Table 1. SARS-CoV-2 transmission events in hotel quarantine settings, Australia 2020–2021.

Event no.	Hotel	State	Month and year	Number of potential source cases	Variant of concern	Transmission to quarantine workers	Transmission to travellers in mandatory quarantine	Resulted in community transmission (other than household contacts)
1	Duxton	WA	Apr-20	Unknown[1]	No	2	0	No
2	Pan Pacific	WA	May-20	1	No	1	0	No
3	Rydges on Swanston	VIC	May-20	3	No	5	0	Yes[4]
4	Stamford Plaza	VIC	Jun-20	1	No	24	Unknown	
5	N/A	NSW	Jul-20	1[2]	No	0	1	No
6	Marriott	NSW	Aug-20	Unknown[3]	No	1	0	No
7	Peppers Waymouth Hotel	SA	Nov-20	3	No	3	2	Yes
48	Darling Harbour	NSW	Dec-20	Unknown	No	1	0	No
9	Grand Chancellor Hotel	QLD	Jan-21	2	Yes	1	2	No
10	Park Royal Tullamarine	VIC	Jan-21	5	Yes	0	1	No
11	Grand Hyatt Melbourne	VIC	Feb-21	1	Yes	1	0	No

12	Sheraton Four Points	WA	Feb-21	1	Yes	1	0	No
13	Holiday Inn Melbourne Airport	VIC	Feb-21	3	Yes	4	4	Yes
14	Grand Chancellor Hotel	QLD	Mar-21	1	Yes	0	1	No
15	Sofitel	NSW	Mar-21	1	Yes	1	1	No
16	Mecure Perth	WA	Apr-21	Unknown	Yes	0	2	Yes
17	Adina Hotel Sydney	NSW	Apr-21	4	Yes	0	3	No
18	Mercure Sydney	NSW	Apr-21	2	Yes	0	1	No
19	Pan Pacific	WA	May-21	1	No	1	0	Yes
20	Playford	SA	May-21	1	Yes	0	1	Yes
21	Pan Pacific	WA	Jun-21	TBC	TBC	TBC	TBC	No

[1] Unable to be linked to source case/s as numerous cases closely genomically related were in managed facility at the time

[2] Case developed symptoms following quarantine. Unsure if infection was acquired in quarantine or due to long incubation period. Case infected people in community.

[3] Hotel complex was operating as a both police-managed quarantine hotel for overseas travellers and a hotel accommodating international flight crew. It is possible a flight crew member may have been infectious while at the hotel and subsequently left Australia

[4]Two transmission events from hotel quarantine, being Rydges in Melbourne and the Stamford Plaza in Melbourne began as separate events but became indistinguishable in the community. Thus, there were a total of 7 incursions in hotel quarantine, resulting in 6 events with community transmission.

02 June 2021
Coronavirus (COVID-19) health alert

Australian Government
Department of Health

Celebrating 100 YEARS OF HEALTH 1921 2021

Australian Health Protection Principal Committee (AHPPC) statement on Australia's National Hotel Quarantine Principles

Australian Health Protection Principal Committee (AHPPC) statement on Australia's National Hotel Quarantine Principles

Date published:
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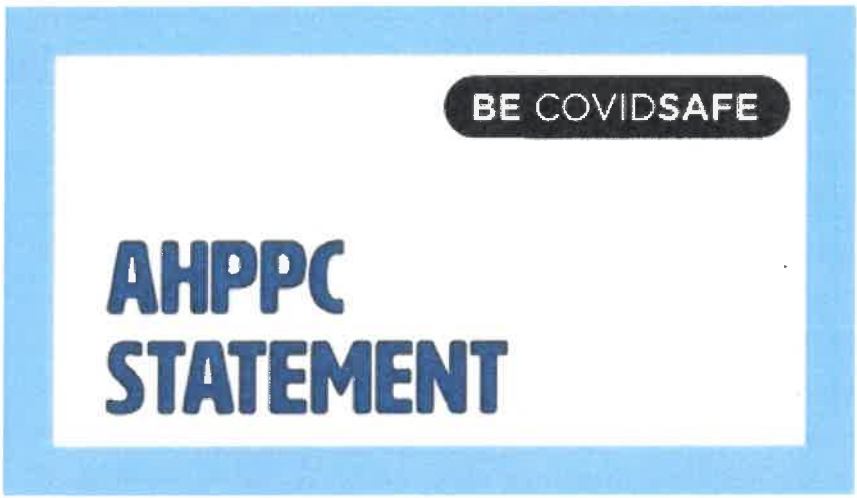
Type:
News

Intended audience:
General public



Hotel quarantining was mandated by National Cabinet on 27 March 2020. Australia's utilisation of hotel quarantine arrangements has proven to be highly successful – approximately 2,200 cases out of 164,714 arrivals have been diagnosed[1] and managed with very few documented transmissions into the

controls[1], a step-by-step approach to manage risks that ranks controls from the highest level of protection and reliability through to the lowest and least reliable protection. Risk management plans should use higher level controls where possible and include strong end to end infection prevention and control in line with a nationally agreed standard and comprehensive infection prevention and control training, and use of standard precautions.

6. Hotel quarantine workers must be protected as this will be where transmission of the infection into the community may occur. It should be ensured that workers have an adequate understanding of their role and responsibilities in relation to infection prevention and control practices and behaviours, and reporting requirements if concerns are identified. Appropriate supervision is required at all times and a strong reporting culture of alerting supervisors to concerns should be fostered.
7. Testing, screening and surveillance, for international arrivals and workers associated with hotel quarantine programs, should align with national guidelines endorsed by AHPPC. These may be supplemented with additional measures, such as pre-emptive contact identification of regular close contacts of workers in case transmission occurs.
8. Facilities used for hotel quarantine must be selected against specific criteria which reduce the risk of transmission as identified in the control hierarchy. This includes consideration of the hotel environment and its suitability for infection prevention and control.
9. In addition, quarantine accommodation needs to be:
    - adequately provisioned and resourced to be able to manage the health of residents and staff in the hotel quarantine facility
    - meeting cultural needs and the needs of those with disabilities, the elderly and infirm
    - located in reasonable proximity to the international port of arrival that is the port of entry
    - located in reasonable proximity of a hospital capable of managing COVID-19 patients
    - considerate of the vulnerability of the local population.
10. Hotel quarantine programs must have established escalation processes with the ambulance and hospital sector for a health emergency. Separate facilities for positive cases or those with complex needs may also be considered.
11. Hotel quarantine programs should apply an assurance process, with regular audits against standards for quarantine, a regular review of controls and their effectiveness and application of a continuous quality improvement process.
12. Hotel quarantine programs should be supported by tools for:
    - Effective data collection, sharing and validation through
        - A nationally agreed data set able to be collected daily
        - National sharing of data on cases and for contact tracing purposes
        - Information on transmission events
        - Monitor and evaluate the effectiveness of the hotel quarantine program to guide policies, protocols and procedures.
    - Monitoring the accommodation and movement of international arrivals and workers in common areas by remote means such as CCTV and/or QR codes.

[1] Figures based on overseas acquired cases that arrived in Australia by air, period: 28 March 2020 to 24 November 2020.

02 June 2021
Coronavirus (COVID-19) health alert

Australian Government
Department of Health

Celebrating 100 YEARS OF HEALTH 1921 - 2021

Australian Health Protection Principal Committee (AHPPC) statement on continuous learning in managed quarantine for international arrivals

A statement from the Australian Health Protection Principal Committee (AHPPC) on continuous learning in managed quarantine for international arrivals.

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14 April 2021

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News

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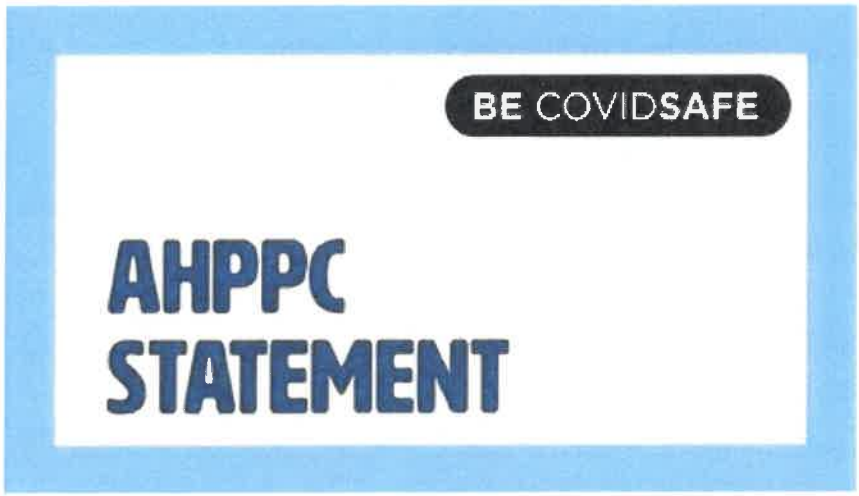
General public



Summary

lower level control aimed at protecting workers from transmission.

- States and territories will regularly review their managed quarantine programs to identify and address areas for improvement as they arise.
- Jurisdictions should develop assurance processes for managed quarantine programs to inform and refine processes and support continuous improvement.
    - Programs should consider the inclusion of routine regular monitoring and compliance.
    - Formal reviews should be conducted following transmission events to inform best practice arrangements.
    - Assurance processes should take into account differences between jurisdictional guidance and operations.
    - Jurisdictions may also consider peer reviewing managed quarantine programs, from time to time.
- Managed quarantine programs encourage an environment of constant vigilance, reinforcement of best practice, and high levels of support for quarantine workers to raise concerns and issues within their employment setting through a culture of speaking up for safety.
- The results of audits, evaluations and reviews be shared with all states and territories to facilitate learning and the continuing development and implementation of best practice.
    - This will include establishing a national register of formal audits and reviews into managed quarantine.

AHPPC will continue to consider lessons learned in managed quarantine settings and will discuss on a weekly basis. This will include considering the results of audits and any future reviews into managed quarantine. Regular routine consideration is designed to support a process of continuous improvement. Future guidance regarding managed quarantine will consider the outcomes of reviews, audits and evaluations to optimise national arrangements.

