

Briefing

End-to-End Public Health Assessment of the Managed Isolation and Quarantine System

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To:	Hon Chris Hipkins, Minister for COVID-19 Response		

Contact for telephone discussion

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Minister's office to complete:

- | | | |
|---|------------------------------------|--|
| <input type="checkbox"/> Approved | <input type="checkbox"/> Decline | <input type="checkbox"/> Noted |
| <input type="checkbox"/> Needs change | <input type="checkbox"/> Seen | <input type="checkbox"/> Overtaken by events |
| <input type="checkbox"/> See Minister's Notes | <input type="checkbox"/> Withdrawn | |

Comment:

End-to-End Public Health Assessment of the Managed Isolation and Quarantine System

Security level: IN CONFIDENCE **Date:** 1 March 2021

To: Hon Chris Hipkins, Minister for COVID-19 Response

Purpose of report

1. This report provides initial public health advice on New Zealand's managed isolation and quarantine (MIQ) system and proposes a coherent and sequenced programme of work across government to reduce and mitigate risk of COVID-19 transmission across the MIQ system.

Summary

2. Until immunisation delivers sufficient population immunity to allow the safe reopening of the borders, an effective MIQ system will continue to be a cornerstone of the 'Keep it Out' pillar of New Zealand's COVID-19 Elimination Strategy.
3. The MIQ system has been established at pace and continues to evolve as more is understood about the virus, the global context, New Zealand experience, and how emerging technologies can strengthen the system.
4. Recently, in response to new more transmissible variants and community cases associated with the Pullman Hotel, further improvements have been made to the MIQ system to reduce the risk of COVID-19 transmission into the community [MBIE 2021-2085 and HR20210071 refer].
5. Any further modifications to MIQ settings need to be introduced within the context of a whole-of-system approach. From a public health perspective, singular measures are unlikely to reap the best gains. The cumulative impact of multiple discrete changes must also be considered and assessed for any unintended consequences.
6. The Ministry of Health (the Ministry) has undertaken a rapid public health focussed, desktop assessment of the end-to-end MIQ system with the Ministry of Business, Innovation and Employment (MBIE) and the Department of the Prime Minister and Cabinet (DPMC) to identify further opportunities for improvement. This review has scanned measures currently in place from prior to departure at an overseas port, through the MIQ stay and after exiting MIQ to enter the community.
7. The public health officials involved in the assessment concluded that the greatest public health gains can be made by focusing on improving the operation and suitability of MIQ Facilities (MIQFs), particularly:

- a. optimising the management and monitoring of returnee movements;
 - b. improvements to ventilation systems and air flow, and ensuring facilities are fit for this purpose; and
 - c. reducing the volume of arrivals from high risk countries to reduce the number of COVID-19 cases entering MIQ and the operational risks associated with the MIQ system/workforce operating at capacity.
8. Across government there are multiple pieces of work in train to strengthen MIQ settings. Officials have documented this work along the MIQ 'journey' (see Appendix 1) which has highlighted the importance of prioritising decisions on measures that will deliver the greatest risk reduction and sequencing the suite of work that is currently underway or planned in an optimal order as each measure affects others within the overall MIQ system.
9. Further advice will follow from this initial assessment, outlining where more work is required and where cumulative risks are emerging across the MIQ system from a public health perspective.
10. Subject to your agreement, you will then receive packages of advice on suites of policy and operational setting changes, relating to the following topics, in this sequence:
- a. management of returnees within facilities, including cohorting and movement restrictions;
 - b. facility infrastructure and workforce; and then
 - c. what the returnee movement, facility and workforce settings mean for the volumes of returnees and MIQ capacity.

Recommendations

We recommend you:

- a) **Note** that a rapid public health focussed desktop assessment of the end-to-end MIQ system has been undertaken which concluded that the priority areas to reduce risk of COVID-19 incursions into the community are in the MIQs, with less significant opportunities to be made in the settings for pre-departure or in the community after returnees leave MIQ. **Yes/No**
- b) **Note** that a cross-government work programme is underway that reflects public health advice (see Appendix 3) and that you will receive further advice on where more work may be required to further address risk. **Yes/No**
- c) **Agree** that advice on the cross-government work programme will be sequenced to prioritise decisions on measures that will deliver the greatest risk reduction and allows for the flow on impacts of changes to settings to be reflected in other, dependent, settings, as follows: **Yes/No**

- a. management of returnees within facilities;
- b. facility infrastructure and workforce; and then
- c. what the returnee movement, facility and workforce settings mean for the volumes of returnees and MIQ capacity.

d) **Note** that if you agree to this sequenced approach, officials will work with **Yes/No** your office on the content and timing of the packages of advice.



