibility to infection (e.g. vaccination status or immunity from past infection).<br>To prevent transmission to border and MIQ workers, and onward transmission into the community. |
| | 13. | **Gap/opportunity:** ensure all Border and MIQ workers are offered other routine vaccinations e.g. MMR, seasonal influenza | Seasonal respiratory viruses will have an impact on staffing levels – under staffing is a risk in itself regarding maintaining high IPC standards and ensuring quality of care/service is maintained. |
| | 14. | Staff surveillance testing or Border and MIQ workers, and the use of the Border Worker Testing Register (BWTR) to track compliance | **Factor 1:** The likelihood that an individual in the border setting is infectious with COVID-19 |
| | 15. | **In progress:**<br>Increasing the frequency of surveillance testing for MIQ workers. | **Factor 1:** The likelihood that an individual in the border setting is infectious with COVID-19 |
| | 16. | Dedicated health workforce policy in MIQ | Addressing the risk of onward transmission from MIQ healthcare workers to others in community healthcare settings. |
| | 17. | Staff symptom vigilance and self-isolation & testing upon symptom onset. | **Factor 1:** The likelihood that an individual in the border setting is infectious with COVID-19 |
| | 18. | **In progress:**<br>Systematising monitoring and management of symptomatic staff using existing applications (e.g. BHR). | **Factor 1:** The likelihood that an individual in the border setting is infectious with COVID-19.<br>Supporting enhanced monitoring and follow-up of workers that are symptomatic. |

| | | WHAT | WHY |
|---|---|---|---|
| BORDER AND MIQ WORKERS | 19. | **Gap/opportunity:** Ongoing IPC education and training, professional development and refresher training | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual). |
| | 20. | **Gap/opportunity:**<br>Establish a programme for upskilling existing MIQ health workforce to become IPC champions | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>Upskilling MIQ workforce with additional IPC training to increase IPC knowledge and support and oversight on the ground. |
| | 21. | **Gap/opportunity:**<br>Consistent contracts with paid sick leave to enable staff to stay home when sick, framing as 'public health' leave | **Factor 1:** The likelihood that an individual in the border setting is infectious with COVID-19 |
| | 22. | **Gap/opportunity:**<br>Improving staff recruitment and retention | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>Rapid turnover in staff increases risk of transmission because new staff (and unhappy staff) make mistakes. Improving staff recruitment and retention will retain and build upon institutional knowledge and IPC comprehension etc. |
| | 23. | Staff adherence to IPC measures | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>Preventing infection to and from border workers |
| | 24. | Use of P2/N95 particulate respirators by all MIQ staff in indoor, returnee-facing zones. | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>Providing a high level of respiratory protection to the wearer reduces the risk of airborne transmission in confined, poorly ventilated indoor airspaces. |
| | 25. | Ensuring staff accommodation and work rooms are not in the same corridor as returnee zones | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>Reducing staff members' risk of exposure to infectious aerosols by ensuring staff rooms and accommodation are separated from returnee corridors. |
| TRANSPORT TO A MIQF | 26. | Returnee adherence to IPC measures during transport to a MIQF | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual). |
| | 27. | Returnee adherence to IPC measures during rest stops | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual). |

| | | WHAT | WHY |
|---|---|---|---|
| | 28. | **In-progress:**<br>Use of HEPA filters in buses to improve ventilation | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>To prevent airborne transmission on buses. |
| | 29. | **Gap/opportunity:**<br>Improve oversight of cleaning processes and turnaround times between bus trips of returnees | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual). |
| LENGTH OF STAY IN A MIQF AND OVERALL MANAGEMENT | 30. | Length of stay for **returnees** is based on best evidence of incubation periods, disease duration and recovery time. | To reduce the risk of an individual who is incubating the virus, or still infectious, entering the community. |
| | 31. | **In progress:** increasing length of stay for cases of COVID-19, in light of the Delta variant | **Factor 1:** The likelihood that an individual leaving the MIQF is infectious with COVID-19<br>Data suggests that in addition to being more infectious than previous variants, individuals infected with the Delta variant can remain infectious for a longer period than previous variants. |
| | 32. | IPC audit programme | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual). |
| | 33. | **Gap/opportunity**:<br>Reviewing capacity of the MIQ system | **Factor 1:** The likelihood that an individual in the MIQF is infectious with COVID-19.<br>MIQ system capacity determines the likelihood of there being a case in the facility at any given time. Reducing the number of cases coming across the border reduces the overall risk of in-MIQF transmission. |
| | 34. | **Gap/opportunity:**<br>Improving identification of returnees with language barriers, and improving access to interpreters | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>Access to interpreters improves returnees' comprehension (and therefore adherence) to key IPC requirements. |
| RETURNEE TESTING AND MONITORING | 35. | Routine **returnee** testing regime | **Factor 1:** The likelihood that an individual in the MIQF is infectious with COVID-19<br>**Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>To support early identification and transfer of cases in order to reduce risk within MIQFs, and to exclude infection prior to departure into the community. |

| | | WHAT | WHY |
|---|---|---|---|
| | 36. | **In progress:**<br>Additional routine day 6/7 test introduced | **Factor 1:** The likelihood that an individual in the MIQF is infectious with COVID-19<br>**Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>To support early identification and transfer of cases in order to reduce risk within MIQFs. |
| RETURNEE TESTING AND MONITORING | 37. | **In progress:**<br>Design of a saliva testing pilot for returnees to enable an enhanced mixed modality (nasopharyngeal and saliva) testing regime on days 0/1, 3, 6, 9, and 12. | **Factor 1:** The likelihood that an individual in the MIQF is infectious with COVID-19<br>**Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>To support early identification and transfer of cases in order to reduce risk within MIQFs.<br>Increased frequency of routine testing between days 3 – 12 will also support Reconnecting Aotearoa New Zealand work programme. |
| | 38. | Daily returnee health checks | **Factor 1:** The likelihood that an individual in the MIQF is infectious with COVID-19<br>**Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>To support early identification and transfer of cases in order to reduce risk within MIQFs. |
| | 39. | **In progress:** implementing findings of review of health assessment processes, to improve model of care and reduce staff exposure risk. | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>Reducing face-to-face contact and door openings reduce risk of exposure for staff and other returnees. |
| | 40. | **In progress:**<br>Trial of remotely working RNs to support initial health assessments and daily health check processes | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>Reducing face-to-face contact and door openings reduce risk of exposure for staff and other returnees. |
| | 41. | **Gap/opportunity:** strengthen clinical input into the planning of medical exemptions. | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>Unnecessary/unplanned transfers increase the risk of transmission to those involved in the transfer process. |
| MANAGING | 42. | Returnee adherence to IPC measures | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual). |

| | | WHAT | WHY |
|---|---|---|---|
| | | | To provide both source control and protection for the wearer. |
| | 43. | **Gap/opportunity:**<br>Improve returnee adherence to IPC measures via targeted messaging and education at the beginning of returnees' stays. | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>Improving returnee understanding of what is required of them and why is critical to reducing the risk of human error/IPC procedural breaches. |
| | 44. | **In progress:**<br>Returnee behavioural insights study | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual). |
| MANAGING RETURNEE MOVEMENTS | 45. | **In progress:** investigating opportunities to provide returnees with better fitting masks | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>To improve both source control and respiratory protection for the wearer. |
| | 46. | Room restrictions – limiting returnee movements throughout shared spaces within MIQFs | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>To minimise interaction with possible exposure events. |
| | 47. | **In progress:**<br>Use of CCTV as a quality improvement tool for identifying and responding to bubble and IPC procedural breaches | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual). |
| | 48. | Management of returnee smoking | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>To minimise possible exposure events when moving to/from, and while in, the smoking area. |
| | 49. | **In progress:**<br>Vaping trial | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>To minimise possible exposure events by reducing returnees' need to leave their room to smoke. |
| | 50. | Managed access to outdoor fresh air/exercise | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>To minimise possible exposure events when moving to/from, and while in, the fresh air/exercise area. |
| | 51. | Elimination off-site exercise | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>To minimise possible exposure events |

| | | WHAT | WHY |
|---|---|---|---|
| | 52. | 96-hour Cohorting of returnees | **Factor 1:** The likelihood that an individual in the MIQF is infectious with COVID-19<br>**Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>To reduce transmission between returnees at different stages of infection, and to reduce the risk of late-stay transmission. |
| VENTILATION | 53. | Window / Door opening protocols | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>To decrease the risk of airborne spread – reduce unpredictability of airflow and limit potentially contaminated room air from entering corridors. |
| | 54. | **In progress:**<br>Achieving negative pressure in rooms relative to corridors | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>To decrease the risk of airborne spread – reduce unpredictability of airflow and limit potentially contaminated room air from entering corridors. |
| | 55. | **In progress:** Use of air filtration units | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>To decrease viral load in the air. |
| | 56. | **In progress:**<br>Non-sequential door interactions and reducing concurrent/sequential door opening events | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>To prevent airborne transmission from room to room due to rapid succession of opening of doors in that are in close proximity. |
| POST-DEPARTURE | 57. | Public health advice to returnees upon departure | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>Reducing the risk of onward transmission to the community from the returnee. |
| | 58. | Post-departure wellness checks | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br>Identifying symptomatic recently departed returnees, so that they can be followed up for testing. |

| | | WHAT | WHY |
|---|---|---|---|
| | 59. | Post-departure testing (e.g. day 5 after departure). | **Factor 2:** The likelihood that others will be exposed to that person (or infectious aerosols or droplets from the infectious individual).<br><br>Reducing the risk of onward transmission to the community from the returnee, if they are infected upon departing the facility. |
| | 60. | **Gap/opportunity:**<br><br>Arranging vaccination post-departure | **Factor 3:** Host determinants of susceptibility to infection (e.g. vaccination status or immunity from past infection).<br><br>This does not contribute to reducing the risk of in-MIQF transmission, but does support wider public health response to the pandemic. |

# Briefing

## Covid-19 Health System Response: Oxygen Supply and Environmental Issues

| | | | |
|---|---|---|---|
| **Date due to MO:** | 11 November 2021 | **Action required by:** | <N/A> |
| **Security level:** | IN CONFIDENCE | **Health Report number:** | 20212282 |
| **To:** | Hon Chris Hipkins, Minister for Covid-19 Response | | |
| **Cc:** | Hon Andrew Little, Minister of Health<br>Hon Dr Ayesha Verrall, Associate Minister of Health<br>Hon Grant Robertson, Minister of Finance | | |

## Contact for telephone discussion

| Name | Position | Telephone |
|---|---|---|
| **Darryl Carpenter** | Group Manager – Testing and Supply, Ministry of Health | s 9(2)(a) |

## Minister's office to complete:

☐ Approved ☐ Decline ☐ Noted

☐ Needs change ☐ Seen ☐ Overtaken by events

☐ See Minister's Notes ☐ Withdrawn

Comment:

# Covid-19 Health System Response: Oxygen Supply and Environmental Issues

| | | | |
|---|---|---|---|
| **Security level:** | In Confidence | **Date:** | 11 November 2021 |
| **To:** | Hon Chris Hipkins, Minister for Covid-19 Response | | |



## Purpose of report

1. This report updates you on progress in improving the District Health Board (DHB) infrastructure that supplies oxygen for Covid-19 patients and manages the related air handling environment.

## Summary

2. In October 2020 joint Ministers approved funding of $35m to improve oxygen supply and environmental control (air management) systems at 12 DHBs.[1] This programme was based on preparing for an all of government scenario of there being 5,000 COVID cases nationwide, with a hospitalisation rate of 150 ICU-level patients and 600 ward-level patients.

3. Existing and upgraded infrastructure to date supports a minimum of 153 ICU and 537 ward beds for which oxygen supply and related environmental controls are not limiting factors in their use for COVID-19 patients, across all DHBs[2]. This is in addition to the 326 Airborne Infection Isolation Rooms (AIIRs) already in place.

4. The oxygen medical gas supply chain has been prepared to scale up if necessary, with protocols in place should more oxygen be required across all 20 DHBs. This includes portable, emergency oxygen capacity that can be dispatched to any DHB at short notice.

5. The main centres of Dunedin, Canterbury, Capital & Coast, Hawke's Bay, Lakes, Counties Manukau, Auckland, Waitemata and Northland all have suitable bulk oxygen supply and storage in place. Works continue at Mid Central and Hutt Valley DHBs noting the established mitigations above.

6. We are now completing air management upgrades in the nominated ICU, ward and other areas. The upgrades ensure any increased oxygen concentration levels are managed, while reducing the risk of COVID-19 airborne transmission for patients and staff.

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[1] Bay of Plenty, Canterbury, Capital & Coast, Counties Manukau, Hawke's Bay, Hutt, Lakes, Mid Central, Northland, Tairawhiti, Taranaki and Waitemata DHBs.

[2] These bed numbers relate to the physical infrastructure capability and may not reflect the actual COVID-19 patient capacity of DHBs which will depend on workforce, medical equipment, co-location strategies and other factors.

7. There are two constraints for this work:

   a. the ability to gain unfettered access to these areas, which is constrained by total bed availability at each hospital. Chief Executives at four DHBs were recently engaged where further opportunities exist to accelerate progress if better access could be facilitated.

   b. some material shortages are being experienced which are causing delay in some cases

8. The implication of delays by DHBs and alert level changes has resulted in the timeline extending, with the majority of air management works now scheduled to complete by 31 December 2021 and some moving into January and February 2022. The extended timeline does not mean the DHBs cannot accept COVID-19 patients prior to the scheduled works being complete. Bulk oxygen supply is now secured for the DHBs identified as having deficient supply and is not impacted by this.

9. The situation regarding alert levels and case numbers remains fluid impacting access, materials and the construction workforce. There is the future risk of further timeline movements, however we remain focussed on 'as soon as possible' urgent delivery working across DHB, Ministry, consultant, construction contractor and supply chain teams.

10. Emergency works and portable solutions can be enacted at short notice to provide interim measures in response to a surge event. Other operational measures can be enacted to work around the limiting factors this programme is addressing. AIIRs are not affected by the programme, are available, and will continue to be used when DHBs are managing small numbers of COVID-19 patients.

11. We are reviewing the assumptions on which the original business case was developed and reassessing these against the current New Zealand context of COVID-19 cases and management strategies. Recent modelling suggests that the programme deliverables will still support anticipated future scenarios, however we are exploring whether it would be prudent to undertake further works within the scope and appropriation for the programme as a further risk mitigation.