Priorities for continuous improvement

Given the emergence of COVID-19 variants of concern and acknowledging recent incursions linked to managed quarantine, AHPPC has highlighted the importance of continuing to evaluate new research and evidence to optimise managed quarantine arrangements. AHPPC has identified a range of priority matters requiring further consideration and research. AHPPC has requested the assistance of expert committees including ICEG, CDNA, PHLN and the National COVID-19 Health and Research Advisory Committee (NCHRAC) to consider current and future priorities.

AHPPC will continuously evaluate emerging evidence and apply findings and lessons learned to managed quarantine policies. AHPPC will consider the expert advice of ICEG, CDNA, PHLN and NCHRAC during the AHPPC's weekly discussion on managed quarantine. AHPPC's priority issues will continuously evolve in line with the findings of audits and reviews, in order to best support continuous quarantine improvement processes.

Tags:

Communicable diseases | Emergency health management | Immunisation | Coronavirus (COVID-19)

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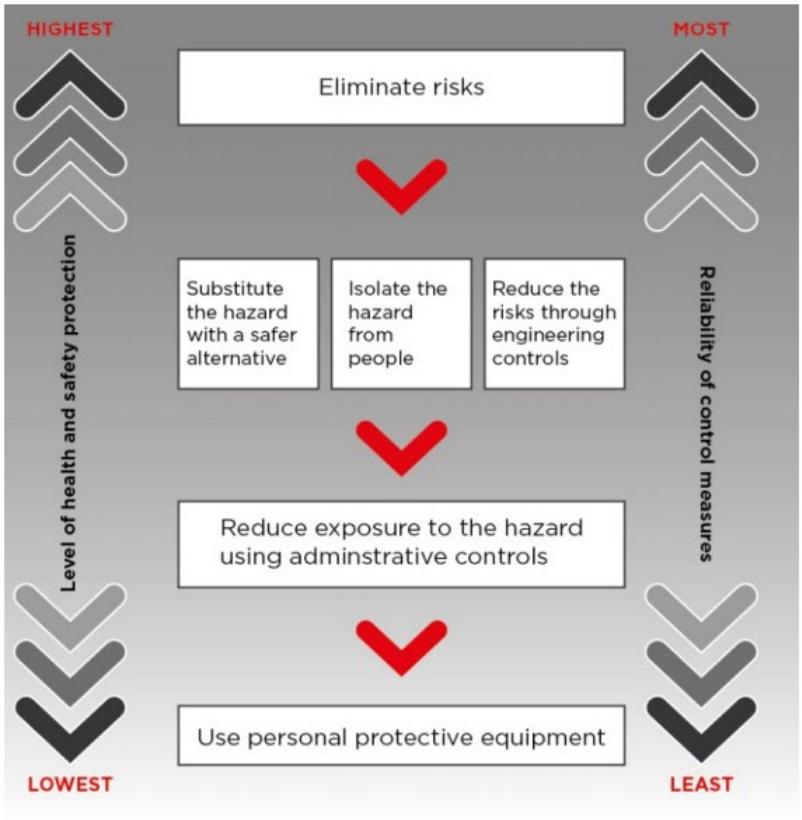
Minimising the risk of infectious respiratory disease transmission in the context of COVID-19: the hierarchy of controls

This document outlines how to use the hierarchy of controls (hierarchy) to manage the risk of transmission of COVID-19 in healthcare, residential care and quarantine settings.

Controlling exposures to occupational hazards is the main way to protect personnel in a workplace. The hierarchy may be used to achieve practical and effective controls of workplace hazards. This hierarchy lists different risk avoidance or mitigation strategies in decreasing order of reliability. Multiple control strategies should be used until the hazard is eliminated or effectively minimised. These can be implemented at the same time and/or following on from each other.

The hierarchy consists of hazard control measures broadly grouped into five categories. The diagram below shows the most effective measures higher in the list.



Source: Safe Work Australia, How to manage work health and safety risks Code of Practice May 2018 , p19, Hierarchy of Control Measures

The model code of practice: *How to manage work health and safety risks* on the Safe Work Australia website provides information on how to do risk assessments, including:

- hazard identification; and

- the application of effective risk controls.

Applying the hierarchy in healthcare, residential care and quarantine settings

Under the hierarchy, employers have a primary duty of care to do all that is reasonably practicable to eliminate the risk. If this is not possible, risks must be minimised as far as is reasonably practicable. This can be done by using one or a combination of:

- substitution;
- isolation; or
- engineering controls.

Administrative controls and personal protective equipment (PPE) should then be considered.

Specific measures to keep COVID-19 out of healthcare and residential care have been introduced. These include:

- advising staff and visitors with relevant symptoms to stay away;
- completing health screening questions before entry; and
- screening body temperature and other measures.

Engineering controls to prevent infectious disease transmission are an important part of the hierarchy in health care, residential care and quarantine settings for control of COVID-19. These include measures such as:

- grouping of patients, residents or guests;
- using isolation wards or cohorting in a separate location; and
- ensuring effective ventilation (air exchanges per hour and the direction of air flow).

These measures are applied broadly as part of infection prevention and control in healthcare, residential care and quarantine settings but need greater emphasis.

Administrative controls have become more widely adopted in health care and residential care facilities as part of the COVID-19 outbreak response. These include introduction of small staff groups (cohorts), to minimise risk of transmission and make contact tracing more efficient.

Using personal protective equipment (PPE) is an important component of a risk management program to prevent potential COVID-19 exposure. However, this also needs the administrative measures that focus on timely identification and isolation of potentially infected patients, residents or staff. Safe use of PPE in line with situational risk assessment is essential. This includes close attention to:

- individual PPE training and competency assessment;
- PPE donning and doffing supervision;
- auditing of PPE use; and
- providing enough quality PPE.

Workplaces should adopt a complete PPE program covering all aspects of PPE use.

Standard and transmission-based precautions consist of a range of risk-minimisation strategies designed to prevent infection transmission. Use of standard and transmission-based precautions as a bundle does not correspond to a particular category in the hierarchy of controls. However, each strategy that makes up standard and transmission-based precautions will sit in one or more of the five control categories.

Reducing or avoiding exposure to transmissible respiratory pathogens in health and residential care and quarantine facilities can be managed by adopting a range of engineering and

administrative controls. These are in addition to using appropriate PPE. These measures should be directed at:

- patient/resident contact settings.
- other shared facilities, such as:
    - lunch/tea rooms;
    - offices;
    - changing areas;
    - meeting rooms; and
    - toilets.

Several suggested strategies are presented in Table 1.

Table 1. Potential risk minimisation strategies for high impact infectious respiratory pathogens, including SARS-Cov-2

Category	Example control measures
Elimination	***Physically remove the hazard.***
Reduce the opportunities for the virus to be introduced into the facility.	Do not admit SARS-CoV-2-positive patients to hospital unless clinically necessary. Use offsite management in home or another location if possible.
	Limit the number of patients or residents going to hospitals or outpatient settings (For example, set up fever/testing clinics, reschedule non-urgent appointments).
	Set up systems to proactively detect and prevent entry to the facility of potentially infectious staff, students, volunteers or visitors. This includes temperature screening, travel risk assessment etc.
	Monitor and reduce the number of visitors, students and non-essential staff in a facility to a minimum.
	Use signage (in appropriate languages) at the facility entrance to alert visitors to not attend while unwell.
	Consider surveillance testing of asymptomatic staff during periods when community transmission becomes locally prevalent.
	Undertake regular testing of quarantine facility staff to enable early detection of infection and removal from duty.
	Quarantine staff who have been exposed to infection without adequate PPE. Ensure daily monitoring and testing as required.
	Promote the use of telelinks for patient/resident visitors where appropriate to reduce potential exposure to asymptomatic carriers.
	If possible, delay new admissions to residential aged care facilities during periods of community transmission and give alternative home-care.
Substitution	***Replace the hazard***
Find alternative ways of providing care that reduce the potential for transmission.	Plan for alternatives to aerosol generating procedures (AGPs) including high flow oxygen and continuous/bilevel positive airways pressure (CPAP/BiPAP) where possible/appropriate.
	Administer aerosolised medicine with spacers instead of nebulisers.

Category	Example control measures
	Use CCTV monitoring in corridors of quarantine hotels in place of stationed security personnel.
Engineering Controls	***Isolate people from the hazard***
Use physical barriers and other forms of hazard reduction for example: ventilation controls, patient separation.	Reduce the number of entry points into the facility/campus to monitor visitor/staff movements and simplify visitor registration.
	Review and optimise ventilation including air exchange rates, air flow and air filtration systems, temperature, and ambient humidity.
	Use negative pressure rooms for SARS-CoV-2-positive patients where available. If negative pressure not available place patient in room with 100% air exhaust if possible and keep door closed.
	In quarantine facilities, ensure sufficient air exchanges in guest rooms and that room air does not leak significantly into adjacient corridors.
	Consider grouping SARS-CoV-2-positive patients in dedicated wards or zones separated from uninfected patients/residents or those with uncertain SARS-CoV-2 status.
	Reduce patient/resident density, if possible, when there are a significant number in the facility with confirmed COVID-19, by physical redesign or creation of a dedicated SARS-CoV-2-positive quarantine area.
	Place quarantine hotel guests in single rooms with private bathroom facilities rather than shared rooms or bathrooms. Consider immediate transfer of SARS-CoV-2-positive guests to a healthcare facility or “medi-hotel”.
	Consider installing safe, temporary barriers to direct wandering residents or quarantine hotel guests into chosen areas.
	Redesign work areas to limit number of workers at workstations; Maintain airflow direction away from staff workstations towards patient care areas where possible.
	Place physical barriers such as glass or plastic screens in triage and reception areas where physical distancing is difficult to maintain.
	In quarantine facilities consider the designation of “safe” and “high risk” zones to assist with staff and guest movement.
Administrative Controls	***Change the way people work***
Effective and consistent implementation of policies & protocols	Set up clear lines of governance. Assign an organisational lead with overall responsibility for overseeing: • task analysis; • risk assessments; and • implementation of infection prevention and control strategies.
	Have evidence-based infection prevention and control policies and guidance in line with national guidance. Adapt the guidance to suit local worker health and safety requirements and other conditions where needed.