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Date:



Megan Main
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Date:



Dr Ashley Bloomfield
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Hon Chris Hipkins
Minister for COVID-19 Response
Date: 5/3/21

I broadly agree with this prioritisation, but would still like to see advice on MIQ post-departure testing being introduced around 5 days after someone has been released.

End-to-End Public Health Assessment of the Managed Isolation and Quarantine System

Context

11. New Zealand's border settings remain our most effective barrier against COVID-19. As a core component of the 'Keep it Out' pillar of the Elimination Strategy, the managed isolation and quarantine (MIQ) system identifies and contains positive cases at the border so New Zealanders can return home, and others can enter the country for critical purposes.
12. Until immunisation delivers sufficient population immunity to enable safe reopening of New Zealand's borders, MIQ settings alongside strong testing, case investigation and contact tracing systems, continue to be New Zealand's best line of defence against COVID-19.
13. Emerging evidence on the transmission of COVID-19 and the recent cases associated with the Pullman Hotel have driven a suite of further operational improvements to the MIQ system [MBIE 2021-2085 refers] that are being implemented currently, are under active consideration, or on which advice to you is being prepared.
14. Given the range of initiatives underway, public health officials and epidemiologists from the Ministry of Health (the Ministry), along with officials from the Ministry of Business, Innovation and Employment (MBIE) and the Department of the Prime Minister and Cabinet (DPMC), undertook a rapid desktop assessment of the end-to-end MIQ system. This exercise aimed to consolidate efforts across government and ensure alignment with the latest public health advice.

Public health advice on the end-to-end MIQ system

15. Across the system there are multiple potential touchpoints that give rise to the risk of COVID-19 entering the New Zealand community, from pre-departure through to post-MIQ, when returnees are back in the community (Appendix 1). Most of these areas are well-documented and sufficient mitigations are in place.
16. In line with continuous improvement principles and evolving public health advice, the end-to-end public health assessment considered each part of the system to identify any additional opportunities for further risk reduction.

Further pre-departure measures

17. Reducing the number of people arriving in New Zealand who are infected with COVID-19 is an important approach to reducing the risk of outbreaks. From a public health perspective, the most effective way to do this is to reduce volumes of arrivals from high risk countries, which currently includes almost all overseas countries.
18. While pre-departure testing may reduce the number of infected people arriving in New Zealand it cannot be used to apply a risk-based approach to arrivals. The efficacy of

testing undertaken in other jurisdictions cannot be verified and, even if the test was reliable, it will not identify individuals who are incubating the disease at the time of their test or who were exposed en route.

19. As a result, even with pre-departure testing, it is important to treat all arrivals in New Zealand, other than those under future Quarantine Free Travel arrangements, as if they have COVID-19. An evaluation of the impact of pre-departure testing will be considered as part of further advice on testing schedules.
20. The commencement of 2-way Quarantine Free Travel with Australia would free up approximately 30 - 40% of MIQ spaces. However, if these spaces are filled with individuals from countries with higher risk than Australia (which is almost all other countries), then there may be an increase in COVID-19 importations.
21. This could place further pressure on the MIQ system to manage an increased load of positive cases, raising the risk of transmission to the community. However, this may be mitigated to some degree by the roll-out of vaccinations overseas.

Measures applied at Managed Isolation and Quarantine Facilities

22. Managed isolation and quarantine facilities (MIQFs) remain the most important step in the overall MIQ system as they stop the transmission of the virus into the New Zealand community. Optimising the management of returnee movements, along with improving ventilation in shared spaces, is likely to see the biggest reduction of risk across the MIQ system.
23. The existing standard operating procedures (SOPs) have been and will continue to be reviewed and updated over time as the MIQ operating model has evolved in line with continuous improvement principles. Public health officials support this approach, including reviewing SOPs against the latest COVID-19 evidence, and ensuring that they are applied consistently across facilities.
24. In addition, there are opportunities to strengthen the management of returnee movements, for example through cohorting, and to improve ventilation measures in response to the emerging evidence about COVID-19 transmission.
25. These changes will support risk mitigation in MIQFs and are reflected in the current work programme.