12. Our focus remains on completing the Oxygen Supply and Environmental Issues programme deliverables with due urgency and we will keep you appraised of progress.



## Recommendations

We recommend you:

a) **Note** progress made in implementing the oxygen supply and environmental issues programme. **Yes / No**

b) **Note** across all DHBs, existing and upgraded infrastructure works completed to date supports a minimum of 153 ICU and 537 ward beds for which oxygen supply and related environmental controls are **Yes / No**

not limiting factors in their use for COVID-19 patients; in addition to the 326 Airborne Infection Isolation Rooms already in service.

c) **Note** delays by DHBs, establishing access arrangements and from recent alert level changes has resulted in the timeline extending with the majority of air management works now scheduled to complete by 31 December 2021, but that bulk oxygen is not impacted by this with supply now secured for the DHBs identified as having deficient supply. **Yes / No**

d) **Note** the fluid situation regarding changing alert levels impacting access, materials and construction workers, and that the is future risk of timeline movements, however the Ministry and DHBs remain focussed on urgent 'as soon as possible' delivery. **Yes / No**

e) **Note** the extended timeline does not mean the DHBs cannot accept COVID-19 patients prior to the scheduled works being complete. Emergency works and portable solutions can be enacted at short notice to provide interim measures in response to a surge event. **Yes / No**

f) **Note** that further analysis is being undertaken of the work programme deliverables against the current context of COVID-19 cases and management strategies, and an assessment made whether further works should be undertaken within the programme scope and appropriation. **Yes / No**



Bridget White
**Deputy Chief Executive**
**COVID-19 Directorate**
Date: 10/11/2021

Hon Chris Hipkins
**Minister for Covid-19 Response**
Date: 13/11/2021

I'd be concerned if we saw any further slippage in these timelines. CH

# Covid-19 Health System Response: Oxygen Supply and Environmental Issues

## Background

1. In October 2020, following Cabinet approval of a COVID-19 funding package [CAB 20 MIN 0328.25 refers] and submission of a detailed business case, joint Ministers approved funding of $35m to improve oxygen supply and environmental control systems.

2. This business case responded to an all of government scenario of there being 5,000 COVID-19 cases nationwide, with a hospitalisation rate of 150 ICU-level patients and 600 ward-level patients proportioned nationally based on population.

3. The business case identified 12 DHBs which may struggle in providing oxygen in this scenario. It also identified improvements needed in the air management systems to reduce the risk of oxygen concentration levels and COVID-19 airborne transmission, both of which pose a health and safety risk to patients and staff. The 12 DHBs were Bay of Plenty, Canterbury, Capital & Coast, Counties Manukau, Hawke's Bay, Hutt, Lakes, Mid Central, Northland, Tairawhiti, Taranaki and Waitemata.

4. Our last update to you was provided on 22 July 2021 [HR20210945 refers]. This paper provides you with a further progress update for the programme of work.

## Progress to date

5. The work completed to date compares favourably to the original planning scenario. Conservatively across all DHBs, existing and upgraded infrastructure to date supports a minimum of 153 ICU and 537 ward beds for which oxygen supply and related environmental controls are not limiting factors in their use for COVID-19 patients[3]. This is in addition to the 326 Airborne Infection Isolation Rooms (AIIRs) already in place[4] and suitable for COVID-19 patients prior to the scope of this programme.

6. The oxygen medical gas supply chain has been prepared to scale up if necessary. Regular and emergency protocols are in place to increase the national manufacture, storage and delivery of oxygen should this be required by any of the 20 DHBs. This includes portable bulk oxygen storage and conversion capacity that can be dispatched to any area in need, at short notice.

7. The main centres of Dunedin, Canterbury, Capital & Coast, Hawke's Bay, Lakes, Counties Manukau, Auckland, Waitemata and Northland all have suitable bulk oxygen supply and storage in place through a combination of existing and the improved

[3] These bed numbers relate to the physical infrastructure capability and may not reflect the actual COVID-19 patient capacity of DHBs which will depend on workforce, medical equipment, co-location strategies and other factors.

[4] Refer https://www.health.govt.nz/news-media/news-items/covid-19-novel-coronavirus-update-25-february

infrastructure. Works continue at Mid Central and Hutt Valley DHBs noting the established mitigations above.

8. We are monitoring overall oxygen usage associated with the Auckland surge event. Increases in total usage have been negligible, noting use of oxygen generally decreases when alert levels go up because of elective procedures being deferred.

## Remaining upgrades to ICU and wards

9. With the upgrades to critical oxygen infrastructure in hand, the focus is now on completing air management upgrades in the nominated ICU, ward and other areas. The upgrades ensure any increased oxygen concentration levels in these areas are managed, while reducing the risk of COVID-19 airborne transmission for patients and staff through increased fresh air ratios, more air changes per hour, HEPA (high-efficiency particulate absorbing filter) filtration and directional airflow.

10. As previously reported, finalising and scheduling ICU and ward work has been problematic while each DHB has refined its COVID-19 operational response. This has been resolved with the main constraint now being the ability to gain unfettered access to wards and other areas to complete the upgrades. This requires each area to be vacated and patients relocated, which is constrained by total bed availability at each hospital.

11. The recent changes in alert levels have highlighted to DHBs the importance and urgency of completing the programme of works. Chief Executives at Capital & Coast, Mid Central, Hawke's Bay and Bay of Plenty DHBs, being the regions where access was proving most problematic, were recently engaged to discuss where opportunities existed to accelerate progress if unfettered access could be facilitated. These conversations have been successful in reducing the risk of delivery delay.

12. A summary of progress and the remaining work is included as **Attachment A**.

## Managing the extended delivery timeline

13. The implication of delays by DHBs, establishing workable access arrangements and alert level changes has resulted in the timeline extending further, with the majority of air management works now scheduled to complete by 31 December 2021 and some moving into January and February 2022.

14. Bulk oxygen supply is now secured for the DHBs identified as having deficient supply and is not impacted by these delays.

15. The situation regarding alert levels remains fluid impacting access, materials and the construction workforce. Further timeline movements are likely, however, we remain focussed on 'as soon as possible' urgent delivery working across DHB, Ministry, consultant, construction contractor and supply chain teams.

16. The extended timeline does not mean the DHBs cannot accept COVID-19 patients prior to the scheduled works being complete:

    a. The delivery has been staged to provide upgraded oxygen piping near to the areas, then progressively upgrade the areas to enable an increasing number of beds as soon as possible.

b. Alternative operational measures can be enacted to work around the limiting factors this programme is addressing (for example, using other ward spaces with increased physical distancing between beds).

c. Emergency works can be enacted to provide interim measures sooner in the event of a surge event.

d. AIIRs are not affected by the programme, are available and will continue to be used when DHBs are managing small numbers of COVID-19 patients.

17. The programme remains on track to deliver within the allocated budget. At this stage, we estimate that the programme may come in $1-2M under budget.

## The changing context for the programme

18. The context for the programme is different to when the programme was approved 12 months ago. In particular, we now have COVID-19 prevalent in the community and there have been recent changes to the management strategies being employed to combat the disease.

19. Recent modelling indicates that the programme deliverables remain appropriate for many scenarios, particularly where vaccination rates are high. However, there are some scenarios where the original planning assumptions may be exceeded.

20. The programme is exploring whether there are additional works that may be appropriate to undertake to further strengthen the DHBs oxygen supply and environmental systems in the event of a surge. Any additional works would be undertaken within the scope and appropriation of the existing programme. As mentioned above, the existing works are estimated to be delivered under budget, and any further work would be funded from this underspend.

## Linkage to the Health System Readiness Programme (HSRP)

21. The Ministry is advancing the COVID-19 Health System Readiness Programme (HSRP) which is being reported to you separately. The purpose of the HSRP is to ensure the health system is more agile, better equipped, more vigilant and increasingly responsive to the changing threat of COVID-19.

22. The Oxygen Supply and Environmental Issues programme deliverables are an input into the HSRP which will consider how other parallel and subsequent infrastructure improvements are prioritised, funded and actioned.

## Next steps

23. Working in with the HSRP, our focus remains on completing the Oxygen Supply and Environmental Issues programme deliverables with due urgency and will keep you appraised of progress.

**ENDS.**

# Appendix 1 – Progress Update , 8 November

| DHB | Status | O2 Bulk Storage | O2 Convert to Gas | O2 Reticulation – Central | O2 Reticulation – Spaces | Air Interim | Air Permanent | Expected Completion |
|---|---|---|---|---|---|---|---|---|
| Northland | G | ✓ | ✓ | ✓ | WIP | | WIP | Dec 21 |
| Waitemata | A | ✓ | WIP | ✓ | ✓ | ✓ | WIP | Dec 21 |
| Counties Manukau | A | ✓ | ✓ | ✓ | WIP | | WIP | Feb 22 |
| Lakes | G | ✓ | ✓ | | | | WIP | Dec 21 |
| Bay of Plenty | G | | ✓ | | | | WIP | Dec 21 |
| Tairawhiti | G | | ✓ | WIP | WIP | | WIP | Dec 21 |
| Hawkes Bay | A | ✓ | ✓ | WIP | WIP | | WIP | Feb 22 |
| Taranaki | G | | | | | | WIP | Jan 22 |
| Mid Central | A | WIP | Sched | WIP | WIP | | WIP | Feb 22 |
| Hutt Valley | A | WIP | Sched | | | | WIP | Feb 22 |
| Capital & Coast | A | ✓ | | ✓ | WIP | ✓ | WIP | Jan 22 |
| Canterbury | G | | | ✓ | ✓ | | ✓ | Nov 21 |

**Key**
✓ - Complete
WIP – Work underway
Sched – Work is scheduled but yet to start

**Status**
Green – On track
Amber – Immediate issue or future risk that may impact on the timeline. Mitigations in place
Red – Issue or risk that will impact delivery. Governance support required

Work completed but not shown:
- Supply chain optimisation (oxygen manufacture, network bulk storage and distribution)
- Emergency supply chain measures (supply of portable oxygen bulk storage, supplier emergency protocols)

# Briefing

## Covid-19 Health System Response: Oxygen Supply and Environmental Issues

| | | | |
|---|---|---|---|
| **Date due to MO:** | 11 November 2021 | **Action required by:** | <N/A> |
| **Security level:** | IN CONFIDENCE | **Health Report number:** | 20212282 |
| **To:** | Hon Chris Hipkins, Minister for Covid-19 Response | | |
| **Cc:** | Hon Andrew Little, Minister of Health<br>Hon Dr Ayesha Verrall, Associate Minister of Health<br>Hon Grant Robertson, Minister of Finance | | |

## Contact for telephone discussion

| Name | Position | Telephone |
|---|---|---|
| **Darryl Carpenter** | Group Manager – Testing and Supply, Ministry of Health | s 9(2)(a) |

## Minister's office to complete:

☐ Approved ☐ Decline ☐ Noted

☐ Needs change ☐ Seen ☐ Overtaken by events

☐ See Minister's Notes ☐ Withdrawn

Comment:

# Covid-19 Health System Response: Oxygen Supply and Environmental Issues

| | | | |
|---|---|---|---|
| **Security level:** | In Confidence | **Date:** | 11 November 2021 |
| **To:** | Hon Chris Hipkins, Minister for Covid-19 Response | | |



## Purpose of report

1. This report updates you on progress in improving the District Health Board (DHB) infrastructure that supplies oxygen for Covid-19 patients and manages the related air handling environment.

## Summary

2. In October 2020 joint Ministers approved funding of $35m to improve oxygen supply and environmental control (air management) systems at 12 DHBs.[1] This programme was based on preparing for an all of government scenario of there being 5,000 COVID cases nationwide, with a hospitalisation rate of 150 ICU-level patients and 600 ward-level patients.

3. Existing and upgraded infrastructure to date supports a minimum of 153 ICU and 537 ward beds for which oxygen supply and related environmental controls are not limiting factors in their use for COVID-19 patients, across all DHBs[2]. This is in addition to the 326 Airborne Infection Isolation Rooms (AIIRs) already in place.

4. The oxygen medical gas supply chain has been prepared to scale up if necessary, with protocols in place should more oxygen be required across all 20 DHBs. This includes portable, emergency oxygen capacity that can be dispatched to any DHB at short notice.

5. The main centres of Dunedin, Canterbury, Capital & Coast, Hawke's Bay, Lakes, Counties Manukau, Auckland, Waitemata and Northland all have suitable bulk oxygen supply and storage in place. Works continue at Mid Central and Hutt Valley DHBs noting the established mitigations above.

6. We are now completing air management upgrades in the nominated ICU, ward and other areas. The upgrades ensure any increased oxygen concentration levels are managed, while reducing the risk of COVID-19 airborne transmission for patients and staff.

---

[1] Bay of Plenty, Canterbury, Capital & Coast, Counties Manukau, Hawke's Bay, Hutt, Lakes, Mid Central, Northland, Tairawhiti, Taranaki and Waitemata DHBs.

[2] These bed numbers relate to the physical infrastructure capability and may not reflect the actual COVID-19 patient capacity of DHBs which will depend on workforce, medical equipment, co-location strategies and other factors.

7. There are two constraints for this work:

   a. the ability to gain unfettered access to these areas, which is constrained by total bed availability at each hospital. Chief Executives at four DHBs were recently engaged where further opportunities exist to accelerate progress if better access could be facilitated.

   b. some material shortages are being experienced which are causing delay in some cases

8. The implication of delays by DHBs and alert level changes has resulted in the timeline extending, with the majority of air management works now scheduled to complete by 31 December 2021 and some moving into January and February 2022. The extended timeline does not mean the DHBs cannot accept COVID-19 patients prior to the scheduled works being complete. Bulk oxygen supply is now secured for the DHBs identified as having deficient supply and is not impacted by this.

9. The situation regarding alert levels and case numbers remains fluid impacting access, materials and the construction workforce. There is the future risk of further timeline movements, however we remain focussed on 'as soon as possible' urgent delivery working across DHB, Ministry, consultant, construction contractor and supply chain teams.

10. Emergency works and portable solutions can be enacted at short notice to provide interim measures in response to a surge event. Other operational measures can be enacted to work around the limiting factors this programme is addressing. AIIRs are not affected by the programme, are available, and will continue to be used when DHBs are managing small numbers of COVID-19 patients.

11. We are reviewing the assumptions on which the original business case was developed and reassessing these against the current New Zealand context of COVID-19 cases and management strategies. Recent modelling suggests that the programme deliverables will still support anticipated future scenarios, however we are exploring whether it would be prudent to undertake further works within the scope and appropriation for the programme as a further risk mitigation.