Category	Example control measures
	Give clear guidance on when to change resident placement. For example, residents with signs and symptoms typical of COVID-19 should not have roommates.
	Ensure staff training and competency assessment in standard and transmission-based precautions is provided.
	Give guidance on environmental cleaning and disinfection according to risk. Conduct regular checks with frequency determined by risk.
	Give continuing and appropriate education on infection prevention and control to all staff, residents and visitors.
	Regularly update residents, family members, staff and other service providers on COVID-19 policies.
	Give policy support to reduce the risk of staff attending when unwell, including conducive pay and leave arrangements for casual staff.
	Discourage casual staff from working across different facilities. Ensure that agency staff satisfy infection control training requirements before employing.
Minimise opportunities for infection transmission	Organise separation of care for SARS-CoV-2-positive vs uninfected patients or residents. Assign staff to care groups and reduce frequency and number of personnel on ward rounds.
	Triage and manage visitors and ensure they comply with hand hygiene and PPE requirements.
	Reduce opportunities for transmission between staff by promoting use of telehealth technology for all staff meetings.
	Allocate surgical masks for source control to patients or residents with respiratory symptoms to use when they are outside of their ward or room. Educate patients/residents/guests on safe mask use and disposal.
	In quarantine facilities ensure that guests remain in their allocated room, use a surgical mask whenever the door is opened, and maintain physical distancing from any staff attending.
	Manage all workspaces to reduce respiratory transmission risks by adopting measures to improve physical distancing. For example, floor markings, spaced seating, maximum room occupancy notices.
	Adopt general measures to reduce contact spread, such as education and training. Have enough hand hygiene products and facilities available, and increase cleaning and disinfection of shared areas.
	Set up a plan for facility outbreak management and ensure all stakeholders are aware of roles and responsibilities.
	Use standardised infection control signage for standard and transmission-based precautions.
Maintain staff wellbeing	Have enough staff to avoid excessive workloads and ensure staff can take regular breaks.
	Know which staff may be vulnerable to severe COVID-19 infection and redeploy if needed.
	Develop policy to manage staff and others who become unwell in the workplace.

Category	Example control measures
	Ensure all staff providing healthcare, aged care, and hotel quarantine services are vaccinated against SARS-CoV-2 as soon as practicable.
	Provide an employee assistance program that provides psychological support.
Personal Protective Equipment (PPE)	***Protect the worker***
Review PPE policies & guidelines	Have risk-assessed PPE recommendations for specific staff roles and activities.
	Have enough supply of PPE items and related equipment at the point of use.
	Give effective education and communicate on appropriate PPE use for standard, contact, droplet and airborne precautions.
	Conduct regular staff PPE donning and doffing competency assessments.
	Manage the PPE supply chain across all levels of the health service and ensure appropriate PPE ordering by staff.
Set up a respiratory protection program	Fit test staff who may need to wear a particulate filter respirator (P2/N95 or equivalent).
	Train staff to perform a fit check (seal check) every time a P2/N95 respirator is used.
	Emphasise the importance of eye protection as an essential component of droplet and airborne precautions. Train staff in safe cleaning of reusable eyewear if used.
	Consider the use of reusable powered air purifying respirator (PAPR) or elastomeric respirator where there is high risk from aerosol exposure (for example critical care environments). Train staff in their safe use.
	Where PAPR devices or equivalent are available to use, ensure staff are: • trained and competency assessed for their use; and • continue to use the devices to maintain currency of practice.

Resources

Safe Work Australia. How to manage work health and safety risks Code of Practice MAY 2018. Available at https://www.safeworkaustralia.gov.au/system/files/documents/1901/code_of_practice_-_how_to_manage_work_health_and_safety_risks_1.pdf

The Australasian Faculty of Occupational and Environmental Medicine (AFOEM) in the Royal Australasian College of Physicians has produced a detailed document on COVID-19 workplace risk mitigation strategies. This is available at: https://www.racp.edu.au/docs/default-source/advocacy-library/covid-19-workplace-on-workplace-risk-management.pdf?sfvrsn=88f5f71a_4

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Morawska,L. et al. How can transmission of COVID-19 indoors be minimised? Environment International, vol 142, Sept 2020. https://www.sciencedirect.com/science/article/pii/S0160412020317876?via%3Dihub

National Review of Hotel Quarantine

Contents

Executive Summary

Australia implemented international border restrictions early in the course of the pandemic in order to prevent the spread of COVID-19. From 28 March 2020 all returning travelers have been required to undertake 14 days of quarantine in a designated facility. Since then, some 130,000 international and domestic travelers have been quarantined slowing the spread of COVID-19 in Australia.

The review has examined quarantine systems and processes in all States and Territories except Victoria, met with relevant agencies and reviewed hotel quarantine arrangements and witnessed passenger arrivals. A model of good practice in an end to end quarantine system, together with the role of coordination of decision making, risk mitigation, community safety and patient care has been described.

Hotel quarantine is difficult to endure, particularly for vulnerable people. It is an expensive resource and requires a highly specialised workforce to support the system including clinical, welfare and security services in order to mitigate risk and discharge duty of care obligations. Infection prevention and control processes need to be tightly managed. Clear communication and decision making across agencies must be defined - including clear lines of accountability and risk ownership. Clinical and mental health support needs to be integrated within the system and should not rely on guests needing to reach out. Guests also need access to clear communication channels before they travel and timely review and appeals mechanisms.

States and Territories can improve hotel quarantine practices by adopting best practice. End to end assurance is necessary to ensure standards are maintained. With six months of quarantine experience and the likelihood that hotel quarantine will remain in place for some time, Australia's one size fits all approach should be reconsidered to take account of greater knowledge of the virus, different prevalence in countries of origin of travelers, an understanding of how to incorporate risk-based approaches in system design and different models of quarantine made possible by new testing and monitoring arrangements. This will be essential to place quarantining arrangements on a more sustainable footing into the medium term.

This is important as pressure to increase travel to and from Australia is growing. Existing models of quarantine are unlikely to be able to expand significantly above current levels and new approaches that manage risk are needed. An ability to add scale through surge capacity should be considered.

In this context the review recommends:

1. States and Territories should embed end-to-end assurance mechanisms and look to continuously improve hotel quarantine to ensure that it is delivered consistent with good practice.
2. Information on the quarantine system should be easy to access by travelers in order to ensure their understanding of quarantine and to better psychologically prepare them for the experience. This should be provided across relevant Commonwealth/State and Territory websites.
3. People in quarantine should have access to timely decision making and review processes, and complaints mechanisms including pathways for escalation.

4. Options for new models of quarantine should be developed for consideration by National Cabinet including a risk assessment of these options and an analysis of traveler suitability.
5. National Cabinet should consider exempting low risk cohorts, such as travelers from New Zealand, from mandatory quarantine.
6. The Australian Government should consider a national facility for quarantine to be used for emergency situations, emergency evacuations or urgent scalability.

Introduction

In December 2019, China reported cases of a viral pneumonia caused by a previously unknown pathogen. The pathogen was identified as a novel (new) coronavirus (recently named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)), which is closely related genetically to the virus that caused the 2003 outbreak of SARS. SARS-CoV-2 causes the illness now known as Coronavirus disease 2019 (COVID-19).[1]

After diagnoses of the initial cases the virus spread quickly throughout the world and on 30 January 2020 the World Health Organisation declared the outbreak of COVID-19 as a Public Health Emergency of International Concern (PHEIC).

Public health authorities globally began to implement a range of non-pharmaceutical interventions (NPIs) in order to protect the public and slow the spread of the virus. Pending better understanding of the ecology of the virus, these measures included social distancing, improved hand hygiene, temperature checking, mask wearing mandates, school closures, limiting gatherings and isolation of infected patients.

The first case of COVID-19 was recorded in Australia on 25 January 2020[2]. By 1 February 2020, 12 cases had been confirmed domestically and by late March there were approximately 4,000[3] confirmed cases in Australia.[4]

In the absence of effective treatments and/or vaccines, slowing the spread of the virus was widely agreed as crucial in the effort to limit disease and deaths, flatten the epidemiological curve and ensure limited and critical resources such as intensive care were readily available to patients who required it.

Countries such as Australia and New Zealand implemented border restrictions together with 14 days quarantine in order to prevent spread of the virus.

The increase in cases between February and March was an important consideration in the decision to implement hotel quarantine and part of efforts to slow the passage of the virus into Australia and through the community.

All States and Territories have experienced COVID-19 cases, with some jurisdictions experiencing higher numbers and more community based transmission. As at 11 September 26,565 cases of COVID-19 have been reported in Australia, including 797 deaths, and 23,211 have been reported as recovered from COVID-19.[5]

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1 https://www.who.int/news-room/detail/29-06-2020-covidtimeline

2 Moloney.K, Moloney. S (2020) 'Australian Quarantine Policy: From Centralization to Coordination with Mid-Pandemic COVID-19 Shifts' Public Administration Review, 80:4, 671–682. DOI: 10.1111/puar.13224.

3 29 March – 4,159 cases and 16 deaths

4 https://www1.health.gov.au/internet/main/publishing.nsf/Content/novel_coronavirus_2019_ncov_weekly_epidemiology_reports_australia_2020.htm

5 https://www.health.gov.au/resources/publications/coronavirus-covid-19-at-a-glance-11-september-2020

Quarantine in Australia

Quarantining people who may have come into contact with an infectious pathogen is not new. During the 14th century ships arriving in Venice from infected ports were required to remain at anchor for 40 days before landing[6].

Last century during the 1918 Spanish flu, 1957–58 influenza pandemic and the 1968 flu pandemic, several countries implemented quarantine measures to control the spread of the disease[7][8].

In 2003 during the SARS epidemic, quarantine and temperature checkpoints were used extensively, while moving infected patients to isolation wards and home-based self-quarantine was the main way the Western African Ebola virus epidemic was ended in 2016[9].

Australia has an intermittent history of human quarantine. Human quarantine measures were enacted in response to smallpox (1913) and to the Spanish flu (1918)[10] and maritime arrivals were directed to quarantine as needed at dedicated quarantine stations. Australia's early quarantine policy largely rested on its geography as an island state, in which being an 'island' enabled the regulation of disease importation. In Australia this has been significant for the health of humans, animals and agriculture.

Implementing quarantine for COVID-19

The Australian Government declared a human biosecurity emergency (18 March 2020), via the Biosecurity (Human Biosecurity Emergency) (Human Coronavirus with Pandemic Potential) Declaration 2020, made pursuant to section 475 of the Biosecurity Act 2015. On 27 March 2020, the Australian Government announced that as of 28 March 2020 all incoming travelers were required to undertake a 14 day supervised quarantine period in a designated hotel or accommodation facility at their port of entry.