Post-departure from Managed Isolation and Quarantine Facilities

26. All the measures taken at each stage of the MIQ system need to be considered as a whole in order to have a proportionate and well-balanced system that manages the risks without unnecessarily restricting returnees.
27. Public health advice on further measures after returnees leave MIQ is that the enhancements underway to the Wellbeing Check process and improvements to the collection of contact information for those leaving MIQFs, is appropriate for this part of the MIQ system. This takes into account the existing measures in place, the operational improvements underway at MIQFs and the level of residual risk at this point in the MIQ system. You are being provided with further advice on post-departure measures.

Cumulative risks across the MIQ system

28. Unintended impacts of ongoing change are evident in the impact on the MIQ workforce, including hotel, security and health staff. Additional change and pressure on staff increases the risk of human error, and a higher risk of transmission may make it harder to recruit and retain staff for critical frontline roles.
29. Flow on impacts of additional testing requirements on MIQF guests are also being seen on the testing schedule and on people's willingness to participate in further testing. These impacts, and others, will be further assessed and advice provided to you in a follow-up briefing.

The current work programme aligns with public health advice

30. The public health assessment of the MIQ system supports the current work programme's immediate focus on strengthening the management of returnee movements and ventilation measures, alongside other MIQ settings. Further analysis will be undertaken to identify whether there are any additional gaps in the work programme that need more attention.

Sequencing improvements in the MIQ system

The MIQ system has evolved since its inception last year

31. Since MIQFs were stood up at pace last year, a number of key steps have been taken to strengthen the model. These include:
 - a. implementing a national operational framework and SOPs to facilitate consistent practices across facilities;
 - b. introduction of staff testing; and
 - c. implementing the managed isolation allocation system (MIAS) to help manage demand and increase occupancy of MIQFs.
32. More recently, the introduction of pre-departure and Day 0/1 testing for those travelling from high risk countries, additional smoking cessation measures, wider use of N95 masks by staff and the use of interim room restrictions have been put in place to assist in managing risk in a worsening global environment.
33. Advice across a range of other areas is being developed that is focused on strengthening MIQ settings to reduce and/or manage risk. This work includes consideration of:
 - a. a review of the criteria for facilities;
 - b. the use of technology in facilities;
 - c. the process for vaccinating the MIQ workforce;
 - d. a review of the staff testing order;
 - e. a review of the testing schedules of those in MIQ;
 - f. assessments of ventilation systems in the facilities; and
 - g. advice on continued room restrictions.

34. Officials will continue to review our settings in light of the implications following the vaccination of the border workforce. Additional advice will be provided as evidence of the impacts of vaccines on transmissibility and severity of the virus become clearer.

Considering further enhancements

35. It is imperative that any additional measures to be introduced within MIQs are understood within a whole of system approach and designed with a strong overall public health lens reflecting the changing COVID-19 evidence base. They should build on the strong set of processes and practices already in place in MIQs that aim to prevent transmission within MIQs and protect the New Zealand community from COVID-19.
36. To provide greater coherence and clarity to the work underway and to identify further opportunities for improvement across the MIQ system, the work programme has been mapped across the MIQ 'journey' and against the public health risks (see Appendices 1-3). This has highlighted the importance of packaging and sequencing the pieces of work where they are dependent on each other.
37. The Ministry, MBIE and DPMC have reviewed the multiple pieces of work underway across government to strengthen MIQ settings. Many issues are dependent on other pieces of work, for example:
- a. effective cohorting of returnees in MIQs will impact the need for room restrictions and ease pressure on the MIQ workforce;
 - b. the standards required for ventilation systems will impact the suitability of facilities;
 - c. the extent of movement restrictions required will impact the criteria for the suitability of facilities;
 - d. the testing requirements for returnees, and the types of facilities used, will impact workforce requirements; and
 - e. the implementation of cohorting, and the requirements for facilities and the MIQ workforce will impact the capacity of the MIQ system.
38. The packages of work have been sequenced to ensure that the measures that are likely to have the biggest impact on risk reduction are delivered first, followed by advice on settings that are dependent on those decisions. To this end, the proposed sequence of work across government is:
- a. Management of returnees in MIQ, including:
 - i. separation of cohorts, room restrictions and returnee movements;
 - ii. ventilation; and
 - iii. testing of returnees.
 - b. Infrastructure and workforce, including:
 - i. review of criteria for suitability of facilities;
 - ii. external review of MIQs and operating model; and
 - iii. workforce, including models of care and testing of workforce.