12. Our focus remains on completing the Oxygen Supply and Environmental Issues programme deliverables with due urgency and we will keep you appraised of progress.



## Recommendations

We recommend you:

a) **Note** progress made in implementing the oxygen supply and environmental issues programme. **Yes / No**

b) **Note** across all DHBs, existing and upgraded infrastructure works completed to date supports a minimum of 153 ICU and 537 ward beds for which oxygen supply and related environmental controls are **Yes / No**

not limiting factors in their use for COVID-19 patients; in addition to the 326 Airborne Infection Isolation Rooms already in service.

c) **Note** delays by DHBs, establishing access arrangements and from recent alert level changes has resulted in the timeline extending with the majority of air management works now scheduled to complete by 31 December 2021, but that bulk oxygen is not impacted by this with supply now secured for the DHBs identified as having deficient supply. **Yes / No**

d) **Note** the fluid situation regarding changing alert levels impacting access, materials and construction workers, and that the is future risk of timeline movements, however the Ministry and DHBs remain focussed on urgent 'as soon as possible' delivery. **Yes / No**

e) **Note** the extended timeline does not mean the DHBs cannot accept COVID-19 patients prior to the scheduled works being complete. Emergency works and portable solutions can be enacted at short notice to provide interim measures in response to a surge event. **Yes / No**

f) **Note** that further analysis is being undertaken of the work programme deliverables against the current context of COVID-19 cases and management strategies, and an assessment made whether further works should be undertaken within the programme scope and appropriation. **Yes / No**



Bridget White
**Deputy Chief Executive**
**COVID-19 Directorate**
Date: 10/11/2021

Hon Chris Hipkins
**Minister for Covid-19 Response**
Date: 13/11/2021

I'd be concerned if we saw any further slippage in these timelines. CH

# Covid-19 Health System Response: Oxygen Supply and Environmental Issues

## Background

1. In October 2020, following Cabinet approval of a COVID-19 funding package [CAB 20 MIN 0328.25 refers] and submission of a detailed business case, joint Ministers approved funding of $35m to improve oxygen supply and environmental control systems.

2. This business case responded to an all of government scenario of there being 5,000 COVID-19 cases nationwide, with a hospitalisation rate of 150 ICU-level patients and 600 ward-level patients proportioned nationally based on population.

3. The business case identified 12 DHBs which may struggle in providing oxygen in this scenario. It also identified improvements needed in the air management systems to reduce the risk of oxygen concentration levels and COVID-19 airborne transmission, both of which pose a health and safety risk to patients and staff. The 12 DHBs were Bay of Plenty, Canterbury, Capital & Coast, Counties Manukau, Hawke's Bay, Hutt, Lakes, Mid Central, Northland, Tairawhiti, Taranaki and Waitemata.

4. Our last update to you was provided on 22 July 2021 [HR20210945 refers]. This paper provides you with a further progress update for the programme of work.

## Progress to date

5. The work completed to date compares favourably to the original planning scenario. Conservatively across all DHBs, existing and upgraded infrastructure to date supports a minimum of 153 ICU and 537 ward beds for which oxygen supply and related environmental controls are not limiting factors in their use for COVID-19 patients[3]. This is in addition to the 326 Airborne Infection Isolation Rooms (AIIRs) already in place[4] and suitable for COVID-19 patients prior to the scope of this programme.

6. The oxygen medical gas supply chain has been prepared to scale up if necessary. Regular and emergency protocols are in place to increase the national manufacture, storage and delivery of oxygen should this be required by any of the 20 DHBs. This includes portable bulk oxygen storage and conversion capacity that can be dispatched to any area in need, at short notice.

7. The main centres of Dunedin, Canterbury, Capital & Coast, Hawke's Bay, Lakes, Counties Manukau, Auckland, Waitemata and Northland all have suitable bulk oxygen supply and storage in place through a combination of existing and the improved

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infrastructure. Works continue at Mid Central and Hutt Valley DHBs noting the established mitigations above.

8. We are monitoring overall oxygen usage associated with the Auckland surge event. Increases in total usage have been negligible, noting use of oxygen generally decreases when alert levels go up because of elective procedures being deferred.

## Remaining upgrades to ICU and wards

9. With the upgrades to critical oxygen infrastructure in hand, the focus is now on completing air management upgrades in the nominated ICU, ward and other areas. The upgrades ensure any increased oxygen concentration levels in these areas are managed, while reducing the risk of COVID-19 airborne transmission for patients and staff through increased fresh air ratios, more air changes per hour, HEPA (high-efficiency particulate absorbing filter) filtration and directional airflow.

10. As previously reported, finalising and scheduling ICU and ward work has been problematic while each DHB has refined its COVID-19 operational response. This has been resolved with the main constraint now being the ability to gain unfettered access to wards and other areas to complete the upgrades. This requires each area to be vacated and patients relocated, which is constrained by total bed availability at each hospital.

11. The recent changes in alert levels have highlighted to DHBs the importance and urgency of completing the programme of works. Chief Executives at Capital & Coast, Mid Central, Hawke's Bay and Bay of Plenty DHBs, being the regions where access was proving most problematic, were recently engaged to discuss where opportunities existed to accelerate progress if unfettered access could be facilitated. These conversations have been successful in reducing the risk of delivery delay.

12. A summary of progress and the remaining work is included as **Attachment A**.

## Managing the extended delivery timeline

13. The implication of delays by DHBs, establishing workable access arrangements and alert level changes has resulted in the timeline extending further, with the majority of air management works now scheduled to complete by 31 December 2021 and some moving into January and February 2022.

14. Bulk oxygen supply is now secured for the DHBs identified as having deficient supply and is not impacted by these delays.

15. The situation regarding alert levels remains fluid impacting access, materials and the construction workforce. Further timeline movements are likely, however, we remain focussed on 'as soon as possible' urgent delivery working across DHB, Ministry, consultant, construction contractor and supply chain teams.

16. The extended timeline does not mean the DHBs cannot accept COVID-19 patients prior to the scheduled works being complete:

    a. The delivery has been staged to provide upgraded oxygen piping near to the areas, then progressively upgrade the areas to enable an increasing number of beds as soon as possible.

b. Alternative operational measures can be enacted to work around the limiting factors this programme is addressing (for example, using other ward spaces with increased physical distancing between beds).

c. Emergency works can be enacted to provide interim measures sooner in the event of a surge event.

d. AIIRs are not affected by the programme, are available and will continue to be used when DHBs are managing small numbers of COVID-19 patients.

17. The programme remains on track to deliver within the allocated budget. At this stage, we estimate that the programme may come in $1-2M under budget.

## The changing context for the programme

18. The context for the programme is different to when the programme was approved 12 months ago. In particular, we now have COVID-19 prevalent in the community and there have been recent changes to the management strategies being employed to combat the disease.

19. Recent modelling indicates that the programme deliverables remain appropriate for many scenarios, particularly where vaccination rates are high. However, there are some scenarios where the original planning assumptions may be exceeded.

20. The programme is exploring whether there are additional works that may be appropriate to undertake to further strengthen the DHBs oxygen supply and environmental systems in the event of a surge. Any additional works would be undertaken within the scope and appropriation of the existing programme. As mentioned above, the existing works are estimated to be delivered under budget, and any further work would be funded from this underspend.

## Linkage to the Health System Readiness Programme (HSRP)

21. The Ministry is advancing the COVID-19 Health System Readiness Programme (HSRP) which is being reported to you separately. The purpose of the HSRP is to ensure the health system is more agile, better equipped, more vigilant and increasingly responsive to the changing threat of COVID-19.

22. The Oxygen Supply and Environmental Issues programme deliverables are an input into the HSRP which will consider how other parallel and subsequent infrastructure improvements are prioritised, funded and actioned.

## Next steps

23. Working in with the HSRP, our focus remains on completing the Oxygen Supply and Environmental Issues programme deliverables with due urgency and will keep you appraised of progress.

**ENDS.**

# Appendix 1 – Progress Update , 8 November

| DHB | Status | O2 Bulk Storage | O2 Convert to Gas | O2 Reticulation – Central | O2 Reticulation – Spaces | Air Interim | Air Permanent | Expected Completion |
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| Bay of Plenty | G | | ✓ | | | | WIP | Dec 21 |
| Tairawhiti | G | | ✓ | WIP | WIP | | WIP | Dec 21 |
| Hawkes Bay | A | ✓ | ✓ | WIP | WIP | | WIP | Feb 22 |
| Taranaki | G | | | | | | WIP | Jan 22 |
| Mid Central | A | WIP | Sched | WIP | WIP | | WIP | Feb 22 |
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**Key**
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- Supply chain optimisation (oxygen manufacture, network bulk storage and distribution)
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# In confidence

Office of the Minister of COVID-19 Response

Office of the Associate Minister of Health

Cabinet

## COVID-19 Minimisation and Protection approach – changes to testing, case investigation and contact tracing

### Proposal

1 This paper outlines changes to COVID-19 testing, case investigation and contact tracing, which are being made to ensure that New Zealand is ready to transition from the elimination strategy to the minimisation and protection approach and seeks additional funding to support testing and contact tracing in 2021/22.

2 In October 2021, Cabinet invited the Minister of Health to report back on these matters in November [CAB-21-MIN-0421 refers].

3 This paper is designed to be read in conjunction with the following papers that were on the Social Wellbeing Committee agenda on 17 November:

3.1 COVID-19: Care in the Community model (Ministry of Health)

3.2 COVID-19: A whole of system welfare approach under the COVID-19 Protection Framework (Ministry of Social Development)

### Relation to government priorities

4 This paper relates to the Government's response to COVID-19.

### Executive Summary

5 On 18 October 2021, Cabinet agreed to replace the elimination strategy with the minimisation and protection approach and to replace the Alert Level Framework with the new COVID-19 Protection Framework [CAB-21-MIN-0421].

6 Under the new approach – and with increasing vaccination rates – many systems and processes, which were designed with the goal of getting to zero COVID-19 cases in the community, must now be adjusted to reflect the new goals of minimising the spread of COVID-19 in the community and protecting those most vulnerable to the disease.

7 This paper outlines key changes to COVID-19 testing, case investigation and contact tracing which have been made, or are currently being made, to implement and support the minimisation and protection approach, including:

7.1 the development of a new approach to COVID-19 testing, under which the kind of testing that will be prioritised will change based on the COVID-19 Protection Framework setting for an area, with a high focus on symptomatic testing and surveillance testing in vulnerable communities at Red or Orange, and greater focus on surveillance testing at Green to rapidly identify clusters of cases and prevent further transmission;

7.2 a revised approach to COVID-19 contact tracing and case management, to ensure that the contact tracing system is scalable, fit for purpose and does not impose unnecessary burdens or restrictions on positive cases and contacts; and

7.3 a commitment to working with Māori and Pacific communities and complex groups to promote equity. This will include commissioning evaluations and reviews to inform understanding about which initiatives work best to increase the testing rates of groups and improving contact tracing (for example use of mobile technologies, iwi-led testing sites, working with other marginalised communities leadership to access their members for testing).

8 This paper also seeks funding of $983.143 million, comprising:

8.1 $788.643 million to enable ongoing COVID-19 testing through to 31 March 2022; and

8.2 $194.500 million for case investigation and contact tracing services, including resourcing for Public Health Units (PHUs), to 30 June 2023.

## Background

9 On 18 October 2021, Cabinet agreed to replace the elimination strategy with the minimisation and protection approach and to replace the Alert Level Framework with the new COVID-19 Protection Framework [CAB-21-MIN-0421].

10 While the vaccines available now are effective at reducing the risk of serious illness and death from COVID-19, they are not sufficiently effective at reducing the risk of transmission to achieve and maintain elimination in the context of the Delta variant.

11 This means that although high rates of vaccination in the eligible population will help to significantly reduce the harm caused by COVID-19 and the continuation of current preventative measures (such as the use of personal protective equipment (PPE) by health care workers and patients), there remains a need for complementary public health measures alongside vaccination to minimise transmission as much as possible and protect the most vulnerable.

12 A central element of the public health response to COVID-19 has been the test, trace, isolate and quarantine (TTIQ) system. This system – comprising contact tracing, case management, COVID-19 testing and isolation or quarantine arrangements for community cases – has been a key set of tools underpinning the sustained success of the elimination strategy throughout most of 2020 and 2021.

13 The TTIQ system will need to play a different role to support the minimisation and protection approach. Under the new approach, the TTIQ system will be used to:

13.1 minimise the spread of COVID-19, and enable outbreaks to continue to be stamped out, where practical to do so; and

13.2 protect the most vulnerable communities and individuals from the disease, identify cases early to enable early treatment and prevent hospitalisations.

14 Separate work is underway to ensure the health system has sufficient capacity and capability to support communities and protect the most vulnerable, and in doing so, protect all New Zealanders who rely on the health system from significant harm.

15 Across the whole TTIQ system, processes and system are changing to prioritise resources where there is the greatest public health benefit from their use.

16 This will help to ensure that our response to the ongoing pandemic is proportionate, sustainable and feasible.

17 This paper outlines specifically what changes being made to some aspects of the TTIQ system are, including:

17.1 the development of a new approach to COVID-19 testing, under which the kind of testing that will be prioritised will change based on the COVID-19 Protection Framework setting for an area. It will have a high focus on symptomatic testing, strategic restrictions for testing according to testing capacity, and surveillance testing in vulnerable communities at Red or Orange, and greater focus on surveillance testing at Green to rapidly identify clusters of cases and prevent further transmission; and

17.2 a revised approach to COVID-19 contact tracing and case management, to ensure that the contact tracing system is scalable, fit for purpose, locally tailored and does not impose unnecessary burdens or restrictions on positive cases and contacts.

18 Our response to the pandemic will need to remain flexible, adaptable and agile in order to respond to rapid changes in circumstances. We must be prepared for an ongoing high degree of uncertainty and a lack of many suitable international models for our response or comparators for our situation.

*Home isolation and quarantine*

19 Since October, approximately 5000 cases in Auckland have been self-isolating rather than being in a quarantine facility and this approach is being rolled out across New Zealand as appropriate.

20 To support this change, the Northern Region Health Coordination Centre (NRHCC) developed and is continuing to refine, with support from the Ministry of Health (the Ministry), a “home isolation” model called COVID-19 Care in the Community that aims to integrate clinical pathways, public health, and wellbeing support for COVID-19 positive cases at home.