States and Territories enacted complementary legislation/declarations and set up hotel quarantine arrangements across Australia. Each State and Territory adopted an approach consistent with its administrative, policing and health arrangements and geography, including the location of entry ports.

States and Territories were required to establish hotel quarantine across Australia at short notice and scale up services more broadly in response to an unprecedented public health emergency. All arriving passengers have been quarantined since the day after the Australian Government's

[6] https://www.cdc.gov/quarantine/historyquarantine.html#:~:text=The%20practice%20of%20quarantine%2C%20as%20we%20know%20it%2C,Italian%20words%20quaranta%20giorni%20which%20mean%2040%20days.

[7] https://www.parliament.vic.gov.au/publications/research-papers/download/36-research-papers/13957-epidemics-and-pandemics-in-victoria-historical-perspectives

[8] Tognotti, E. (2013). Lessons from the History of Quarantine, from Plague to Influenza A. Emerging Infectious Diseases, 19(2), 254-259. https://dx.doi.org/10.3201/eid1902.120312.

[9] https://apps.who.int/ebola/current-situation/ebola-situation-report-16-march-2016

[10] Moloney.K, Moloney. S (2020) 'Australian Quarantine Policy: From Centralization to Coordination with Mid-Pandemic COVID-19 Shifts' Public Administration Review, 80:4, 671–682. DOI: 10.1111/puar.13224.

announcement and these hotel quarantine arrangements have undoubtedly slowed the passage of COVID-19 through the Australian community.

Until such time as a safe and accessible vaccine is available or other therapeutic and pharmaceutical responses to COVID-19 are developed, access to quarantine remains a necessary response to COVID-19 for public health protection.

This type of suppression measure has been effective and has saved lives but the Hotel Quarantine System is vulnerable to breaches and these are hard to eliminate. It is also an expensive resource and comes at a high cost to individual, social and economic wellbeing.

The Review

On 10 July 2020 the Prime Minister announced that the National Cabinet had agreed to a national review of hotel quarantine. The Prime Minister's announcement, including the Terms of Reference for the review, are at Appendix 1. On 16 July the review wrote to each State and Territory seeking existing frameworks, policies, and procedures governing hotel quarantine. During July, August and September additional data and information requests were made to States and Territories, in parallel to a number of site visits.

With six months of quarantine experience the design of the Hotel Quarantine System can be informed by improved knowledge about the virus, an understanding of how to incorporate risk based approaches in system design, and wherever possible, standards improved through adoption of best practice.

The review has not audited every detail of hotel quarantine nor every hotel or facility used across the country, rather the review has examined hotel quarantine management, structures and operations and has had the opportunity to compare systems in the States and Territories, and identify areas of good practice in order to identify how the Hotel Quarantine System can be put on a more sustainable footing into the medium term.

Consistent with the need to improve performance the review has provided contemporaneous feedback to jurisdictions to enable ongoing improvement.

As it is likely that restrictions on movement of some people will continue for some time it is also important that the experience of people who enter quarantine, their health and welfare, is reviewed. This includes psychological wellbeing and preparedness in order to ensure the experience of quarantine is as positive as possible.

The Victorian arrangements were not reviewed as a separate inquiry is being conducted by the Hon. Jennifer Coate AO. Where the report makes references to 'jurisdictions' or 'States' Victoria is explicitly excluded.

Quarantine statistics

There is no single source of complete data on hotel quarantine. As a consequence the review used the national and State/Territory data sources available to build a comprehensive national view and noted, where relevant, any apparent differences in definitions.

Integrated data within many jurisdictions is also an issue. The absence of a single view of guests is an impediment to good management of the quarantine journey and can be the source of preventable errors in follow up, testing, and guest experience. Many jurisdictions are moving to resolve this and this will assist with preventing avoidable errors.

Quarantine statistics provided to the review and retrieved from open source information are provided at Attachment A.

Throughput

The distribution of travelers across the Hotel Quarantine System is, in part, driven by typical travel pathways into Australia but has also been affected by the implementation of international flight caps into all jurisdictions as well as internal border restrictions and domestic quarantine. It should also be noted that some capital cities are not receiving regular international commercial flights due to COVID-19 and others are not international ports.

As at 28 August 2020, some 130,000 travelers have undertaken hotel quarantine comprising approximately 96,000 international and 34,000 domestic travelers. NSW has received 51,660 travelers into quarantine; however, only six percent have been domestic quarantine, while Queensland has received approximately 22,026 travelers into quarantine, of which 34 percent have been domestic quarantine. In the other States receiving international arrivals, domestic quarantine rates range between five and 16 percent. Smaller jurisdictions like Tasmania and the ACT, which are not international ports or receiving regular international flights are not comparable arrangements but are quarantining domestic travelers at a rate of 77 percent and 99 percent, respectively[11].

Nationally, domestic quarantine equates to approximately 26 percent of the total number of quarantined travelers between March and 28 August 2020.

Positivity

Despite the significant number of travelers quarantined in Australia since March, the Hotel Quarantine System has low positivity rates.

Since implementation of mandatory hotel quarantine, 851 travelers have been diagnosed with COVID-19 during their quarantine period; a positivity rate of 0.66 percent. In the two weeks to 30 August 2020 this rate was a low as 0.30 percent, based on 22 diagnoses of COVID-19 from in excess of 6,500 international travelers.[12]

[11] This includes home quarantine in the ACT

[12] All figures quoted are based on the review's calculations from open source material and information provided to the review by States and Territories

Point of Origin

Most current passenger arrivals into Australia are on flights from the Middle East, New Zealand, Singapore and the United States. Each of these countries has different rates of COVID-19 transmission and have adopted different responses to the pandemic.

Singapore and New Zealand have targeted largely successful minimisation or suppression strategies and adopted quarantine arrangements early in the pandemic (Attachment B). China, Hong Kong, Taiwan and Canada, among others, have also implemented similar quarantine arrangements.

Figure 1 details passenger arrival data for the two week period of 14 to 28 August[13], in which passengers from New Zealand and Singapore accounted for 14 percent and 12 percent, respectively, of all international passengers into Australia. New Zealand and Singapore, among others, have low infectivity rates of COVID-19 cases per one million of the population.[14]

Countries with low infectivity rates are sometimes referred to as low prevalence settings. Arguably arrivals from these destinations, particularly those who can demonstrate they have been in the country for 14 days continuously prior to arrival in Australia pose a very low level of risk for importation of the virus.

[13] Based on data from the Australian Border Force
[14] Based on data from the World Health Organisation

Figure 1 - International Arrivals - Australia

Flight Point of Origin[15]	Total PAX coming into AUS 14-28 August	% Incoming PAX	Total crew PAX	Total transit PAX	COVID-19 cases/million[16] [AUS=1,060]
TOTAL	13,089		4,808	198	
Unknown	2,826	23%	953	17	-
Qatar	2,418	19%	811	92	43,436
New Zealand	1,310	14%	156	4	306
Singapore	1,386	12%	400	13	9,863
United Arab Emirates	1,290	8%	581	22	9,248
USA	843	7%	283	0	21,175
China	984	4%	688	4	62
Papua Nui Guini	174	2%	5	20	60
India	165	2%	32	0	4,401
Hong Kong[17]	207	1.4%	93	0	Not recognised
Indonesia	188	1.2%	67	20	1,006
Malaysia	274	1.1%	182	1	337
Taiwan[18]	204	0.8%	137	2	Not recognised
Thailand	108	0.8%	47	0	51
Nauru	51	0.6%	1	0	0
Philippines	87	0.6%	40	0	2,776
Republic of Korea	84	0.5%	47	0	0
Sri Lanka	98	0.5%	61	0	157
Timor Leste	34	0.4%	0	0	20
New Caledonia	41	0.3%	13	0	95
Japan	91	0.3%	66	0	649
Mauritius	35	0.3%	10	0	289
Kiribati	20	0.2%	1	3	0
Solomon Islands	29	0.2%	15	0	0
Fiji	43	0.2%	30	0	36
Brunei	32	0.1%	23		334
Vietnam	32	0.0%	31	0	11
Azerbaijan	7	0.0%	7		3,947
Chile	14	0.0%	14	0	23,954
Columbia	7	0.0%	7		15,841
Micronesia	7	0.0%	7	0	0

[15] The review could not ascertain whether these 'point of origin' were preceded by a connecting flight from another country/region, as such the point of origin or may be the point of origin nominated by passengers on their incoming passenger declaration as opposed to the original departure point.

[16] https://covid19.who.int/

[17] Hong Kong is not recognised as a member state of the World Health Organisation. For data reporting purposes it is considered a part of the People's Republic of China

[18] Taiwan is not recognised as a member state of the World Health Organisation. For data reporting purposes it is considered a part of the People's Republic of China.

Operation of the Quarantine System

The Hotel Quarantine System relies on complex logistical arrangements designed to ensure infection control and the movement, management and care for guests with their eventual release, infection free, into the wider community. This requires clear lines of authority, management and accountability. These were evident in all jurisdictions reviewed. In many States an emergency management framework has been deployed. Detailed State and Territory arrangements are outlined at Attachment C.

The quarantine journey

To understand the operation of the quarantine system it is important to understand the traveler's experience. This commences before the traveler boards their flight.

While some travelers may have accessed information about the requirement to enter mandatory quarantine through government websites, social media or through family and friends, people entering quarantine may also only first encounter the quarantine process inflight or during the disembarkation process. This may mean a traveler is uncertain or unprepared for quarantine. After landing, flights are boarded by Human Biosecurity Officer/s and the Australian Border Force which deliver on-board briefings about quarantine requirements, immigration, customs and biosecurity clearances, and the airport transit process.

After disembarking, travelers pass through the various commonwealth clearance processes and undergo health screening by border nurses. The extent of health screening varies across jurisdictions; in some it is limited to a temperature and symptom check for COVID-19, while others undertake a more comprehensive screening to identify COVID-19 symptoms as well as other primary, acute or mental health issues. In scenarios where the more complete screening occurs it typically informs placement and the case management requirements for those travelers during quarantine. Transfer to hospital from the airport by patient transport services or ambulance for symptomatic cases is common across jurisdictions.

In some States, as required by legislation, travelers are issued with a quarantine notice around this time. The quarantine notice typically references the authorising legislation, how quarantine will occur and is provided in an easily understood, simple format.