- c. Volumes: what the returnee movement, facility and workforce settings mean for the appropriate volumes of returnees, considering the sustainable capacity of the MIQ system.
39. Officials propose to provide advice on these packages over the coming month as the results of existing reviews become available, starting with a discussion with you and Minister Verrall at the upcoming strategy session on MIQ. This sequenced approach means that some pieces of advice will be held back to enable more comprehensive advice to be prepared for your consideration. Officials can discuss how this could be managed with your office, should you agree to this approach.
40. While a sequenced work programme will introduce greater logic and coherence into the MIQ improvements, agencies will continue to be responsive to emerging issues, including scientific evidence, and provide you with advice as and when required.
41. Agencies will also seek to develop a complete 'programme' view of MIQ to build on this public health focused assessment, which includes the full range of MIQ-related operational and policy considerations.

Equity

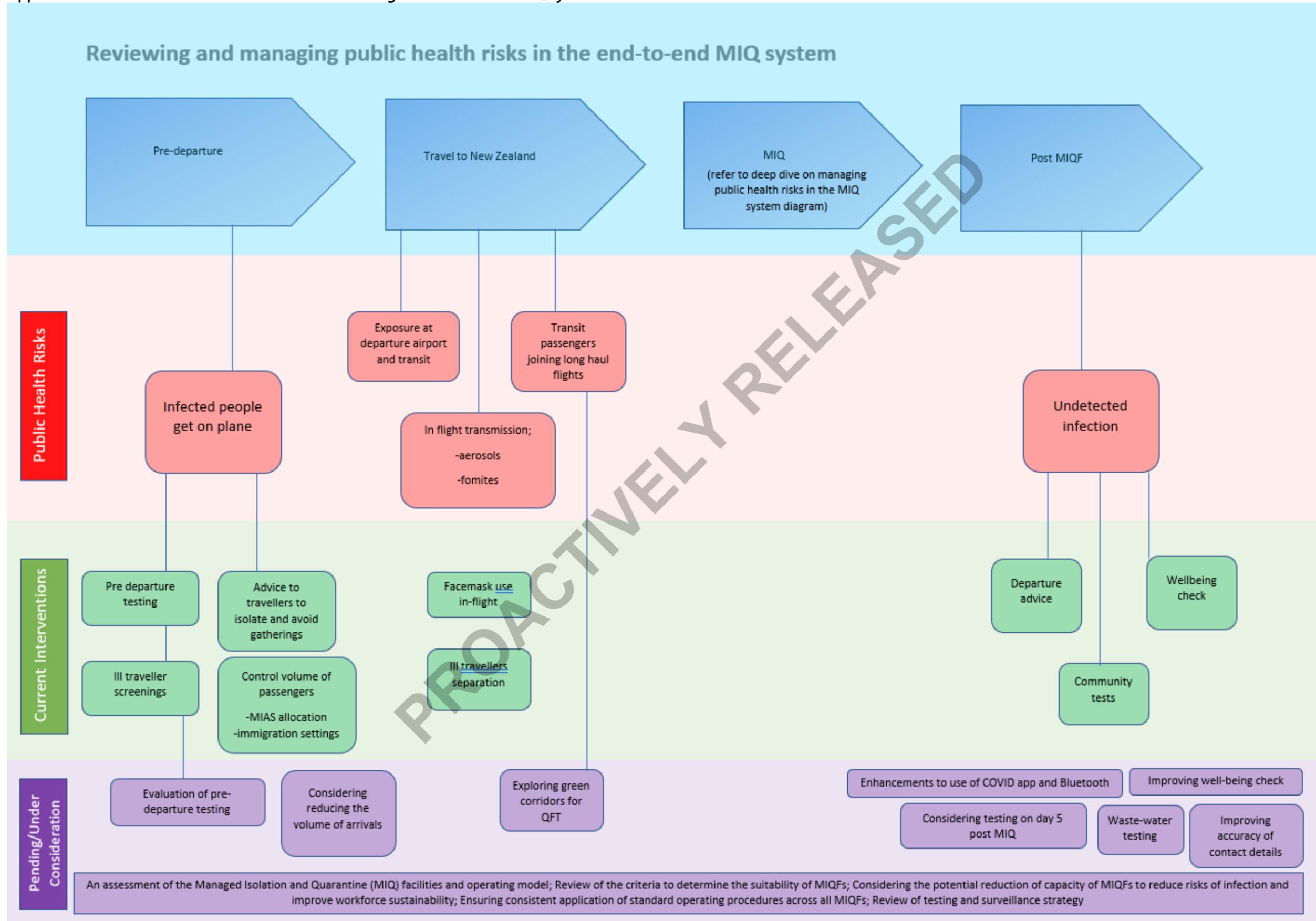
42. Improving the management of risk across the MIQ system contributes to the protection of communities and groups that are vulnerable to the impacts of COVID-19, and therefore supports equitable health outcomes across the population.
43. Equity considerations particularly apply to our frontline border and MIQ workforce, where vulnerable Māori and Pasifika populations are over-represented. Any increase in risk through the border directly affects those groups.