21 Further details on the model are outlined in the papers on COVID-19 Care in the Community (led by the Ministry) and Managing COVID-19 in the Community (led

by the Ministry of Social Development), which was discussed at the Cabinet Social Wellbeing Committee meeting on 17 November 2021.

22 The COVID-19 Leave Support Scheme (LSS) and the COVID-19 Short-Term Absence Payment (STAP) also assist with home isolation, by helping employers pay employees who need to self-isolate. The Ministry of Social Development and the Treasury will work with the Ministry to ensure settings for these supports are aligned to the new case management and testing approach.

23 It is critical to the public health response that the model of home isolation adopted in New Zealand is effective at preventing onwards transmission, and thereby reducing the total number of cases in the community. Should this not be achieved, it is probable that other elements of our response will be compromised.

*Other matters being dealt with separately*

24 Other aspects of the transition to the minimisation and protection approach – including vaccination, vaccination certificates, face covering requirements and changes at the international border – have also been, or will be, dealt with in other papers.

25 Further, the Minister for COVID-19 Response will bring forward a separate paper to Cabinet on 13 December 2021 concerning the future of MIQ. This paper will seek agreement to a business case for longer term investment in infrastructure and a workforce for MIQ.

*Impact of COVID-19 on Māori and Pacific communities*

26 Vulnerable and marginalised communities have been especially hard hit by the current outbreak of COVID-19 in and around Auckland. For example, as at 15 November, Pacific peoples have accounted for 30% of all cases in the community since August 2021, and 40% of all hospitalisations. Māori are now over-represented among current cases. Other groups where there has been a disproportionate impact or that have posed particular challenges include people in transitional or insecure housing and drug users.

27 Currently Māori and Pacific communities also face a greater risk from COVID-19, due to the lower vaccination rates.. Across New Zealand, only 77% of eligible Māori have had a first dose of a COVID-19 vaccine, while 61% have had two doses. This is significantly lower than 90% of eligible New Zealanders who have had a first dose, and the 81% who have had two doses.

28 As a result, there needs to be a continued focus on Māori and Pacific needs in the public health response to the pandemic. Given the current lower vaccination uptake in Māori and Pacific communities, all health services need to anticipate that these groups will be over-represented across different elements of the health system esponse, including testing, isolation and contact tracing.

29 The health system is and continues to work with Māori and Pacific providers in a responsive and agile way to ensure the needs of Māori and Pacific communities are met locally. This includes contracting Māori and Pacific providers and working with

iwi to provide services across public health, primary care, welfare and cultural support.

30 The Ministry will convene a forum of Māori and Pacific providers to review lessons identified and learned to date during the response to the pandemic and consider how these can be incorporated in policy and practice going forward to better serve Māori and Pacific communities.

## COVID-19 testing

31 The Ministry has multiple workstreams underway to adapt and improve testing to support the transition to a minimisation strategy. These workstreams are described below and summarised in **Appendix 1**, which sets out a roadmap for these interventions.

*COVID-19 Testing Strategy*

32 The Ministry is currently finalising a new COVID-19 Testing Strategy, which is aligned to the COVID-19 Protection Framework. The Strategy provides principles to guide providers to the best approach to testing in each level of the COVID-19 Protection Framework. This will allow each region to develop an approach to testing that best fits the local circumstances and to direct resources toward actions that best protect vulnerable communities, including but not limited to the prioritisation of testing. The Ministry will continue to provide national leadership.

33 Different test modalities have different purposes and are useful in different settings. The choice of modality and/or sample can be specific to the testing scenario and reason the test is undertaken. The laboratory testing network use PCR for both surveillance and diagnostic purposes, utilising a nasopharyngeal, oropharyngeal swab or saliva sample type. In efforts to preserve laboratory PCR capacity in the future for targeted testing, surveillance testing will be pivoted to using RATs and saliva PCR through private providers.

34 The Ministry has now revised its position and saliva testing is available as a single sample, diagnostic test. As a result, the frequency of testing in certain situations, eg border workforce, has reduced from two tests to one test a week. This has contributed to a slight reduction in the volume of PCR demand for this cohort on the laboratory network. Saliva sample collection is non-invasive and can be self-collected.

35 The table below sets out some of the principles about how the approach to testing will change at different levels of the COVID-19 Protection Framework.

*Table 1 – Testing approach under the COVID-19 Protection Framework*

| | |
|---|---|
| **Red** | • The aim of testing is to prioritise diagnosis of those at risk of serious illness and identify those in critical roles who may be infectious to protect vulnerable people and essential systems.<br>• Symptomatic people will be tested by PCR[1] and Rapid Antigen Testing (RAT) can be performed to provide a rapid result, if recognised to be helpful based on the specific setting.<br>• When a region is at the Red setting and there are very high levels of prevalence, symptomatic individuals could be tested first by RAT, with positive RAT results confirmed by PCR.<br>• Where necessary, processing of samples should be prioritised according to vulnerability of the setting, for example, cases from Healthcare and Aged Residential Care settings being prioritised ahead of those from the wider community (although there will remain a need for all tests to be processed in a timely way).<br>• Regular surveillance testing of workers in roles that bring them in to contact with vulnerable people, to protect those they work with, their families and communities. RAT and or other modalities to be used as fits the context. |
| **Orange** | • The aim of testing is to minimise onwards transmission to prevent escalation of outbreaks.<br>• Diagnosis of those at risk of serious illness is prioritised, and identification of those in critical roles who may be infectious to protect vulnerable people and essential systems and minimised transmission.<br>• Symptomatic people will be tested by PCR, but RAT could also be performed to provide a rapid result, if helpful.<br>• Regular surveillance testing of workers in roles that bring them in to contact with vulnerable people, to protect those they work with, their families and communities. RAT and or other modalities to be used as fits the context. |
| **Green** | • The aim of testing is to quickly find clusters of cases to contain outbreaks and enable a public health response.<br>• Symptomatic individuals and those at greater risk of exposure to COVID-19 are the focus of testing.<br>• Symptomatic people will be tested by nucleic acid amplification testing PCR.<br>• PCR also used for focussed surveillance testing, of individuals in contact with people known to have COVID-19 or those who are symptomatic where there are additional risk factors such as poor ventilation.<br>• RAT will not be in widespread use as part of the public health response, due its unsuitability for low prevalence areas. |

36 Equitable access to and options for testing are central to the testing strategy, in alignment with Te Tiriti o Waitangi. Rapid Antigen Testing (RAT) is a key addition to this strategy, which has not been a part of previous testing plans. This will help to

[1] The Testing Strategy refers to nucleic acid amplification testing (NAAT), of which PCR is one type

support access to testing, potentially including self-testing, which is consistent with the principle of Tino rangatiratanga.

37 The RATs currently approved for use in NZ are performed on a nasal sample. Since 15 November, options for tests using a saliva sample are being evaluated against the evaluation framework, as approved by the COVID-19 Testing TAG. Saliva-based PCR for diagnostic testing is currently going through the latter stages of approval, which also improves the options available, as it avoids the need for a nasopharyngeal confirmatory PCR.

38 The Ministry is finalising the COVID-19 Testing Strategy, which is expected to be provided to the Director-General of Health on 22 November 2021. This will incorporate input and sign-off from the Testing Technical Advisory Group, input from the Public Health Technical Advisory Group, and feedback from consumers and focus groups, which is currently being sought. Relevant Ministers will be briefed on the final strategy.

*Current capacity for testing*

39 The current laboratory capacity for COVID-19 PCR testing is around 16,000 tests per day, whereas current demand is around 28,000 tests per day. While the national laboratory network is capable of surge capacity of up to 50,000 tests per day, as was demonstrated in August 2021, when a single day testing peak of more than 49,000 was reached, this was not sustainable and significantly impacted turnaround times. This surge can only be maintained for 2 to 3 days.

40 By pooling samples, we have a capacity of around 45,000 tests per day, however, the benefits of pooling diminish as the prevalence of COVID-19 in the community increases. Therefore pooled capacity of 45,000 is unlikely to be available when community prevalence is high.

41 Consequently, approximately 65-70% of tests can be processed and reported in under 24 hours (67% as of Friday 12 November) against a benchmark of 80%. Urgent work is underway to improve capacity and utilise new testing modalities to address this issue and improve testing turnaround times, as outlined in the following sections.

*Future testing capacity*

42 The additional measures we are taking to increase capacity and move surveillance to a different modality where appropriate will bring our surge PCR capacity to 55,000 - 60,000 per day by mid-December 2021.

43 Work is ongoing to ensure that there will be a standing capacity to provide 60,000 PCR tests per day in Q1. The Ministry is engaged in discussions with the laboratory network to identify areas of financial support requirements in the procurement of additional laboratory equipment and securing national reagent supplies.

*Table 2 – Future Testing Capacity by Modality*

| Community Testing Volumes | |
|---|---|
| **Modality** | **Daily standing capacity** |
| Forecast capacity PCR (nasal swab) | 60,000 |
| Forecast Usage RAT (Carestart) | 8,000 |
| Forecast Usage RAT (Panbio) | 8,000 |
| Forecast Usage RAT (SD Roche) | 8,000 |
| Forecast Usage Saliva (PCR) | 15,000 |
| Forecast Usage Serology | 500 |
| **Total** | **99,500** |

*Contracting additional suppliers*

44 s 9(2)(b)(ii), s 9(2)(j) [redacted]

45 s 9(2)(b)(ii), s 9(2)(j) [redacted]

46 s 9(2)(b)(ii), s 9(2)(j) [redacted]

47 s 9(2)(b)(ii), s 9(2)(j) [redacted]

48 s 9(2)(b)(ii), s 9(2)(j) [redacted]

49 s 9(2)(b)(ii), s 9(2)(j) [redacted]

*Expanding the laboratory workforce*

50 The availability of a skilled workforce is likely to be a key constraint on testing capacity scaling up rapidly.

51 In the short-term, laboratories are 'up-training' other personnel and on-boarding skilled workers that are not Medical Laboratory Scientist certified to support all non-resulting processes such as manual ordering, specimen processing, loading instruments or similar tasks. The Medical Science Council has approved unregistered staff working in labs to support this initiative.

52 Medium-term support would come from bringing trained laboratory workers from other countries, which will become more feasible moving in to 2022 as settings at the border change. In the long-term, collaboration with universities including sharing workforce forecasting and developing approaches to attracting people into laboratory careers will help enhance the workforce to provide a more robust system for future scenarios.

*Adding more equipment to the lab network*

53 s 9(2)(b)(ii), s 9(2)(j) [redacted]

54 s 9(2)(b)(ii), s 9(2)(j) [redacted]

55 s 9(2)(b)(ii), s 9(2)(j) [redacted]

56 s 9(2)(b)(ii), s 9(2)(j) [redacted]

*Rapid antigen testing*

57 With COVID-19 in the community, RAT has increased utility as a screening tool in situations where a rapid result is needed to inform risk assessment in workplace health and safety settings, to protect the healthcare workforce from potentially infected hospital visitors and to screen recent travellers at their point of arrival into New Zealand. RAT is a key component of the new Testing Strategy in development, as set out above, and as a new modality it can greatly increase the capacity of the number of tests that can be performed. RAT is not a replacement for PCR symptomatic testing but has utility for regular surveillance testing.

58 There are two scenarios where the use of RAT will be useful in the public health response to COVID-19. The first is where there is a highly vaccinated population and controlled setting and RAT can be used for regular surveillance testing. This includes health care settings, aged residential care and border workers. The second is in rural communities where, in the event of an outbreak, they need to have the ability to use RATs as a screening tool, followed by a confirmatory PCR test.

59 The Ministry has secured an additional two million RATs for the public health response and is actively communicating with suppliers to ensure there is enough in country volumes to support the roll out beyond the public health response. The Ministry will adopt the same/similar principles of supply for rapid antigen tests as those used for the supply of Personal Protective Equipment (PPE) and Critical Medical Supplies, as these principles are transferrable and have been largely successful in managing supply chain and distribution issues for PPE. Access for use outside the public health response will be privately funded. Discussions are underway to establish supply through the Pharmacy distribution model.

60 The rollout of RAT in a number of settings has been accelerated, and options are being investigated to move cohorts subject to surveillance testing requirements to RAT rather than PCR testing, in order to release some PCR testing capacity in the short term.

61 Three pilots using rapid antigen testing at the three Auckland metro DHBs for patients and visitors have recently been completed. The Ministry is now overseeing a phased roll-out of rapid antigen testing over three phases:

61.1 **Phase one,** which is underway, involves piloting point of arrival testing and working with the 29 businesses as part of the MBIE business charter as well as a roll-out of patient testing to the wider health sector including to the aged residential care sector. RAT is also now in use in MIQFs where the day 5/6 PCR test result is not available on day of departure.

61.2 **Phase two** includes rollout in high-risk healthcare settings for the healthcare (including aged residential care) workforce and vulnerable people and a wider roll-out to all businesses and government agencies and is currently expected to take place from 1 December 2021. Information, advice and guidance will be made publicly available so that public and private entities can make informed decisions about the utility of rapid antigen testing in their settings

61.3 **Phase three** involves community use of approved RAT by the end of December 2021, as part of implementing the new COVID-19 Protection Framework for controlling the ongoing Delta outbreak. Preparation work to support the community phase of the rollout is being completed in parallel to work supporting phase two, with a view to moving forward the timeframe if possible. High risk and vulnerable populations will be prioritised in this phase.

62 The Ministry is also urgently investigating options to accelerate the timing of this phased approach and will report back to the Associate Minister of Health on this matter. This report back will also include:

62.1 advice on the scope of Phase three;

62.2 advice concerning the availability of RAT to the general public or through controlled channels, such as pharmacies. The use or importation of such tests is currently prohibited under the COVID-19 Public Health Response (Point-of-care Tests) Order 2021, except for persons authorised by the Director-General of Health or for tests which are subject to an exemption; and

62.3 advice on the use of RAT in the public health response, for example in detecting outbreaks in isolated communities.

63 This phased roll out of RAT is building to a new approach, which involves a re-defined regulatory environment, facilitating the approval of new test kits, wider use amongst business, government agencies and other organisations. The Ministry will continue to manage the authorisation for importation and distribution of testing kits. The Ministry will also provide guidance about best use and how to self-test.