After screening travelers are marshalled through baggage collection into loading zones for transport to hotels. Some jurisdictions undertake this function within the security controlled precinct (or airside[19]), which limits the risk of interaction with other people in the airport, while some use the usual arrivals passage through the airport to the landside zone. Buses are assembled in preparation for travelers. Travelers are loaded onto buses, which are usually limited to approximately 50 percent

[19] Section 31 Aviation Transport Security Act 2005 (Cwth)

capacity, with the assistance of local police, ADF, contracted transport services or a combination. In most jurisdictions buses are sent to accommodation as they are filled.

If a traveler is identified as unwell while at the airport in nearly all jurisdictions this person will be transported to hospital or a dedicated health facility.

Oversight of accommodation and service delivery in the Hotel Quarantine System varies across jurisdictions. Police managed hotels and those managed by health services predominate. In some cases dedicated hotels are provided for those with COVID-19 and other complex health or identified vulnerabilities. The latter operate as hospital wards staffed by health practitioners while police and/or security largely provide perimeter security. In police managed hotels, police control the environment and health services provide clinical overlay. A smaller number are managed by welfare departments. In some states ADF personnel assist with cordon security, most notably in hotels where the physical layout of the premises requires multiple guard points to secure all exits.

On arrival at the hotel, travelers are offloaded from buses and enter the hotel foyer for the check-in process. In most instances this is a staggered approach, allowing small groups into the foyer at any one time. Hotels have usually received flight or passenger manifests from an agency in the airport environment, which assists with capturing family groups or other accommodation needs prior to the arrival of travelers in the hotel foyer. This is done to assist with room allocations and expedite the check-in process thus limiting the time spent in the foyer by potentially COVID-19 positive people.

Once checked in, travelers are escorted to their hotel room. The process for baggage delivery varies slightly across jurisdictions and is dependent on the service provider undertaking this role in each State and Territory. For example, in the larger jurisdictions these services are undertaken by airport ground crew operators, while smaller jurisdictions have made other service arrangements, using local public transport or public service officials to facilitate. ADF assist in some states.

Having commenced their quarantine period, travelers are contacted by health and support services to determine their health and wellbeing needs during quarantine. The assessments undertaken at this time may dictate the type/s of treatment, support and outreach provided. To this end, some jurisdictions undertake a comprehensive health screening early in the process, including a primary health assessment in the first 24 hours complemented by a mental health assessment, as well as outreach for other vulnerabilities, wellbeing, and/or addictions. Other jurisdictions undertake this process on an ad-hoc or as needed basis, or around day three of quarantine. In the latter there is also some reliance on self-reporting of health and wellbeing issues by travelers throughout their quarantine period.

In many jurisdictions the hotel staff will provide some level of structured entertainment for guests.

Access to fresh air and exercise varies across jurisdictions reviewed. Where this is available and can be delivered with appropriate infection control this contributes significantly to wellbeing.

For some people in quarantine their reasons for traveling to Australia are to visit sick or dying family members or to attend a funeral. Exemptions for compassionate reasons vary significantly in terms of the requests for escorted visits while in quarantine.

During the 14 day quarantine period, travelers are tested for COVID-19 irrespective of whether they are symptomatic, at approximately days two and 11 of quarantine. This is consistent with the AHPPC guidelines. In some jurisdictions a positive result will result in a change of accommodation in the

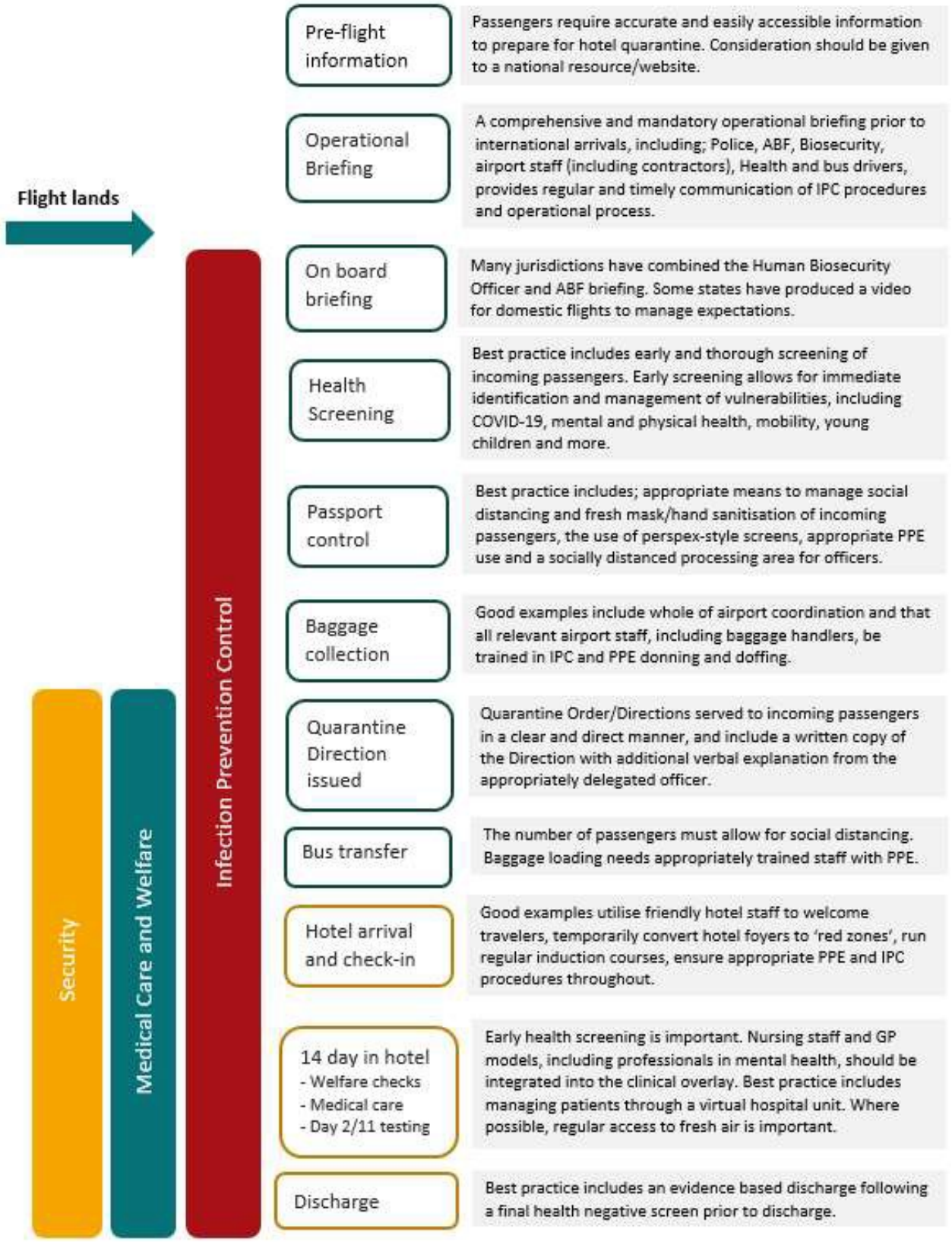
Hotel Quarantine System, for others it will result in transfer to hospital and for others it has no practical effect.

Compliance with testing requirements is very high as failure can result in an extended stay in quarantine.

At the end of the 14 day period and in receipt of a negative COVID-19 test result travelers are discharged from the hotel. In some cases travelers are issued a statement or letter acknowledging their completed quarantine and negative test results.

Different operational practices throughout the quarantine journey are largely informed by different risk tolerances within jurisdictions; however, the process detailed at Figure 2 outlines the typical hotel quarantine journey in States and Territories.

Figure 2 – Typical State/Territory Quarantine Journey



Legal basis for quarantine and exemptions

Travelers can be quarantined under either Commonwealth or State/Territory legislation.

The Commonwealth Constitution contains only one specific power which directly relates to public health,[20] the power to make laws in relation to quarantine, which at the Commonwealth level are typically enacted through the Biosecurity Act 2015 (the Act). The quarantine power may be exercised concurrently with the States and Territories.

Under the Act, the Commonwealth Chief Medical Officer may declare a human health response zone and may impose on individuals a human biosecurity control order for the purpose of managing risks to human health, such as requiring people to be quarantined[21].

States and Territories have a broad range of public health and emergency response powers available under public and emergency legislation for responding to public health emergencies like COVID-19. The various orders, instruments or directions (subordinate law) enacted by States and Territories prescribe the core requirement for various categories of people to be held in hotel quarantine, and the requirements imposed on them while they are in quarantine. The details of which can be found in Attachments C and D.

Australia quarantines people who may have or are confirmed to have come into contact with COVID-19 through three means; hotel quarantine, quarantine or isolation at home, and admission to health facilities. State and Territory legislation also provides for exemptions from quarantine either on an automatic basis, for example flight and maritime crew or essential and highly skilled workers, or on application for individual circumstances, such as for compassionate reasons or health concerns. States and Territories have conferred the discretion on their Chief Health Officers, Police Commissioners or the relevant Minister to grant these exemptions, which tend to include:

- Certain essential travelers (such as law enforcement and health professionals, border communities, government and security personnel)
- Consular staff, in keeping with requirements to preserve diplomats freedom of movement and travel, and protection from detention, under the Vienna Convention on Diplomatic Relations 1961

[20] The Commonwealth also has powers for various medical benefits. The Commonwealth may also have recourse to other constitutional heads of powers (e.g. in relation to external affairs and immigration and emigration) to achieve public health.

[21] On 21 January 2020, after consultation with the Chief Health Officer for each State and Territory and the Director of Biosecurity , the federal Director of Human Biosecurity (aka the Chief Medical Officer) formally declared COVID-19 as a 'listed human disease' under the Biosecurity Act 2015.

On 3 February 2020 human health response zones were declared under Commonwealth legislation the Director of Human Biosecurity made two determinations deeming the Royal Australian Air Force Base Learmonth in Western Australia, and the North West Point Immigration Detention Centre in Christmas Island, as human health response zones restricting the movement of people in and out of those areas to prevent the spread of COVID-19.

On 7 February 2020 the Howard Spring Accommodation Village in the Northern Territory was also listed as a human health response zone with the same conditions of entry and exit. These determinations were made in consultation with the relevant Chief Health Officer (however described) for the State or Territory in which the human health response zone were located.