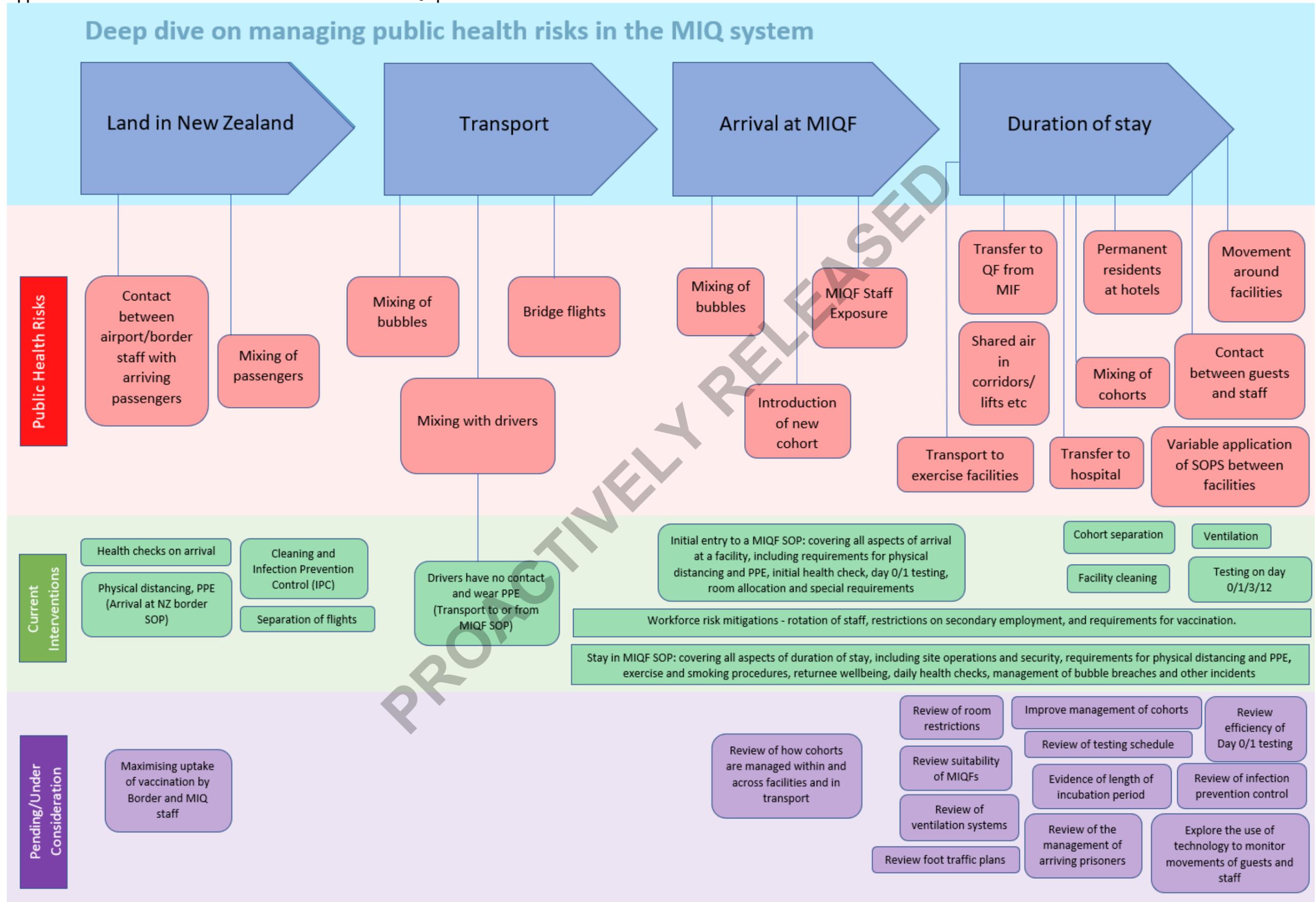
Next steps

44. The Ministry, MBIE and DPMC will report back to you in the coming weeks on where further work is required to manage risk across the MIQ system and where cumulative risks may be emerging as a result of ongoing changes.
45. Subject to your approval, further packages of advice on improvements to the management of returnees, infrastructure and workforce, and what this means for volumes of arrivals, will follow for your consideration.
46. If you agree to this approach, officials will work with your office to confirm deliverables and timing.