64 There are further opportunities to utilize RAT, such as deploying it as the methodology used for border worker surveillance testing. Work is underway to capture and record the results of RATs, which would allow for its use in a mandatory testing regime, such as the testing of border workers under the COVID-19 Public Health Response (Required Testing) Order 2020. A shift in testing modalities would allow for laboratory capacity to be utilized for other tests, notably symptomatic testing.

65 A much greater scale of and a wider spread of use is expected, with RAT becoming a tool for a rapid indication if an individual is positive in settings where there is urgent need for a result to inform patient management while awaiting a PCR test result, in settings where rapid PCR is not yet available. It may also have a role as a regular surveillance test in some scenarios

66 The NRHCC has already developed a plan for using RAT as a surveillance test for healthcare workers and expanding its use for patients. The Ministry will explore with key agency partners, including the Ministry of Business Innovation and Employment, how quickly RAT could be established as a testing option for border workers.

67 51,000 rapid antigen test kits have already been dispatched to MIQFs and northern region DHBs. 403,105 more kits are available in the Ministry's warehouses and 231,448 additional kits have been ordered and are incoming. As the time taken for delivery of an additional shipment of RAT kits is between three and ten days, supply is carefully monitored to ensure that enough is available.

68 The Ministry continues to expand its supply of RATs for supporting use in healthcare settings, including aged residential care. The mechanisms for DHBs accessing supply of RAT kits will mirror the process for ordering PPE and critical medical supplies.

69 The COVID-19 Testing Technical Advisory Group have approved the selection and evaluation framework for new point of care tests, which will be implemented to review the applications that will increase supply and distribution networks. It will also facilitate review of new tests that could be added to the list of approved tests for use in New Zealand. This will strengthen supply and access as we roll out the use of RAT through phases two and three.

*Rapid PCR testing*

70 Rapid PCR is already in use around New Zealand, with the instruments in use including Cepheid GeneXpert, Abbott ID Now, Roche Cobas Liat, and BioFire. These are mainly deployed in hospitals, for use specifically in Emergency Departments and pre-surgery, to make rapid assessments for situations where the risk of a false negative result is high.

71 There are many advantages of rapid PCR. It is highly sensitive and specific, equivalent to full-scale diagnostic laboratory performance, but able to produce results within an hour, and positive results in as little as 20-30 minutes. The devices currently in use are, however, very low throughput with most only able to analyse one sample at a time meaning there is insufficient capacity to screen all admissions in a large emergency department.

72 Additionally, there is a global supply shortage for reagents used by most rapid PCR instruments. Purchasing and deploying rapid PCR for non-critical use would create further reagent supply issues for hospitals where they are currently being used. Some reagents are produced in New Zealand, but there is a limit to the extent that this can be scaled up, given that the constituent components would need to be imported.

73 Work is underway to progress expanded use of rapid PCR for COVID-19 testing, including the Ubiquitome instrument that has been developed with support from MBIE. This instrument is capable of analysing up to 16 samples at a time. This platform will be evaluated by the Ministry to determine its use case to best support testing through the new point of care testing evaluation framework that commenced

on 15 November 2021. The Ubiquitome instrument is, however, currently constrained by the same issue of short-supplied reagents described above.

*Identifying new and emerging testing technologies*

74 The Ministry is working with expert groups to monitor and assess future testing innovations on a regular basis. Criteria are being developed of the characteristics of the test and research regarding the test that would be required before an evaluation would be undertaken. Any evaluation undertaken would include test performance, independent research, feasibility, clinical utility, cost, need and equity among other things.

*eOrdering national rollout*

75 The Ministry's Data and Digital team has also been rolling out eOrdering to community testing centres and general practices. This improves the efficiency of sample registration, using technology solutions including barcode scanning to replace manual data entry at the laboratory and can help improve the speed of test processing in laboratories resulting in improved turn-around-times for delivery of a test result.

76 eOrdering has been rolled out to community testing centres in 15 out of the 17 regions throughout New Zealand with permanent CTCs. One more region is going live in the week commencing 22 November and the final region is in the configuration stage. Additionally, at least another 45 pop-ups across the country will be pre-configured by the end of 2021 in preparation for testing surges.

77 Work is also underway to bring the eOrdering system to general practice in Auckland as a priority before a further rollout nationwide. Four general practices are live currently, which will increase to 12 by the end of November 2021. This work is particularly important given the context that two thirds of all COVID-19 samples are collected by general practice and most testing takes place in Auckland.

78 eOrdering enables automated negative text result messaging as soon as the result is available in the system which further improves turn-around-time of a result reaching the person who was tested.

*Tailoring approaches to testing across regions*

79 As noted above, the new testing strategy will allow for a different approach to testing and how it is applied in each region depending on the COVID-19 Protection Framework level, and based on local factors including rurality, demographics and local rates of vaccination. The testing services provided by CTCs, DHBs and GPs, however, will remain consistent.

80 Each DHB has a testing surge plan in place to inform its response as and when new clusters of cases are identified in that region. Testing approaches for aged residential care facilities, prisons and other high risk facilities are tailored to each facility (including high risk residential housing). Each DHB is responsible for being flexible to ensure this testing happens appropriately.

81 Throughout this outbreak, innovation has been led by the NRHCC, who have analysed data to characterise transmission risk by time, person and place and then targeted these settings for sample collection. They have deployed several different tactics included extending testing centre hours, opening pop-up community testing centres, dedicated community testing centres in churches, schools and workplaces and mobile swabbing teams. These mobile swabbing teams have provided in-house testing at residential facilities such as aged residential care facilities, correctional facilities, emergency housing, transitional housing, boarding houses, motels, and community housing providers located close to other facilities with positive cases.

82 This learning has been shared with other DHBs, including Waikato DHB when the outbreak was detected in their region. Additionally, building on this experience, Lakes DHB has employed a mobile testing van for the contacts of a case in Taupō and have extended testing centre hours.

83 Taranaki DHB has utilised rapid PCR in its hospital lab for critical tests and has organised the sending of other samples three times per day to Wellington, which has been used as a short-term solution. The Ministry has engaged with Taranaki DHB to see how it can support establishing a solution that meets the local need as it has done with Northland DHB. The same support will be provided to other regional hospitals who have the same need.

84 Further support from the Ministry is likely to be required to assist some DHBs to operationalise this response.

## Case investigation and contact tracing

85 As we transition to the minimisation and protection approach, case investigation and contact tracing will adjust alongside other settings to ensure that public health resources are directed to those activities that minimise the impact of community transmission and protect the health and wellbeing of cases and contacts.

86 This paper outlines the changes the system has already made and is actively making to ensure case investigation and contact tracing continues to be an integral part of managing COVID-19 outbreaks.

87 Previously, contact tracing for COVID-19 within Aotearoa has taken a cautious approach in line with our elimination strategy. To date, this has meant that during an outbreak response, there have been a significant number of contacts identified and managed through the system, with the aim of minimising transmission and providing assurance that cases are not going undetected. This included a large number of contacts with very low-risk exposures.

88 As we transition to the COVID-19 Protection Framework, we expect to see significantly higher case and close contact numbers than the system has managed previously.

89 Adapting to this context has meant two things:

89.1 reviewing our case and contact categorisation and management processes to ensure they align with the latest evidence and the strategic goals of the minimisation and protection approach; and

89.2 targeting case investigation and contact tracing services, consistent with the degree of concern about impact on health system sustainability against each level in the COVID-19 Protection Framework. This is likely to result in different approaches in different regions where the goal may be different, for example, tight suppression as opposed to trying to extinguish an outbreak.

90 The focus of contact tracing (and testing) efforts will instead be directed towards reducing onwards transmission - particularly in vulnerable communities - and minimising the impact on the wider health system, including minimising hospitalisation rates.

91 The availability of antiviral medicines that, if given early, reduce hospitalisations (e.g. Paxlovid) is yet another reason to maintain a high-performance contact tracing system. Cases that are identified via contact tracing are diagnosed much earlier than unlinked cases. This offers the potential to introduce antivirals early to vulnerable contacts who test positive.

92 Changes are being made to enable differentiated contact management according to need. For many, a "lighter touch" model will be appropriate, utilising digital communication tools for contacts who are at lower risk, such as those who are vaccinated, and/or able to readily access the necessary public health information and have lower requirements for support.

93 A key focus for the contact tracing system is to ensure that vulnerable communities that have lower vaccination rates and carry the greatest risk including high complexity health needs are prioritised within the system. Lessons learnt from the Delta outbreak are being incorporated into case investigation and contact tracing processes, including development of a triage tool to prioritise allocation of cases. This means that cases who are estimated to be of higher public health complexity (e.g., unvaccinated, not registered with a GP, known to live in transient housing, Māori or Pacific) are managed by the local health system where there are local providers involved to engage with cases and wraparound services. Call centre providers have adapted a manaaki / whakawhanaungatanga approach first to build trust and rapport with cases and contacts. Continuous insight and learning will remain important to ensure contact tracing is delivered in a way that connects with communities.

*Public Health Unit response*

94 PHUs continue to be an integral part of outbreak control, case investigation and contact tracing activities, drawing on highly trained, specialised and experienced staff. As New Zealand transitions from an elimination to a protection framework, it is imperative than PHU capacity is directed to those areas that require specialist knowledge and oversight. Smaller PHUs will need to be supported to analyse the quantity of data required to guide local action.

95 Additional contact management and case investigation capacity is being established through existing telehealth providers that will be available nationally to support outbreaks in any part of New Zealand. This will enable PHUs to delegate work to and free up capacity for high value outbreak control and complex case investigation work focused on complex settings, such as aged residential care, and vulnerable communities, including people in transitional or temporary accommodation.

96 In areas where cases have occurred during this outbreak, there has been a need for increased input from the wider health and social sector, including provision of welfare coordinated through other local and national agencies, referrals to other providers (such as Māori and Pacific providers) for engagement and follow up of contacts during their isolation period.

97 As part of the health system readiness work, DHBs are being asked to provide plans outlining coordination of services and providers including Māori and Pacific stakeholders.

98 In the Auckland metro region, the NRHCC has contributed considerable capacity that will not necessarily exist to the same extent elsewhere in the country. Work continues to coordinate local health and broader welfare resources across each DHB to prepare local health systems for increased cases and contacts. The national "care in the community model" will coordinate pathways of care for cases and household contacts.

99 Funding provided in 2020/21 and in 2021/22 has been allocated to PHUs to support increased capacity in case investigation and contact tracing and additional staff have either been recruited to increase baseline capacity and/or trained as a local surge workforce.

100 There will continue to be a need to bolster the capacity of PHUs to respond to the pandemic over the next twelve to eighteen months (see 'Financial Implications' in this paper for further detail).

101 The PHU funding will maintain capacity across PHU case investigation and contact tracing services. This will continue to be a need throughout 2022/23 irrespective of health system reforms.

102 All PHUs are being utilised and contributing to the current response. Case investigation and contact tracing work is being delegated across the country, with all services being delivered remotely to support the outbreak.

*Updates to case and contact management*

103 Contact categories and the testing and isolation requirements have been revised to reflect an increasingly vaccinated population and the other public health measures in place to minimise transmission. Appendix 3 outlines the key changes that were implemented from 15 November 2021 following approval by the Director-General of Health and the Director of Public Health.

104 The changes are based on sound evidence and international best practice and align with the minimisation and protection approach, reduce the burden on employers and

individuals, while remaining effective at reducing the onwards transmission of COVID-19.

105 Isolation or quarantine is known to have a significant adverse impact on individual wellbeing and employment, and a disproportionate impact on vulnerable communities. Ensuring that the impost of isolation and quarantine requirements is proportionate to the risk and reflects our most up to date understanding of how the virus spreads is therefore a priority.

106 Key changes to contact categories and management protocols include:

106.1 discontinuing the recording of Casual Plus and Casual exposure events in the National Contact Tracing Solution and ceasing the publication of corresponding locations of interest, except for use in relation to school and workplace settings where face-covering protocols are in place;

106.2 reducing quarantine and isolation requirements from 14 days to:

106.2.1 10 days for fully vaccinated, immunocompetent COVID-19 positive persons;

106.2.2 10 days for household or household-like close contacts irrespective of vaccination status, and for other partially vaccinated or unvaccinated close contacts; and

106.2.3 7 days for non-household close contacts who are fully vaccinated.

106.3 adopting revised risk assessment categories for a variety of indoor and outdoor settings, in part based on the vaccination status of people present.

107 The contact identification and management process is supported by comprehensive guidance, enabling an assessment of risk (see **Appendix 3** for further details).

*Management of special settings*

<u>High risk settings</u>

108 Certain settings such as health care, aged residential care settings, correction and compact residential environments (such as halls of residence or apartment blocks) present a greater risk of transmission and require particular and timely management to ensure quick isolation of cases and contacts.

109 A national outbreak response toolkit for aged residential care has been developed which outlines key activities and roles and responsibilities when a case occurs in an aged residential care setting. Work is underway to extend this approach to develop national guidance for other higher risk settings by the end of 2021. This will include consideration of other changes which might further reduce the risk of transmission within or into aged residential care settings.

*National telehealth case investigation service*

110 The Ministry has established a case investigation service within an existing telehealth provider.

111 An initial workforce of 175 people, including clinical and allied health professionals, have been trained to complete case investigation. This provider prioritises recruitment of Māori and Pacific staff to enable ethnicity matching of caller to cases and contacts.

112 This workforce operates under clinical governance with cultural competence and necessary escalations processes in place to ensure the service delivers equitable outcomes.

113 As at 9 November 2021, the service is now performing a national allocation and triage function to assess the public health complexity of a case before referring medium to high complexity cases (such as Māori, Pacific, unvaccinated, not registered with a GP or persons living in transitional housing) to a PHU to manage. The service will complete case investigations for cases that are defined as low public health complexity using the referral and escalation pathways that have been developed.

114 Final details are being worked through and it is expected that this service will operate independently by the end of November 2021. In the meantime, case investigation staff from the provider are working within ARPHS case and contact management teams.

115 Whilst this service will be first utilised to support cases in the Auckland metro region, it is intended that this service will operate nationally, managing cases across the country.

116 Currently, 175 people have been trained in case investigation and a further 300 people will be trained by the end of November 2021. Within the existing trained workforce of 175 people, we have additional capacity to manage approximately 150 cases per day through this service. This is in addition to the capacity across PHUs who are currently managing between 160 – 200 cases per day meaning national capacity for case investigation is between 300 – 400 cases per day.

117 Bolstering national telehealth services for case investigation will provide a workforce of 475 trained case investigators by early December 2021 which significantly increases the existing capacity within PHUs.