- Border communities (in the case of quarantine requirements being imposed due to internal border restrictions)
- Unaccompanied minors
- In some cases, where people have already undertaken 14-days quarantine in another jurisdiction

The subordinate law put in place in each State and Territory is not identical as it has been made under either public health or emergency management legislation in the relevant jurisdiction.

Similarly the process for applying for exemptions varies significantly. Information about criteria, the application process including evidentiary requirements, timeframes and appeal mechanisms were often unclear and/or hard to find. This causes considerable stress to potential applicants and should be a focus for improvement. Publicly available clear criteria, application and appeal processes would assist travelers.

Types of quarantine accommodation

Quarantine can be undertaken in any place where the effective isolation of a person can be achieved. The majority of arrivals into Australia have been quarantined in hotels (this includes apartment hotels); however, both the ACT and the NT have used alternative approaches.

In the NT quarantine is undertaken at the Howard Springs Accommodation Village (Howard Springs), a former 3,000 bed mining camp located near Darwin's Central Business District (CBD). It is a unique facility.

Unlike hotels, where each person is isolated in their room, Howard Springs' accommodation comprises single rooms which are grouped in compounds. Each room has a veranda and hence all guests have access to a shared outside space. While this requires guests to observe strict social distancing and mask wearing protocols, there were high levels of customer satisfaction.

In the ACT the majority of quarantine is undertaken in a private home with appropriate supervision. Hotel quarantine is used in the minority of cases.

Health and welfare

A clear focus on the health and welfare of guests is required in order to discharge the duty of care owed to these guests. While many arrivals may consider themselves psychologically robust and in good physical health proper screening and support should be provided.

The review has observed significant variation in the standard of screening and care. Jurisdictions should ensure that wherever possible all guests get early access to screening and ongoing support to ensure good mental and physical health.

A clinical overlay, including access to specialists and treatment, is critical to the health of guests. Levels of clinical oversight varies significantly and should be an early focus for improvement in those States not currently delivering best practice arrangements.

The role of entertainment and diversionary activities is also key. Good hotels where the guest experience and hospitality was a focus of hotel management included actively engaging with guests through initiatives such as; guest specific Facebook pages/groups, providing exercise; quizzes and other activities; age specific activities; and delivery of a structured day.

Customer feedback

The review has spoken with a number of people with experience of hotel quarantine. Feedback to the review indicates a lack of information about quarantine, specifically that participants found navigating government websites challenging and that information about hotel quarantine was more frequently sourced from family, friends and through social media. Many people reported, while challenging, the experience of quarantine was acceptable. The care provided by health and hotel staff was widely acknowledged; however, a lack of fresh air, support for mental health and the quality of hotel food also featured in feedback to the review.

Through consultation with the Australian Human Rights Commission, and the Ombudsmen (Commonwealth, and all State and Territory equivalents), the review sought details regarding formal complaints about the experience of quarantine. For these complainants the experience has not been positive.

In the period up to 28 August 2020, in the order of 90 complaints were made to the Human Rights Commission about the requirement to quarantine and/or conditions of quarantine including: lack of access to fresh air, food, quality of the accommodation, and size (especially for people with psycho-social disabilities). For the same approximate date range advice to the review indicated 218 complaints or enquiries to Ombudsmen offices. Similar themes were evident in these complaints being: cleanliness, food, access to air and exercise; the requirement to quarantine and the costs; the exemption process; and access to medical support – including mental health support[22]. These are also distinct from complaints specifically made against police.

The review has not canvassed complaints made direct to State and Territory government agencies responsible for administering hotel quarantine nor the resolution process or rate. The review did, however, also engage with a range of other stakeholders, including peak advocacy groups and the business sector. Other feedback through these processes posed questions about oversight, transparency of processes, and complexity of the legal framework and the feasibility of a more coordinated approach, including centralising hotel quarantine administration in each State and Territory into a specific agency with the necessary expertise in biosecurity operations.

This feedback points to a number of areas for improvement.

Infection control and quarantine breaches

There have been widespread reports of breaches of quarantine. These include the infection of guards and escape of hotel quarantine guests.

[22] These numbers do not include general enquiries or complaints made directly to the responsible government agencies nor complaints or enquiries that fall outside of the Commission or Ombudsmens' formal jurisdiction.

While the potential impact of breaches may be high the number of incidents was low in absolute and relative terms[23]. The actual impact of these breaches (excluding Victoria) was also low with incidents identified early and appropriate actions taken.

The review has not examined each of these incidents in detail but rather has sought access to incident reporting (where this exists) in order to understand the system design and management issues indicated. These are reflected in the best practice section below and attached.

Infection prevention and control are fundamental to an effective quarantine system. Appropriate PPE use, training and assurance processes must be practiced throughout the quarantine journey.

The review has observed all parts of the quarantine system and has seen donning and doffing of PPE throughout the journey. Advice on opportunities to improve practices has been provided during the course of the review. Issues identified included inconsistent PPE use in airports and across agencies, opportunities to improve distancing between staff and the need to install physical barriers to provide additional protection to staff and passengers.

Clear operational instructions together with the provision of training, including regular refresher courses and auditing enables consistent application of good infection control practices. This has been implemented successfully in a number of jurisdictions across the full range of staff, including police, hotel and transport staff, private security, and health and welfare professionals.

While the system is managed to limit these incidents some errors are inevitable. The nature and scale of breaches is, however, important as a measure of system performance and should be monitored to identify opportunities for improvement. Jurisdictions all provided evidence which demonstrated they were using this information to improve hotel quarantine.

Quarantine constitutes a first line of defence in preventing the importation of COVID-19. While the quarantine system should be managed to limit breaches the robustness of elements of the second line of defence (testing, contact tracing in the community) are also crucial as it will not be possible to manage a quarantine system that is completely error free.

Breaches in the Victorian system have not been considered as these are being considered by the Hon. Jennifer Coate AO as part of her inquiry. As previously noted, references to 'jurisdictions' or 'States' does not include Victoria.

Changing needs of people entering quarantine

The review has heard that the needs of people in quarantine has changed since the system was inaugurated in March 2020. Early returning cohorts were reported as having a lower level of needs in terms of their health and wellbeing, were largely returning residents and did not require the same level of support as more recent arrivals.

While detailed demographic information was not available to the review to validate this impressionistic reporting, jurisdictions indicated that the level of health, social and other supports

[23] Based on material provided to the review and consultation with States and Territories. There is no centralised data source for this information.

needed by more recent arrivals including assistance with adjustment into the community through access to housing was also significant. In this respect there are differences between the people entering domestic verses international quarantine.

Risk settings

The threat to Australia from COVID-19 was recognised by public health authorities early in the pandemic and steps were taken to reduce/eliminate risks where ever possible. The Australian health system and public had no experience with a pandemic of this scale and severity and systems were severely tested in the early days with rapid decision making and implementation necessary to protect the community. The measures adopted were founded on solid public health knowledge and good infection control principles. This was important as knowledge of COVID-19 was in its early stages and detailed assessment of specific risks were difficult if not impossible to make.

In this context and while the review could not find any explicit consideration of formal risk settings it was clear that the risk posed by COVID-19 and the need to reduce this risk were fundamental to decision making from the outset. However, the timeframes required to set up the arrangements led to a one size fits all approach to people crossing our international (and some domestic) borders in which everyone enters mandatory 14 day quarantine unless they are exempted.

The 14-day quarantine period is based on the incubation period for COVID-19, which is widely accepted as a range of 1 – 14 days. It is estimated that fewer than 1 in 100 people who are exposed to COVID-19 will develop disease after the 14-day period.

In June 2020 the AHPPC considered the ongoing requirement to quarantine international travelers. The AHPPC considered two options; reducing the time of quarantine and combining it with home quarantine arrangements; or continuing the 14 day hotel quarantine model. The AHPPC concluded that risk of COVID-19 in travelers returning from many countries is increasing, reinforcing the importance of quarantine as a protection measure and consequently recommended that all international travelers continue to undertake 14 days quarantine in a supervised hotel[24].

The objective of Hotel Quarantine is to prevent the spread of the virus from any arriving traveler who is infected into the wider community. The design, management and delivery of quarantine services is therefore critical to the achievement of this objective. However, the current system does not balance or calibrate all risks nor take decisions informed by absolute or relative risk (for example, exemption categories, transit passengers, airline crew, and the impact on people in quarantine).

Approaches to balancing or managing relative risk in a measured way were only seen in respect of day release for compassionate reasons and activities such as fresh air breaks and exercise in some jurisdictions. In a number of jurisdictions travelers who arguably offered the same risk profile were treated differently based on whether they were a resident or not.

Existing approaches also do not differentiate between the risks posed by arrivals from countries where there is widespread community infection verses those where there is limited or no virus in

[24] https://www.health.gov.au/news/australian-health-protection-principal-committee-ahppc-statement-on-hotel-quarantine

the community. This means that expensive resources are used in a way that may be disproportionate to the risk posed particularly if there are alternative ways to treat or manage this risk effectively.

Where there is very high prevalence of infection in a country or region temporarily closing borders or enforcement of mandatory quarantine can be an appropriate response. Experience to date in Australia has shown that this can be effective. However, as previously noted the costs of these actions need to be properly weighed against the actual risk. In addition, no system (both for granting exemptions or managing quarantine) is foolproof and as such an effective second and third line of defence will always be necessary to respond to any quarantine breaches.

A proper assessment of second and third line defences is crucial to determining the risk capacity of the system (see below).

We now know that COVID-19 is a highly infectious pathogen predominantly spread by respiratory droplets. The most effective way to stop the spread of COVID-19 is to prevent or reduce the spread of droplets from person to person. Interventions known to be effective are; physical distancing, the use of appropriate PPE, especially facemasks and face shields in higher risk situations, hand hygiene (although this has a lower impact owing to the nature of COVID-19 transmission), keeping away from others who are sick with respiratory symptoms, isolating when feeling unwell, and isolation of confirmed infections (these observations are expanded at Attachment E).

We know that the effective application of these strategies will limit and potentially stop the spread of the virus.

At present hotel quarantine is used by most jurisdictions as the mechanism to ensure compliance with the measures noted above, that is to limit contact and hence the possible spread of the virus. However, in a number of jurisdictions arrangements such as home based quarantine (assuming this can be done safely) and the use of devices and apps are being used to ensure this compliance. These strategies are also being used effectively in a number of other countries.