ENDS

Appendix 1: Public health risks and interventions along the end-to-end MIQ system







End-to-end MIQ System: cross-agency workplan

IN-CONFIDENCE - NOT GOVERNMENT POLICY

Component of system	Public Health Risk	Description	Work underway	Proposed further advice
MIQ (Land in New Zealand)	Contact between passengers and with border staff	Passengers interact with several government agencies and airport staff upon arrival.	<p><i>Ministry of Health lead</i></p> <ul style="list-style-type: none"> Maximising uptake of vaccination by Border staff. Reviewing testing of border workers. <p><i>MBIE lead</i></p> <ul style="list-style-type: none"> Review of 'Arrival at NZ Border' Standard Operating Procedure (as part of regular review). 	
MIQ (Transport)	Mixing during transport from airport to MIQF	Passengers are transported in groups, so there is a risk that contact could occur between drivers and passengers, and between bubbles.	<p><i>MBIE lead</i></p> <ul style="list-style-type: none"> Review of 'Transport to/from MIQF' Standard Operating Procedure (as part of regular review). 	
MIQ (Duration of stay)	Mixing of cohorts within MIQFs	Mixing of cohorts (passengers that arrived on different flights, and over significantly different timeframes) introduces risk that previously uninfected guests can be infected prior to departure, which would not be picked up by testing due to incubation period of 3-5 days.	<p><i>MBIE lead</i></p> <ul style="list-style-type: none"> Review of 'Stay in MIQF' Standard Operating Procedure¹ (as part of regular review process) <p><i>Ministry of Health lead</i></p> <ul style="list-style-type: none"> Review of infection prevention control measures. Measuring MIQF workforce capacity and reviewing models of care. 	<p><i>MBIE lead</i></p> <ul style="list-style-type: none"> Review of the management of cohorts within facilities (initial advice provided). Review of room restrictions for the start and the end of the isolation period. Exploring the use of technology to monitor the movements of guests and staff. An external assessment of MIQ facilities and operating model. Review of the criteria to determine the suitability of MIQFs. <p><i>Ministry of Health lead</i></p> <ul style="list-style-type: none"> Review of testing schedule for guests at MIQ. <p><i>Joint agencies lead</i></p> <ul style="list-style-type: none"> Reviewing border settings, to strike right balance for volumes in terms of managing demand, legal requirements and health advice.
	Movement around MIQF	Guests moving around facilities brings risk of aerosol or fomite transmission from undetected positive cases.		
	Shared air in confined spaces	New information about COVID-19 suggests that it is capable of being transmitted through aerosolised particles, even when the infected person and others are not in the same space at the same time. Particularly risky where the space is confined.	<p><i>Ministry of Health lead</i></p> <ul style="list-style-type: none"> Review of ventilation systems and air flow. 	
	Mixing with health and hotel staff	Particularly during testing, health checks, and delivery or collection of items for guests, such as food, deliveries etc.	<p><i>Ministry of Health lead</i></p> <ul style="list-style-type: none"> Maximising uptake of vaccination by MIQ staff. 	
Post-MIQ	Undetected infection in guests leaving MIQFs.	As in the Pullman Hotel cases, undetected transmission in MIQFs results in returnees leaving MIQFs and moving freely throughout New Zealand, potentially causing a community outbreak.	<p><i>Ministry of Health lead</i></p> <ul style="list-style-type: none"> Considering the feasibility and efficacy of testing on day 5 post MIQ. Improving the Wellbeing Check process. Advice on current COVID-19 surveillance tools and wastewater testing. 	<p><i>Ministry of Health lead</i></p> <ul style="list-style-type: none"> Exploring use of technology to improve records post-departure from MIQF. <p><i>Ministry of Health lead</i></p> <ul style="list-style-type: none"> Improving the accuracy of contact details on record for contact tracing.
Overarching			<p><i>DPMC and Ministry of Health joint lead</i></p> <ul style="list-style-type: none"> Advice on settings across the Keep It Out pillar of the Elimination Strategy. 	

¹ This SOP includes all aspects of duration of stay, including (among others) site operations and security, requirements for physical distancing and PPE, exercise and smoking procedures, returnee wellbeing, daily health checks, management of bubble breaches and other incidents.