118 The Ministry has worked with the provider to develop scaling plans to enable an additional 500 people to be trained over the next four weeks through to 20 December 2021. This means that by this point, there will be capacity to manage 1,000 cases per day which will be delivered through a retained workforce of approximately 900 people. Actual capacity will increase each week over the next four weeks as cohorts of people are trained and begin working within the service.

119 Additional funding is being sought for this service with assumptions outlined in the financial implications section of this paper.

*The contact tracing model in light of the COVID-19 Protection Framework*

120 Within the current outbreak, as we transition from an elimination strategy the contact tracing system has adapted to prioritise capacity to focus on ensuring individuals are isolating in a timely manner. As local models for community isolation are developed, it is anticipated that the clinical care and welfare assessment of cases and their households will shift from case investigation into primary care and regional hubs. Once in place, this mean that case investigation providers will focus primarily on assessing and investigating the public health risks, allowing more cases to be managed. The streamlined model is currently in development as part of establishing the Caring for COVID-19 in the Community model.

121 Under the Protection Framework, the contact tracing system will have less unintended consequences than previously as contact categories have been revised to take into account the evidence from the large Delta outbreak (e.g. removal of the Casual Plus category for general use) and the additional public health measures to minimise risk in settings, (e.g. face coverings, physical distancing and capacity restrictions within indoor settings).

122 In addition, revised guidance and toolkits are being developed for workplaces and education settings to describe measures which, if implemented will make it unlikely they will have to close if a case visits their premise during their infectious period, or that high volumes of close contacts will be identified that may have an impact on their ability to continue to remain open (e.g. staff categorised as close contacts). Workplaces and schools are highly unlikely to be listed as a location of interest as contacts will be able to be identified by other means. This model will ensure public health resources and expertise are utilised most effectively, and empower individuals and communities to protect themselves from the disease.

123 Technology enhancements are underway to enable a digital pathway for cases and contacts if they are able to access technology and engage with the system in this way, for example an electronic portal for a case to record their exposure events, upload contact details, provision of information via email and use of electronic surveys to monitor symptoms (contacts only). Cases will also be able to trigger their digital diary and Bluetooth tracing key uploads rather than relying on case investigation staff to prompt this.

124 It is expected these options will be in place by early December 2021. Digital pathways for cases are expected to reduce call load thereby increasing case investigation capacity while also improving accessibility for cases and contacts who find the phone-based system difficult (such as deaf and hearing-impaired individuals). It is anticipated traditional methods will continue to be used with individuals who do not have access to digital tools and/or prefer more personal contact and additional support (for example, mobile testing and/or manaaki services). The following table describes the contact tracing activities under the phases of the COVID-19 Protection Framework.

*Table 3 – Contact tracing approach under the COVID-19 Protection Framework*

| | |
|---|---|
| **Red** | • No focus on source attribution<br>• Focus on regaining control of the outbreak and minimising hospitalisations and fatalities by prioritising notification to cases and referral to appropriate services (management or community isolation where health status will be closely monitored)<br>• Cease recording and publication of low-risk locations of interest<br>• Light touch approach within workplaces and education settings where public health measures are in place to minimise transmission<br>• Potential use of text messages to notify cases<br>• Focus investigation of exposure events to higher risk settings |
| **Orange** | • Focus shifts from intense source attribution to cluster control, and spread prevention with individual cases and contacts.<br>• Prioritise contact tracing capacity to focus on ensuring individuals are isolating in a timely manner<br>• Light touch approach within workplaces and education settings where public health measures are in place to minimise transmission<br>• Limit investigation of exposure events to higher risk settings<br>• Ceasing recording and publication of low-risk locations of interest |
| **Green** | • Focus on assertive source identification and spread prevention<br>• Extensive contact identification and monitoring to control transmission<br>• Recording and publication of all locations of interest |

125 From 1 December 2021, we will have standing capacity to manage up to 6,000 - 7,000 initial calls to contacts per day (to inform the person they are a contact) and up to 40,000 – 65,000 follow-up communications through daily monitoring calls or emails. Additional surge capacity can be brought on if required. The level of communication and touch points can vary significantly based on the complexity of needs (such as welfare support, general awareness of public health measures, language barriers, peer support, access or suitability of digital self-check in). Therefore, the exact number of calls within the workforce capacity can fluctuate. The service is designed to scale in accordance with needs and demand and at pace that considers learnings from previous outbreaks, latest modelling and public health risk assessment, all while ensuring effective and efficient management of available funding.

126 There is further scalability within call centre provider contracts and their workforce, as well as opportunity to utilise the digital pathway and provide information electronically for low-risk contacts.

127 Additionally, given the low risk of transmission from casual contacts, casual locations of interest will only be published in areas where health authorities are seeking to stamp out the virus. This will significantly reduce the impact of low-risk exposure events on businesses and individuals who may be required to self-isolate.

128 In early 2021, the Ministry undertook a large system update to the National Contact Tracing Solution, which included a review of the COVID-19 Disease Indicators used to measure the timeliness of the contact tracing service as well as the wider public health response.

129 The review was completed in June 2021. Consideration may be given to a further review of the current COVID-19 Disease Indicators when a definitive end to the outbreak is reached.

*Digital contact tracing*

QR codes

130 Information from the QR code system has had good usage through this outbreak, and usage of the system by the public has been sustained at a high level since the mandatory recordkeeping policy was announced. Currently approximately 10-20% of cases each day upload their digital diary. During the current outbreak, over 65,000 people have been notified that they have been exposed at a location of interest.

131 QR code scanning provides a standardised way of referring to venues, and a fast and scalable way of notifying attendees of exposures. There is significant value in this system, even when only used for higher-risk exposure events.

132 Future possibilities enabled by this technology at higher levels of prevalence of the disease in the community include:

132.1 automated cluster detection – identifying where many cases were at the same place at the same time, which may be an early indicator of a superspreading event; and

132.2 assisted risk assessment – making public health risk assessment faster by adding time spent in a location and surfacing venue information.

Bluetooth tracing

133 Bluetooth tracing allows for anonymous notification of close contacts, as detected by proximity between two devices.

134 Bluetooth tracing has good uptake from the public. Over two million devices have Bluetooth tracing running, representing approximately half of all New Zealand adults. It has only had occasional usage during this outbreak, due to a variety of factors such as socio-economic status of cases and their households often sharing one phone. The same underlying technology has been used in other jurisdictions to generally good effect, including jurisdictions with significantly lower public uptake.

135 It is expected that Bluetooth will have value, particularly in areas with lower numbers of cases that are less likely to result in a "pingdemic" where high numbers of contacts are identified without taking into account public health protections in place, for example PPE in a health care setting.

136 It is anticipated that the case investigation digital self-service tool, which will enable cases to trigger Bluetooth tracing code uploads themselves, will result in higher activation rates of the technology rather than relying on this being done by a case investigator.

137 Future possibilities for this technology include:

137.1 automatic distribution of Bluetooth tracing upload codes to positive cases; and

137.2 enhancements to the experience for recipients of Bluetooth tracing alerts – for example reminders to get tested on the recommended number of days after exposure.

*Equity*

138 This outbreak has affected a number of vulnerable communities, where culturally appropriate and timely access to support is vital to ensure the associated risk to individuals is managed.

139 Prioritising efforts to improve vaccination rates for Māori, including engagement and funding of iwi and local providers is a key priority area to address this risk.

140 The unvaccinated will be overrepresented in cases therefore processes are in place to ensure the system is responsive to those with barriers to access, alternative health beliefs or a history of interactions with state institutions that have undermined trust. This includes scaling of mobile services such as the Pae Ora model within the Northern Region to focus on appropriate engagement with Māori, as well as strong connections to Māori and Pacific providers, many of whom provide integral manaaki (welfare) services to cases and contacts.

141 The national case investigation service has been developed with an 'equity-first' approach meaning that there are clear pathways to ensure cases affecting vulnerable communities are prioritised as well as diversity of workforce and culturally competency of callers to support individual needs.

142 The PHUs and the National Investigation and Tracing Centre will continue to use ethnicity as a measure of prioritisation, ensuring Māori and Pacific populations receive priority care from the public health service. This is alongside prioritisation of unvaccinated people and marginalised communities, such as persons known to reside in transitional housing. A triage allocation tool is currently used to prioritise allocation of cases to either:

142.1 a local PHU, for those deemed higher complexity and therefore more likely to need access to local, higher intensity pathways; or

142.2 to a PHU outside of the region where a case lives, for those deemed low to medium complexity.

143 Whakarongorau, a telehealth provider for the contact tracing service, have boosted the diversity of their workforce by over 200% in the past year to ensure they are able to offer culturally supported services to Māori, Pacific and other populations.

144 Ensuring effective and meaningful engagement with the local communities, as well as protecting the privacy of individual information are both key components of building trust in the contact tracing system.

145 Contact tracing services, including communications to individuals, are all enabled to be delivered remotely, with a focus on ensuring both phone and email options are available to best serve the individual i.e., those in remote or rural settings.

## Operational planning

146 An overview of the key steps for operationalising changes to COVID-19 testing, case investigation and contact tracing to support the minimisation and protection approach is at **Appendix 3**.

147 The Ministry has reviewed infection prevention and control measures in light of the minimisation and protection approach. Noting there are multiple layers of protection, imagined as Swiss cheese slices that block the spread of SARS-CoV-2. No layer is perfect; each has holes, and when the holes align, the risk of infection increases. But several layers combined in a prevention and response mode – social distancing, standard and transmission precautions such as face coverings, particulate respirators and PPE (health care workforce), hand washing, testing, contact tracing, ventilation, vaccines and government messaging – significantly reduce the overall risk and response.

148 Aged residential care facilities as an example have both preventative actions in place applying standard transmission in times of lower Alert Levels that provides operational procedures and protocols such as if a resident has been discharged from a hospital within a Red zone or heightened Alert Level setting requires a negative PCR test before returning to the facility. Patients are isolated for a period not dissimilar to MIQ settings.

149 As part of any prevention mechanism within operating contexts, RAT could be utilised with health care workers and visitors. In an instance of a positive case that is a resident or healthcare worker, facilities isolate residents and adapt transmission precautions such as the use of P2/N95 particulate respirators, testing strategies across residents and isolate workers and residents within facilities.

150 Corrections have modelled their processes on the operating guidelines for MIQ. The Ministry has enabled supply of RAT kits effective Friday 12 November. Standard and transmission protocols are applied readily.

## Financial Implications

151 This paper also seeks funding of $983.143 million to enable COVID-19 testing, case investigation and contact tracing, to be a call against the COVID-19 Response and Recovery Fund. This comprises:

151.1 $788.643 million to enable ongoing COVID-19 testing through to 31 March 2022; and

151.2 $194.500 million for case investigation and contact tracing services, including resourcing for PHUs, to 30 June 2023.

152 The cost of COVID-19 testing during the remainder of this financial year and the 2022/23 financial year will be driven primarily by key policy decisions in the

coming weeks. As such, these costs are currently uncertain, and it is not feasible to accurately forecast the cost of delivering these systems over the medium term.

152.1 For example, forecasting the cost of COVID-19 testing through to June 2023 on the basis of current testing volumes, produces an unrealistically high additional cost of around $2.517 billion. However, this cost is very unlikely to ever be realised, due to both the limited capacity of testing laboratories to undertake this volume of work over a prolonged period and because future policy decisions may significantly reduce demand for testing.

*Table 4: Community Testing*

| | Testing start date | Forecast end date | Average number of tests per day | Number of testing days | Average cost per test $ | Costs incurred $ million |
|---|---|---|---|---|---|---|
| Funding agreed 2021/2 | 1/07/2021 | 30/06/2022 | 5,500 | 365 | 121 | 242.908 |
| Incurred as follows: | | | | | | |
| Actual Usage | 1/07/2021 | 7/11/2021 | 17,827 | 130 | 102 | 236.386 |
| Forecast Usage | 8/11/2021 | 30/06/2022 | 25,000 | 235 | 102 | 599.250 |
| Additional Funding required | | | | | | 592.729 |

*Table 5: Lab Testing*

| | Testing start date | Forecast end date | Average number of tests per day | Number of testing days | Average cost per test $ | Costs incurred $ million |
|---|---|---|---|---|---|---|
| Funding agreed 2021/22 | 1/07/2021 | 30/06/2022 | 7,000 | 365 | 64 | 163.520 |
| Incurred as follows: | | | | | | |
| Actual Usage | 1/07/2021 | 7/11/2021 | 19,011 | 130 | 64 | 158.172 |
| Forecast Usage | 8/11/2021 | 30/06/2022 | 26,000 | 235 | 64 | 391.040 |
| Additional Funding required | | | | | | 385.692 |

| | |
|---|---|
| Total Community testing request | 1,523.479 |
| Total Lab testing request | 993.052 |
| **Total** | **2,516.530** |

153 For this reason, funding of $788.643 billion for testing is sought on a short-term basis, in order to continue the current response to the pandemic and implement policy decisions made by the Government in relation to the transition to the minimisation and protection framework.

154 Once key policy decisions driving these costs have been made, a further paper will be brought back to Cabinet concerning funding beyond March 2022. This is expected to be in the first quarter of 2022.

155 Funding of $194.500 million for contact tracing and case investigation services is sought for the period to 30 June 2023.

156 The funding sought in the paper does not include funding for MIQ, which will be dealt with separately.

*Need for funding for COVID-19 testing and laboratory services*

157 Additional funding for COVID-19 testing and laboratory services is required due to the substantial escalation in costs arising from the response to the outbreak of COVID-19 which began in August 2021.

158 For the 2021-22 financial year, the Ministry was funded at a level that would allow for an average of 5500 tests per day across New Zealand. Currently, around 27,000 tests per day are being completed, which has depleted funds available for the remainder of the financial year.

159 The additional cost is partially offset by a lower unit cost per test of $102 (rather than the budgeted $121), based on actual costs last financial year.