A clearer focus on actual risk together with a structured approach to risk management through agreement on risk appetite (the amount of risk accepted in the management COVID-19), risk tolerance (the amount of risk we can take) and risk capacity (the amount of risk we cannot exceed) would help in creating a framework for the adoption of different approaches.

Clear guidance regarding expectations for material types of risk should be supported by qualitative and quantitative metrics and should use language that is meaningful to everyone. It should also encourage risk management and not risk aversion together with accountability and ownership of risk. If a risk moves outside the clearly expressed upper limit of appetite, then action needs to be taken immediately and relevant settings changed as appropriate.

It is timely to revisit the risk settings and thresholds about who should be undertaking hotel quarantine and examining options that do not introduce an unacceptable risk. This should include an explicit consideration of the prevalence of COVID-19 in source countries noting that an assessment should also be made of the extent and nature of testing regimes in those countries, and any evidence based risk of inflight transmission.

An evidence based approach

The use of evidence to inform the design and delivery of hotel quarantine was observed in most jurisdictions. This included in respect of infection control and the experience of people who are in quarantine, including their mental and physical health needs.

A more evidence based and nuanced approach to managing risk is now possible as there is more knowledge of the prevalence of the virus and its characteristics, more options available to effectively ensure compliance with known mitigations and there is greater public understanding of how less restrictive alternatives can be used effectively.

Continuous improvement

The first cohorts of people to be quarantined during COVID-19 were specific groups of repatriated residents (for example, from Wuhan and the Diamond Princess Cruise ship) who were able to be accommodated at dedicated facilities[25]. These were largely organised as one off arrangements and were delivered under Commonwealth legislation. However, following the decision of National Cabinet that restrictions would be placed on all people entering Australia (excluding those with an exemption granted by an authorised state health official) State based quarantine arrangements were established rapidly.[26]

The scale of the logistics required to accommodate all returnees in the system was considerable and officials, police forces together with deployed ADF personnel have worked well to give effect to the decision of National Cabinet.

These arrangements have continued to improve since their establishment including through lifting of the quality of hotels, attention to the quality of food and customer experience, more attention to the health needs of guests and greater attention to infection control.

Consistent with the need to improve performance the review has provided contemporaneous feedback to jurisdictions to enable ongoing improvement. Further opportunities for improvement are available to all jurisdictions (see best practice definitions at Attachment F).

[25] Refer to footnote 21.

[26] On 13 March 2020 the Council of Australian Government formed the National Cabinet, made up of the nation's first ministers (the Prime Minister, Premiers and Chief Ministers) and advised by the AHPPC, to deliver a whole-of-government response to the COVID-19 outbreak. This saw the National Partnership on COVID-19 Response and the Australian Health Sector Emergency Response Plan for Novel Coronavirus (COVID-19) being activated (also on 13 March 2020) and reaffirmed that all jurisdictions have public health responsibilities, but the primary responsibility for managing the impact of COVID-19 lies with the state and territory governments with the financial support of the Commonwealth.

System Performance – Good Practice

The review has had the opportunity to examine quarantine arrangements in most States and Territories. Many jurisdictions demonstrate a high standard and many features of good practice, including at scale, while others are implementing the minimum standards. There are, however, areas for improvement in each jurisdiction.

What does 'good' look like?

The review has identified a range of features that constitute good practice in hotel quarantine, many of which have been demonstrated in systems around the country. These features have been grouped under five core components: planning and preparedness; the hotel quarantine framework; procurement; the health, mental health and wellbeing of people in quarantine; and the broader customer experience.

Planning and Preparedness

Good operating systems are hallmarked by strong incident control governance and mechanisms that assist in planning and preparedness. These are underlying principles of crisis and/or emergency management functions, of which many jurisdictions are well rehearsed in.

Governance and multidisciplinary approach

Emergency management type operations provide the necessary framework for appropriate accountability and clear line of sight for operations. They are multidisciplinary but well integrated and feature open lines of communication, collective and consultative decision making that incorporates all perspectives in the command and operation chain. This approach limits opportunities for ambiguity and fractured decision making.

This aspect of quarantine arrangements is fundamental and cuts across all phases of any program (as illustrated in Figure 2) – if this element does not work well in any phase or aspect of the program, it will lead to systemic failures.

Pre-flight

The review has identified the need for better information for people entering hotel quarantine. Good practice would result in the existence of centralised information in a location that makes sense to incoming travelers, for example the landing pages of the Australia.gov.au website and State and Territory government websites. These websites require better integration.

Information should be in lay terms and ideally on landing pages. A website akin to the New Zealand Managed Isolation and Quarantine website represents good practice.

Consideration should be given to adding material to on-board videos shown to all international arrivals on commercial aircraft.

Operational briefing and airport arrival

The airport is a discrete place of work in the hotel quarantine system and requires a well-coordinated, integrated approach. In good practice operations this is demonstrated with an operational briefing prior to each flight arrival or commencement of a shift.

Sometimes referred to as a 'toolbox' or 'huddle', operational briefings bring together key agencies participating in the airport arrivals process prior to arrivals to discuss how the event will proceed, including command structures, role definition as it pertains to each agency, what to do in the event of uncertainty and reiterating the importance of appropriate regard for risk, including adherence to strong IPC practices.

Transfers

The airport arrivals process has many steps as travelers disembark the aircraft and proceed through clearances and screening. In good operations travelers are issued with a quarantine notice or similar which explains the legal basis for quarantine and provides travelers with information in a format that is easily understood.

Best practice also recognises risk and that travelers may be COVID-19 positive. The result is proper marshalling through the airport and risk mitigations, including physical barriers to protect staff, appropriate PPE and handling of luggage, distancing measures by keeping functions dispersed through the transit line, and timeliness of transfer to hotel transport. The same principles extend to the transit passengers, and the risk they may pose in airports and, where relevant, into and from hotel quarantine.

Hotel check-in

The hotel check-in the process in good practice operations is expedient, proportionate to risk and mindful of the customer experience. Good examples include a staggered but timely offloading from buses which limits the numbers of travelers in the hotel foyer at any one time. This is aided by good information sharing through the early receipt of flight manifests and other complimentary information. The latter ensures quick check-in and early allocation of appropriate accommodation.

In all components of the arrivals process best practice involves declaration of 'hot zones'. Hot zones require increased safety protocols and risk mitigations for the risk associated with travelers whose COVID-19 status is unknown. Hot zones may be spatial or determined by time but feature strong IPC practices with due regard for environmental risks. In best practice examples there were clear processes, including visual and auditory signals when the status of zones (such as hotel lobby/airport arrivals) was changing status.

Hotel Quarantine Framework

Risk strategies

All components of hotel quarantine involve risk. Environmental risks are present in all stages (arrivals, clearances and screening, the hotel) while system risks typically present when there are

failures in management, accountability and assurance structures or protocols and where risk has been inadequately considered.

In good practice operations decisions about risk are guided by an overarching risk policy statement that explicitly details the tolerance for risk in hotel quarantine. This type of risk statement is supported by risk framework documents, such as matrices and control plans that document risk ownership.

Many jurisdictions have not adequately considered and documented their approach to risk, and have mainly focussed on exemptions.

Strong end to end IPC, comprehensive IPC training, assurance processes

Good hotel quarantine practice incorporates proper IPC practice throughout the entire process and at appropriate levels for the risks associated with each environment. Standard IPC precautions include hand and respiratory hygiene, the use of appropriate PPE, safe waste management, proper/ IPC compliant linen rotation and cleaning cycles, environmental cleaning, and sterilization of patient-care equipment.

Implementing standard precautions as a first-line approach to IPC minimises the risk of transmission of infectious agents from person to person, even in high-risk situations. In good practice operations IPC practice is informed by comprehensive and regular IPC training and assurance processes, including independent audits by a team of qualified and experienced IPC practitioners and other professionals examining the entire process. This could include audits by teams from within jurisdictions auditing each other's systems.

Comprehensive IPC training is competency based and delivered through regular face to face training and demonstrations of correct PPE donning, doffing and disposal as well as environmental cleaning practices. Training and practice, however, must be reinforced through scheduled and/or random compliance checks by appropriately qualified IPC experts, coupled with treatment and rectification plans for identified issues or breaches.

In cases of significant or persistent breaches changes to staffing arrangements should occur, including termination if appropriate.

Assurance processes are a key component on continuous organisational improvement, a specific risk control in the hotel quarantine system and one of the strongest indicators of good practice.

Clinical overlay and case management/data integration

Clinical supervision and treatment for hotel quarantine guests is paramount. Clinical overlay is cognisant of the duty of care responsibilities that are inherent in the hotel quarantine system and should be applied conscious of the risks posed by failures to identify all health needs of travelers. Good practice also includes pathways for escalation and evidence of clinical governance structures. In good practice, clinical overlay demonstrates strong clinical governance structures which provides additional assurances with respect to duty of care obligations.

Clinical overlay is aided by good case management practices and data integration, which links the various records pertinent to a hotel quarantine guest's quarantine period in a manner that enables quick and fulsome access to all parties and accurately capture an individual's hotel quarantine journey.

Testing

Testing should be undertaken consistent with AHPPC guidelines, at approximately day two and 11 of quarantine, with clinical staff donned in full PPE. It should also inform hotel discharge, that is testing is part of an 'evidence based discharge' or 'criteria led discharge' in which people in quarantine need to pass two COVID tests, have a health screen, and corresponding paperwork in order to be discharged.

Exemptions and leave

Good practice as it pertains to exemptions and leave should be evidenced by clear lines of accountability and a transparent decision making framework. Decision making frameworks should document how and when decisions are made about who is exempted from quarantine, how risk has been considered and applied, and timeframes should be expedient. Applicants should have access to appeal mechanisms.

Procurement

Best practice in procurement, whether it is for hotels, medical, welfare or security services have clear oversight of contracts and an understanding of risk with explicit strategies to manage these risks.

Supervision of contracts and procuring hotels

Good practice in hotel quarantine has a strong foundation in proper government procurement processes and contractual management. Contractual management is premised on ownership of risk, who is authorised to exercise various powers and functions, and proper decision making mechanisms at all stages.

Good practice is demonstrated by documented strong administration processes and accountability structures that effectively manage external service provider contracts, from the procurement of hotels through tender or, where relevant, single select methodology, to the supervision of contracts and rectification or cessation where services are not delivered in accordance with contract provisions.