*Table 6 - Community Testing (proposed)*

| | Testing start date | Forecast end date | Average number of tests per day | Number of testing days | Average cost per test $ | Costs incurred $ million |
|---|---|---|---|---|---|---|
| Funding agreed 2021/2 | 1/07/2021 | 30/06/2022 | 5,500 | 365 | 121 | 242.908 |
| Incurred as follows: | | | | | | |
| Actual Usage | 1/07/2021 | 7/11/2021 | 17,827 | 130 | 102 | 236.386 |
| s 9(2)(b)(ii) | [redacted] | | | | | |

*Table 7 - Lab Testing (proposed)*

| | Testing start date | Forecast end date | Average number of tests per day | Number of testing days | Average cost per test $ | Costs incurred $ million |
|---|---|---|---|---|---|---|
| Funding agreed 2021/22 | 1/07/2021 | 30/06/2022 | 7,000 | 365 | 64 | 163.520 |
| Incurred as follows: | | | | | | |
| Actual Usage | 1/07/2021 | 7/11/2021 | 19,011 | 130 | 64 | 158.172 |

s 9(2)(b)(ii) [redacted]

| | |
|---|---|
| Total Community testing request | 457.608 |
| Total Lab testing request | 331.036 |
| **Total** | **788.643** |

*Need for funding for case investigation and contact tracing*

160 Additional funding is required for continuity of our contact tracing service, including contracted call centre providers, PHUs and their Māori partners seeking assurance of funding to 30 June 2023.

161 Significant effort and investment has been made to establish the partnerships and capability across existing workforce and inability to provide certainty increases risk of losing this workforce. Short-term commissioning carries risk including staff turnovers, loss of productivity which in turn impacts the efficient delivery of the contact tracing service.

162 We propose allocating a total of $194.500 million to contact tracing services including case investigation services. This funding will enable us to provide a level of commitment to commission services to 30 June 2023.

162.1 **Contact tracing Current Shortfall ($14.4 million)** – this funding is needed to cover the increased spend on contact tracing since August 2021 to date.

162.2 **Contact tracing ($32.4 million)** – this funding is needed to enable increased baseline workforce in order to mobilise a large workforce within short period of time and ensure sufficient funding is available to continue to deliver the contact tracing service through to 30 June 2022.

162.2.1 The assumptions that underpinned existing contracts were based on pre-Delta modelling and did not reflect the high volumes of contacts that have been identified during this outbreak. In order to ensure there is a greater capacity to manage increased volumes of contacts, funding is being sought to increase the workforce available within a short period of time (increasing baseline capacity to make 2,000 - 3,000 calls within the first 24-48 hours to 7,000 - 8,000 calls).

162.2.2 This will mitigate the risk of not being able to manage large volumes of contacts in a timely manner when a case is identified in a region that does not yet have community transmission and fewer restrictions are in place which mean there may still be large volumes of contacts identified and required to self-isolate despite updates to contact categories and management protocols.

162.2.3 Most of the funding allocated to 30 June 2022 has been exhausted through the recent response to the August COVID-19 Delta variant outbreak and the ongoing support needed to date. The original budget was set prior to the Delta Variant.

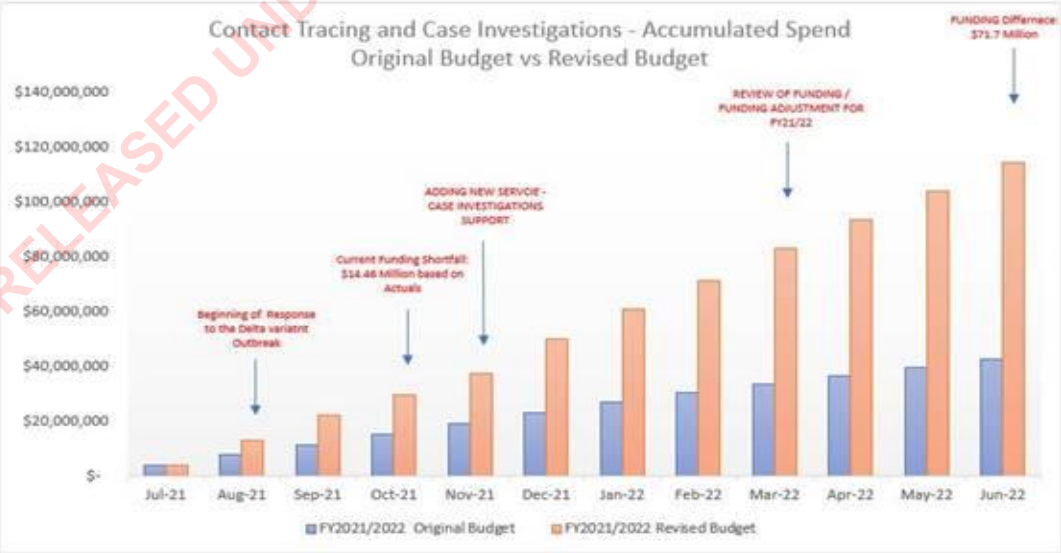
171.3 **National Case Investigation service ($55.7 million)** – this funding is needed to provide additional capacity to complete case investigations through our telehealth providers. This includes a clinically trained workforce to oversee case investigations ensuring timely referrals are made in order to minimise whānau health and wellbeing. Timely investigations increase our ability to isolate contacts at risk quickly to minimise public health risk. Funding estimates are based on an average of 150 case investigations completed by this service per day from 1 December 2021 to 30 June 2022 (with a lower number around 75 per day during the last half of November 2021). However, the actual demand for case investigations will be peaky, with greater demand in certain periods to contain outbreaks, and lower demand in others. This means that a relatively greater number of case investigators will need to be trained, in order to manage periods of high demand.

162.4 **Contact tracing and case investigation services for 2022-23 ($92.0 million) –** this includes $40 million for distribution to PHUs and local providers to maintain and enhance case investigation and contact tracing capacity, and $52 million for continuation of call centre services and technology enhancements.

163 The recent modelling suggests an exponential growth of cases in the community which has a direct impact on contact tracing and case investigations demand.



*Figure 1 – contact tracing and case investigations budget projections*



### Legislative Implications

164 There are no immediate legislative implications of the changes outlined in this paper. However, it is likely that some elements of these changes will, in due course, be implemented through secondary legislation.

165 In particular, changes to arrangements for testing and isolation are likely to be reflected in future orders made under section 11 of the COVID-19 Public Health Response Act 2020. Any such orders would be subject to the consultation requirements set out in that Act, including consultation with key Ministers.

166 It is not anticipated that changes to primary legislation will be required to implement any of the changes outlined in this paper.

## Impact Analysis

### Regulatory Impact Statement

167 The changes outlined in this paper do not require a Regulatory Impact Statement.

### Population Impacts

168 The likely population impacts on health and economic outcomes from the transition to the minimisation and protection approach were detailed in CAB-21-MIN-0421, which was considered by Cabinet on 18 October 2021.

178 The changes outlined in this paper are necessary measures to support and implement the minimisation and protection approach, and therefore contribute to the same population impacts. A formal evaluation of the effectiveness of how PHUs/ DHBs have served Māori, Pacific, remote and marginalised communities is planned and will assess the way they have worked with NGOs and community service providers. Recommendations made from the evaluation will be incorporated into the next iteration of testing, case investigation and contact tracing programmes. This will include understanding what initiatives work best to increase the testing rates of group eg mobile, iwi lead testing stations, working with gang leadership to access members for testing.

*Treaty implications*

179 The Crown has an active duty to protect Māori health outcomes. In developing the detailed design of this new approach, we will engage with Māori to ensure that the efficiencies proposed around testing and case management do not have a disproportionate negative impact on Māori outcomes.

180 Māori rangatiratanga can be enabled in the provision of community-led wellbeing support under the new COVID-19 Protection Framework. We understand that officials are working with relevant Māori groups to ensure Māori are appropriately supported and funded to provide this sort of support. Access to testing modalities such as RATs will not be dissimilar to the supply of PPE. Distribution and access for Māori Health providers and Iwi will be equitable, fair and transparent. All Māori Health providers have access to the centralised portal for access to RATs. Local iwi

know and understand how best to support and provide access to their communities. The Ministry of Health will enable access to testing modalities that best meet the needs of Māori and do Māori.

181 In addition, a review of the Ministry of Health equity response to the August 2021 COVID-19 Delta outbreak, has recently been commissioned. Historically pandemic responses have preferentially advantaged non-Māori, and failed to protect whānau, hapū, iwi and Māori communities from the worst outcomes[OB]. Other populations the COVID-19 Delta variant poses an elevated risk to is the Pacific community (a community that has experienced high number of positive cases in the early weeks of the Delta variant outbreak) and disabled people. These groups bear a disproportionate burden of health and social risk-factors too that makes them more susceptible to contracting COVID-19. The review will seek community-driven experiences to provide insight into the health outcomes for populations or priority groups at higher risk during the COVID-19 epidemic. These experiences will inform the Ministry to inform effective planning and action for future responses, so greater equity is achieved in the future.

## Human Rights

182 The changes outlined in this paper have no immediate impact on human rights, beyond those outlined in relation to the minimisation and protection approach [CAB-21-MIN-0421 refers].

## Consultation

183 The following agencies were engaged in the development of this paper , the Department of the Prime Minister and Cabinet, Treasury, Ministry of Business, Innovation and Employment, Ministry for Social Development, Te Arawhiti, Te Puni Kōkiri, Ministry for Pacific Peoples and the Ministry of Transport.

## Communications

184 Some operational communications within the health system has already taken place to allow changes outlined in this paper to be implemented. This includes updating guidelines around the use of home isolation and periods of isolation and quarantine, which have been distributed to DHBs, PHUs and other health service providers.

185 All-of-government communications in relation to the implementation of the COVID-19 Protection Framework will be considered separately by Cabinet.

## Proactive Release

186 It is intended that this paper will be proactively released, following Cabinet consideration.

## Recommendations

The Minister for COVID-19 Response and Associate Minister of Health recommend that Cabinet:

1. **note** that in October 2021, Cabinet agreed that the Minister of Health would report back in November on updated strategies for testing, contact tracing and isolation to support the transition to the minimisation and protection framework [CAB-21-MIN-0421 refers];

2. **note** that an effective testing, tracing, isolation and quarantine system is critical to the success of the minimisation and protection framework. To enable this, a specialist implementation taskforce has been stood up to support our all-of-government efforts on these systems;

3. **note** that the focus of testing that will be prioritised will change based on the COVID-19 Protection Framework setting for an area, with a high focus on symptomatic testing for all if possible, strategic restrictions for testing according to testing capacity, and surveillance testing in vulnerable communities at Red or Orange, and greater focus on surveillance testing at Green to rapidly identify clusters of cases and prevent further transmission;

4. **note** that work is underway to expand the use of Rapid Antigen Testing, where appropriate, including a current trial with businesses;

5. **note** that that the final COVID-19 Testing Strategy will be provided to the Director-General of Health on 22 November, and relevant Ministers will be briefed;

6. **note** that COVID-19 testing capacity will be increased to 60,000 tests per day, and that increases beyond this level would require further investment in equipment and workforce;

7. **note** that work is underway to expand the capacity for COVID-19 testing, including through contracting additional laboratories for the public health response;

8. **note** that the Ministry of Health will work with Immigration New Zealand to explore options for changes to border settings that might allow the recruitment of skilled laboratory workers from overseas;

9. **note** the new approach to case investigation and contact tracing, under which resources will be focussed on protecting vulnerable communities and individuals, and the approach taken in different areas will vary depending on the nature of the outbreak;

10. **note** the changes to managing cases of COVID-19 and contacts, including reduction in periods of isolation and quarantine from 14 days to 10 days generally, and to 7 days for vaccinated non-household close contact;

11. **note** that with the additional funding sought within this paper, the scalable national case investigation capacity will be able to manage up to 1,000 cases per day by 20 December 2021;

12. **note** that with the additional funding sought within this paper, there is standing capacity to manage 6,000-7,000 initial communications to contacts per day as well as 40,000 – 65,000 follow-up communications (via phone and email) per day. Additional surge capacity can be activated if required;

13. **note** that the ongoing nature of the pandemic and the need to maintain our response pillars, including the capacity to manage outbreaks, means additional funding is needed for the COVID-19 health system response in 2021/22 and 2022/23;

14. **agree** to additional funding of $983.143 million over 2021/22 and 2022/23 to support the on-going health system response to COVID-19 as a call against the COVID-19 Response and Recovery Fund, as follows:

15. **agree** to increase expenditure to provide for costs described in recommendation 14 above, with the following impacts on the operating balance and net core Crown debt:

| | $m - increase/(decrease) | | | | |
|---|---|---|---|---|---|
| **Vote: Health**<br>**Minister of Health**<br>**Minister for COVID-19 Response** | **2021/22** | **2022/23** | **2023/24** | **2024/25** | **2025/26 & Outyears** |
| Operating Balance and Net Core Crown Debt Impact | - | - | - | - | - |
| Operating Balance Only Impact | 891.143 | 92.000 | - | - | - |
| Net Core Crown Debt Only Impact | - | - | - | - | - |
| No Impact | - | - | - | - | - |
| **Total impact** | **891.143** | **92.000** | **-** | **-** | **-** |

16. **approve** the following changes to appropriations to provide for the decision in recommendation 14 above:

| | $m - increase/(decrease) | | | | |
|---|---|---|---|---|---|
| | **2021/22** | **2022/23** | **2023/24** | **2024/25** | **2025/26 & Outyears** |
| **Vote: Health**<br>**Minister for COVID-19 Response** | | | | | |
| ***Multi-Category Expenses and Capital Expenditure:*** National response to COVID-19 across the health sector | | | | | |
| MCA | 891.143 | 92.000 | - | - | - |

| | | | | | |
|---|---|---|---|---|---|
| Non-departmental Output Expense:<br><br>COVID-19 Public Health Response | | | | | |
| **Total Operating** | **891.143** | **92.000** | **-** | **-** | **-** |
| **Total Capital** | **-** | **-** | **-** | **-** | **-** |

17. **agree** that the changes to appropriations in recommendation 16 above for 2021/22 be included in the 2021/22 Supplementary Estimates and that, in the interim, the increases be met from Imprest Supply;

18. **note** that the $788.643m for testing is based on an illustrative costing scenario of 60,000 tests per day through to 31 March 2022;

19. **note** that the funding for testing could support funding beyond 31 March 2022 depending on actual testing volumes and the mix of testing types used;

20. **invite** the Associate Minister of Health to report back in December with further information on the costings and assumptions underlying the National Case Investigation service and the ongoing funding for PHUs in 2022/23;

21. **invite** the Associate Minister of Health to report back in December with an update on the testing strategy, including a forward six month plan of testing costs, broken down by volumes of different testing methods over that period;

22. **note** that the appropriation Minister and the Minister of Finance agree that any movement of amounts between categories in the above multi-category appropriation must reflect any changes in the agreed approach taken to address the COVID-19 public health response and cannot be applied to any other Health related initiatives;

23. **authorise** the drawdown of additional funding from the COVID-19 Response and Recovery Fund to cover additional costs due to increased demand for testing in the 2021/22 financial year to the Prime Minister, the Minister of Finance, the Minister for COVID-19 Response and the Associate Minister of Health; and

24. **agree** that the Minister of Health reports back to Cabinet by 31 March 2022 on future funding requirements for the Ministry of Health and the sector to continue to meet the Government's health system response to COVID-19 beyond 31 March 2022.



Authorised for lodgement

Hon Chris Hipkins

Minister of COVID-19 Response

Hon Dr Ayesha Verrall
Associate Minister of Health

# Testing Workstreams Roadmap

## Current picture

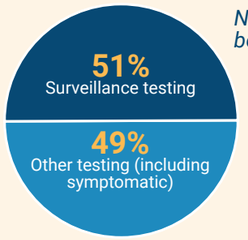
In order to transition from an elimination strategy to the minimisation and protection approach, a number of changes to testing have been proposed. This will help the system refocus on making space available for symptomatic cases and to protect fast turnaround times.

**Current testing volume is 168% of the national lab capacity.**

**Only 67% of tests are able to be processed and reported in under 24 hours.**

**Changing our approach to surveillance testing will ensure capacity is available for timely symptomatic testing.**

### National testing




*National testing averages between 4 Nov - 10 Nov*

- 12,902 daily average surveillance tests.
- 12,170 daily average other tests (including symptomatic).

## Work underway

New Zealand is beginning to transition regionally from an overall Elimination Strategy to a Minimisation Strategy. This change will impact much of the current work.

**Four key areas**

1. Reconnecting New Zealand.
2. Health System Preparedness.
3. COVID-19 Protection Framework.
4. Vaccinations.

## Testing Strategy

A new Testing Strategy is currently being drafted. It will provide clear guidance to align COVID-19 testing with the wider national approach.

**Three key pillars**

1. Encourage an equity focussed approach to test those most at risk.
2. Deploy innovations to testing, including new modalities and new approaches.
3. Adopt a risk based model for testing, prioritising symptomatic, unvaccinated and our most vulnerable people/settings.

## Actions required

**Prioritise testing**
Look at options to ensure our testing is targeting the people and settings that need it most.

**Targeted improvements**
Look at innovations and system improvements to increase efficiencies.

**Increase supply**
Introduce new equipment and providers to increase the total capacity for the lab network.

## Interventions Roadmap

**Contact tracing**
Contact tracing is changing the casual contact categories (15 Nov).

**eOrdering**
Work underway to move top 10 Auckland GP practices to e-Ordering, as well as other regions for GP integration.

**Automation**
Canterbury are trialling automation which will help inform how it is rolled out to network.

**RATs rollout**
A phased rollout of RATs is now underway.

**Surveillance testing**
New approaches to testing arising from Testing Strategy and RATs rollout.

**Testing strategy**
New testing strategy is rolled out to provide clear guidance on national testing approach (22 Nov).

**Protection Framework**
Decision whether Auckland will move to the new Protection Framework (29 Nov).

**Saliva testing policy**
Changes to saliva testing to make it diagnostic and via a single test providing another option..

**VO testing**
Education workforce deadline for being fully vaccinated and will stop surveillance testing for this cohort (1 Jan).

Now → Long-term

**Workforce changes**
The Medical Sciences Council has approved unregistered staff to work as lab technicians.

**Ubiquitome evaluation**
The Ubiquitome evaluation will be prioritised as part of the new tests under the evaluation framework for Point of Care.

**Additional equipment**
Canterbury DHB is increasing capacity by 11,000 per day (Nov 21).

**Contract Hill Lab**
Signed contract to provide 800 additional swabs and 6,000 saliva samples per day (from mid-Dec).

**APHG Capacity**
APHG increasing capacity by 3,000 per day and additional 7,500 per day (from mid-Dec).

**Additional equipment**
Ongoing discussions with Northland DHB to setup new equipment & facility (Dec 21).

Prioritise testing
Targeted improvements
Increase supply

## Future considerations

In 2022, there will be changes to our approach to COVID-19, which will include changes to testing, including:

- Changes to managed and self-isolation.
- Potential changes to the border, such as expanding QFT.
- Seasonal impacts, such as winter illnesses.

## Appendix 2: Additional private lab capacity

| | Nasopharyngeal | Saliva |
|---|---|---|
| **Hills** | 4,000 additional tests (either sample type) per day<br><br>Have recently been contracted, yet to start testing. Will be able to provide up to 4,000 tests per day (of either sample type) by the end of this year. By March 2022, expect this to be 7,000 per day. Current contract is for 800 NP samples per day. | |
| **APHG** | 12,000 additional tests (either sample type) per day<br><br>This includes:<br>• 3,000 in Wellington<br>• 6,000 in Auckland<br>• 3,000 in Christchurch<br><br>Some of the labs are able to pool samples, depending on the context of the prevalence rate (high prevalence removes the option of pooling).<br><br>APHG is currently under contract, the figures above are in addition to the currently contracted capacity of 3,700 saliva sample tests per day.<br><br>Next year, further planned improvements will add additional daily testing capacity as follows:<br>• 2,500 in Nelson<br>• 2,500 in Taranaki<br>• 2,500 in Dunedin | |
| **Rako** | n/a | 8,000 additional saliva tests per day<br><br>Not currently contracted. |

# POL-002 Guidance on community contact categories and actions – effective from 15 November 2021 (version 4.1)



Higher Index of Suspicion (HIS) criteria no longer includes contacts; follow HIS guidance. This guidance excludes healthcare workers: refer to **Risk Assessment and Categorisation of Healthcare Workers Exposed to COVID-19.**

| Category[1] | Description | Actions for the Primary Contacts | Actions for Public Health/NITC | Actions for Secondary Contacts |
|---|---|---|---|---|
| **Healthcare workers** | Healthcare workers who have been exposed to a case should follow instructions from their employer whilst at work and refer to **'Risk Assessment and Categorisation of Healthcare Workers Exposed to COVID-19'**. | | | |
| **No contact** | General public and surveillance testing. | • Asymptomatic: self-monitor for symptoms<br>• Symptomatic: get a test, and stay at home until a negative test result AND until 24 hours after symptoms resolve | • None | • Not applicable |
| **Casual** | People who have had exposure to a case, but do not meet the Close Contact criteria | • Self-monitor for symptoms for 10 days<br>• If symptoms develop, get a test and stay at home until a negative test result AND until 24 hours after symptoms resolve | • Inform via media, apps or other public communication<br>• Self-identify through inbound call e.g. to Healthline<br>• Not recorded in NCTS | • No Secondary Contacts<br>• If a household member of a Casual contact develops symptoms, they follow the 'No contact' [green] pathway |
| **Casual Plus** | **ONLY** for use within education and workplace settings, refer to specific guidance for those settings where available. | | | |
| **Close** | **Household** members with ongoing contact with case (irrespective of vaccination status).<br><br>*Advice is being sought regarding appropriate testing and quarantine requirements for these contacts.* | • Active management<br>• Self-isolate at home until case released AND for an additional **10 days** post case release<br>• Test on **days 5 and 8** post case release<br>• Daily symptom checks via email or phone call<br>• If symptoms develop at any time, get an additional test immediately<br>• Release 10 days isolation post case release, provided no new or worsening symptoms AND negative day 8 test<br>• Repeat entire management plan if new case identified in the household | • Record Primary Close Contact in NCTS<br>• Inform<br>• Isolate/quarantine at home where possible<br>• Monitor & follow-up test results<br>• Clinical assessment of test results and final symptom check and release | • No Secondary Contacts<br>• All household members are Primary Close Contacts of the case |
| | **Household-like**[2] who have no ongoing contact with case (irrespective of vaccination status).<br><br>**Unvaccinated** (<7 days since second dose of Pfizer vaccine or no vaccination). | • Active management<br>• Self-isolate at home for **10 days** post last exposure<br>• Test **immediately** and on **days 5 and 8** post exposure<br>• Daily symptom checks via email or phone call<br>• If symptoms develop at any time during the 10 days, get an additional test immediately<br>• Release after 10 days of isolation post exposure, provided no new or worsening symptoms AND negative day 8 test | • May self-identify through inbound call e.g. to Healthline<br>• Record Primary Close Contact in NCTS<br>• Inform<br>• Isolate/quarantine at home where possible<br>• Monitor & follow-up test results<br>• Clinical assessment of test results and final symptom check and release | • Only **unvaccinated** household members are considered Secondary Contacts<br>• Secondary Contacts are advised to **stay at home** until the Primary Close Contact has a negative day 5 test<br>• Secondary Contacts with contact only prior to a Primary Close Contact's negative test swab being taken (immediate or day 5) are released<br>• Secondary Contacts with any contact after the Primary Close Contact's last test swab was taken are not released until the Primary Close Contact's negative day 5 test result<br>• If the Primary Close Contact develops symptoms, Secondary Contacts should stay at home until the Primary Close Contact returns an additional negative test<br>• If a Secondary Contact develops symptoms, test and stay at home until negative test result AND until 24 hours after symptoms resolve |
| | **Vaccinated** (≥7 days since second dose of Pfizer vaccine). | • Active management<br>• Self-isolate at home for **7 days** post last exposure<br>• Test **immediately** and on **day 5** post exposure<br>• Daily symptom checks via email or phone call<br>• Follow-up if no negative day 5 test result available by day 7<br>• Self-monitor for symptoms for 10 days<br>• If symptoms develop at any time during the 10 days, get an additional test immediately and stay at home until negative test result AND until 24 hours after symptoms resolve<br>• Release after 7 days, provided no new or worsening symptoms AND negative day 5 test | • May self-identify through inbound call e.g. to Healthline<br>• Record Primary Close Contact in NCTS<br>• Inform<br>• Isolate/quarantine at home where possible<br>• Monitor & follow-up test results<br>• Clinical assessment of test results and final symptom check and release | • No specific actions required for Secondary contacts |



[1] The classification and use of these categories as applied to individuals and exposure are clinical decisions of the local medical officer of health with advice from the Office of the Director of Public Health.

[2] Household-like contacts are defined as those who have had frequent or prolonged indoor interactions, including sexual contacts, overnight guests, shared living spaces, shared custody arrangements. At the discretion of a medical officer of health (or delegate), other Close contacts at higher risk may be upgraded to Household-like in order to be actively managed for 10 days e.g., immunocompromised individuals, residents in residential care or correctional facilities.

## Contact risk assessment

The following table should be used to guide assessment and management of contacts exposed during a case's infectious period.
The guidance is **NOT** for:

- household or household-like contacts because they are always managed on a 10-day pathway due to high risk
- contacts in schools or workplaces as separate guidance has been developed for these settings; or
- contacts in healthcare refer to **Risk Assessment and Categorisation of Healthcare Workers Exposed to COVID-19.**

NOTE: An individual public health risk assessment should be carried out for contacts in residential facilities including aged care, correctional centres or other settings where cases and contacts interact frequently with people at high risk of severe illness. It may also be required in other circumstances such as some indoor settings including events attended by large numbers of people.

| | **Close** | | | | | **Casual** | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **Close range contact ≤ 1.5m of case** | | | **Higher risk indoor contact > 1.5m away from case & no close-range contact** | | **Low risk contact no close range contact or higher risk indoor contact** | | | |
| **Type of interaction** | Direct contact with respiratory secretions or saliva (indoors or outdoors) **OR** Face to face contact with a case who is forcefully expelling air/secretions **FOR ANY DURATION OF TIME REGARDLESS OF MASK USE** | Face to face contact for more than **15 minutes** | Non-face to face contact for more than **1 hour** in an indoor space | Indoor settings without good airflow/ventilation:<br>• a small space (< 100m$^2$) for more than **15 minutes**<br>• a medium sized space (100-300m$^2$) for more than **1 hour** | Indoor settings at higher risk of transmission when present for more than **1 hour:**<br>• case behaviours such as singing, shouting, smoking/vaping, playing wind/brass instruments, dancing, exercise<br>• large numbers of people and crowding | Large indoor settings (bigger than 300m$^2$) if none of the previous criteria are present | Small/medium sized indoor venues (less than 300m$^2$) with good air flow/ventilation for up **to 2 hours** | Brief indoor contact within 1.5m of case | Outdoor settings more than 1.5m from case **FOR ANY DURATION OF TIME** |
| **Examples** | Kissing, spitting, hongi, sharing cigarettes or vapes, sharing drinks/utensils<br>Singing, shouting, coughing, sneezing<br>Contact sports (heavy breathing related to exertion) | Having a conversation<br>Sitting across a table from someone | Sitting within 1.5m of someone but not having a conversation | **This could include:**<br>Small offices, toilet blocks<br>Close contact businesses such as hairdressers<br>Buses, trains, taxis<br>School classrooms<br>Restaurants, cafes, bars | **This could include:**<br>Bars and pubs<br>Social gatherings<br>Indoor, high intensity sports<br>Gyms and indoor recreation settings<br>Church sessions | School and community halls, exhibition centres, hardware stores, supermarkets | Well ventilated classrooms/offices/waiting rooms | Passing each other in the corridor<br>Sharing an elevator<br>Collecting takeaways, click & collect services | Most outdoor recreation activities, including outdoor dining<br>Non-contact outdoor sports<br>Petrol station forecourts |

**Vaccination status**
Vaccination status has not been used to 'down categorise' contacts. However, the management pathway of close contacts will differ by vaccination status (see page 1 for details). This is under ongoing review and may change as more evidence becomes available.

**Mask use**
Mask use is not included in this table currently but is included in the tables developed for workplaces and schools. This is because in order to provide sufficient protection to warrant down-categorisation of contacts, masks must be of sufficient quality (e.g. medical masks or cloth masks of sufficient thickness) and must be worn consistently. This is difficult to confirm outside of settings such as schools and workplaces where there are mask wearing policies and multiple observers of compliance.

In addition, mask use does not provide indefinite protection from infection. Evidence suggests the protective effect of mask use is unlikely to last beyond 2 hours, and is likely to be less if the case wearing the mask has high risk behaviours such as singing, shouting, heavy exertion.

It is anticipated that as the COVID-19 Protection Framework comes into effect, it is possible that the risk of inconsistent mask use will be more tolerated. At that time, mask use may be added to this contact risk assessment table.

s 9(2)(b)(ii), s 9(2)(j)

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