In procuring hotels, good practice informs decisions about the quality and variability of hotel venues while contracts for service provisions are determined on a merit basis after demonstration of capacity to meet contract requirements.

Quality of hotels

The quality of accommodation for hotel quarantine is important including consistency of accommodation within a jurisdiction. Travelers appear to manage expectations and understand that the quality of available accommodation is dependent on their geographical location. However, issues quickly arise when the quality of available accommodation differs markedly between hotels in the same location, such as within a central business district.

Health, mental health and wellbeing

Good systems recognise the health, social, emotional and psychological impost of quarantine on the individual and provide necessary health and wellbeing support throughout the process.

Health screening, triage and placement

Comprehensive health screening and wellbeing assessment to identify all health needs of returned travelers should occur at the commencement of hotel quarantine. During airport arrival a complete screen for COVID-19 symptoms and other vulnerabilities should occur. This should include cognitive impairment and mobility. Health screening should identify the amount of intervention and clinical input needed in order to properly manage risk and ensure proper care for each individual undertaking quarantine.

Good practice health screening is not limited to whether a traveler is symptomatic for COVID-19 rather, it includes assessments for any mobility or cognition issues, comorbidities, mental health concerns, drug and/or alcohol health issues, pregnancy including any high risk indications, or any other issue that may affect someone's capacity to undertake or manage the hotel quarantine environment. This assessment determines a traveler's placement in appropriate accommodation for the quarantine period, ideally supports segregation of COVID-19 positive and negative populations but also ensures the right services and level of engagement are evident and commensurate to a traveler's needs.

In best practice situations, health screening is aligned with clinical overlay present in the system. The availability of health services should be proportionate to the needs of the population in quarantine at any particular point in time.

Mental health

The pressures on mental health and wellbeing during hotel quarantine is arguably one of most important considerations in the hotel quarantine system, as even those who have not previously experienced mental ill health may find the experience taxing.

Good practice operations of mental health support is demonstrated by the presence of assertive mental health screening and treatment available to hotel quarantine guests, particularly with evidence of the use of validated mental health assessment tools. Further, good practice includes assertive in-reach and assessment, which is not reliant on the traveler to seek out support, in a timely manner (no later than 24 hours into quarantine).

Good practice in this respect includes screening and in-reach to identify immediate mental health and wellbeing concerns, and daily follow up with guests to identify emerging or escalating psychological distress, until guests decline further contact and/or support.

It is also clear that psychological preparedness for quarantine is material in a person's ability to cope. Provision of information prior to embarkation can assist with this.

Addictions, disability and other vulnerable groups

These types of assessments extend to screening for addictions and other vulnerabilities, particularly disability and the elderly. In good practice operations, treatment plans and necessary supports for addictions is recognised and implemented early to alleviate increased anxiety associated with

withdrawal symptoms from dependency, while assessment for other vulnerabilities should result in ongoing assessment of an individual's capacity and suitability for hotel quarantine or occupational therapy, other supports and proper adjustments that are necessary. Like health screening for primary or acute issues, screening for mental health, addictions and other vulnerabilities is relevant to the level of clinical overlay in the hotel quarantine system.

Particular attention should be paid to the needs of people with disabilities to ensure appropriate assistance and that necessary adjustments are made.

Customer experience

Entertainment and community

Fourteen days in hotel quarantine system can be a difficult and taxing experience. Good practice seeks to lessen the burden by providing tools and strategies for shared experiences, ideally lessoning the isolating elements of hotel quarantine. In good practice operations those tools and strategies include entertainment and community building arrangements, including exercise, craft, trivia, and facilitated conversations through online platforms. These offerings provide an opportunity for quarantined guests to engage in a 'structured day' and build routine, both of which has been shown to be effective against mental fatigue, feelings of isolation, and vulnerability.

Good practice enables individual hotels to share resources with a community of practice enabling a more consistent standard of experience for customers.

Food

Timely food options that cater to all dietary requirements and the ability for guests to receive regular food and/or grocery deliveries are also a feature of good practice in the hotel quarantine system. Deliveries should not be limited to one a day and guests should be able to receive these as requested. Good practice also provides child appropriate options and sufficient variety for children and adults.

Support for parents

Supports for parents and their children during hotel quarantine are imperative. Good practice operations evidence consideration of these cohorts and have put in place tools, strategies and counselling options to ease the pressure on parents supporting children through quarantine. This is particularly relevant for single parents and those with very young children, and ensuring there are opportunities for those parents to exercise self-care practices. This is distinct from mental health screening.

The Quarantine System going forward

'Standing up' capacity to accommodate the needs of thousands of returning travelers in an environment when little was known about COVID-19 and at short notice is a significant logistical achievement. Since the commencement of the Hotel Quarantine System agreed by National Cabinet on 27 March 2020, the system has accommodated some 130,000 people who have subsequently been allowed to enter the wider community following the mandated period of 14 days in quarantine. This includes 33,827 people travelling around Australia who have been subject to domestic quarantine orders[27].

To date hotel quarantine has proven largely effective as a first line of defence against the importation of COVID-19. In concert with a small number of countries Australia has done well in limiting the importation and domestic spread of the virus. There is now a clear difference between countries and regions in the amount of virus circulating in these communities.

Pressure to increase travel for both personal and business needs is increasing. The review has heard from a number of individuals and organisations who are being significantly impacted by their inability to organise travel to Australia. This can be expected to increase as the current limits on arrivals which are largely dictated by quarantine capacity are impacting those who wish to return to Australia and cannot. The need to import skilled labour including for agricultural and critical maintenance tasks has been highlighted as an increasing priority.

The current system has a high cost, requires highly specialised skills and impacts guests financially, emotionally and physically. While the system has largely performed well and there are ways to improve the operation of the existing system through the adoption of best practice, the need to increase the flow of travelers has been brought to the attention of the review. This is particularly important as some form of quarantine will be needed for some time.

It is likely that an effective vaccine for COVID-19 will not be available for wide adoption in the near future and effective treatments are yet to be identified. While a number of vaccine candidates are currently in phase three trials and look promising there remains a significant challenge in scaling up manufacturing and subsequent distribution. Australia has secured a number of supply agreements for candidate vaccines and is participating in the COVAX facility. Notwithstanding this the sheer scale of vaccinating vulnerable people globally will mean an effective first line of defence will need to be maintained.

In this context and some six months since the hotel quarantine system took in its first guests, it is timely to consider what the system should look like going forward, what the demands on the system will be (how much capacity is needed) and how this might be best delivered.

A number of the system settings should be reviewed as part of this consideration. With greater operational maturity, knowledge about the virus and how it is transmitted, improved contact tracing

[27] As at 28 August 2020 based on the review's calculations

and access to greater testing capacity, a one size fits all model will unnecessarily restrict system capacity.

Maintaining an effective first line of defence that is both proportionate and effective using a mix of hotel and home based quarantine with the period of quarantine determined based on risk settings combined with increased testing can deliver improved capacity and better experience for travelers.

There are four overarching strategies that, if implemented, will improve quality and increase capacity in the Hotel Quarantine System:

- Improve system performance and the experience for people in hotel quarantine
- Develop and implement a number of quarantine options for the allocation of arrivals based on an assessment of risk
- Exclude arrivals from very low risk jurisdictions from the need to quarantine
- Consider a national quarantine facility to provide surge capacity

Improve system performance and guest experience

System performance can be improved through the implementation of a more standardised approach to hotel quarantine. The review's good practice guide has been prepared with this in mind and provide a template for States and Territories to make improvements.

States and Territories should now consider their hotel quarantine operations in line with the features of good practice and make adjustments where necessary to meet these baselines. Noting issues about scalability and the specialised nature of the workforce required to implement hotel quarantine, States and Territories should also investigate establishing standing arrangements with AUSMAT in the event of the need to scale up operations quickly.

System performance is also measured on how guests experience quarantine. Feedback to the review from hotel quarantine guests and through consultation with oversight agencies suggests there are several areas for improvement.

The review has been made aware of many poor experiences of hotel quarantine as they relate to cleanliness, food, access to air and exercise; the requirement to quarantine and the costs; the exemption process; and access to medical support including mental health support.

The features of good practice should also be considered as they pertain to the hotel environment, infrastructure and services provided to hotel quarantine guests.

Improving the experience of hotel quarantine by implementing the range of good practice features will ideally produce a net effect of fewer complaints and fewer mental health episodes or wellbeing issues. This net effect should provide residual capacity to better deliver core components of the Hotel Quarantine System.

New models of quarantine

The current one size fits all model of 14 days hotel based quarantine served Australia well in the early days of the pandemic. It is now possible, based on better evidence about risk, to consider additional models to augment standard approaches to hotel quarantine.

Consideration should be given to the design of options which include changes to the period of quarantine, the use of testing taking account of the availability and speed of testing together with alternative locations for quarantine and the availability of technological options for arrivals to validate their location in order to expand the range of options available and hence significantly expand quarantine capacity. The origin of travelers should be considered in deciding the appropriateness of available options.

A number of international jurisdictions have implemented changed quarantine arrangements to utilise testing before travel and on arrival, quarantine for a seven day period combined with testing thereafter, isolation in the home (if suitable) and the use of devices to monitor location, including through smartphone applications or wearable monitoring devices (on a voluntary basis). International counterparts are also gradually introducing travel corridors, green lists etc.

A risk assessment including likely compliance together with enforcement options should form part of this analysis.

It is noteworthy that Australian businesses have indicated willingness to manage quarantine arrangements for essential workers, including through the use of wearable monitoring devices for low risk travelers to ensure that businesses can continue to operate.

The experience of the ACT and a number of international jurisdictions have successfully demonstrated that different models of quarantine can be implemented effectively. As such home quarantine with appropriate checks and/or options for participants to opt in to other forms of monitoring should not be discounted.

Exempting some arrivals from quarantine requirements

A significant percentage of hotel quarantine capacity is being utilised by travelers from low prevalence settings. This includes domestic quarantine. Both cohorts arguably do not represent a high risk for importation or transmission of COVID-19.

Australian governments should contemplate a more considered approach to quarantine based on low prevalence settings and other monitoring options on the basis of risk. Excluding some travelers, such as those from New Zealand, from the Quarantine System will provide net capacity within the system with no or very little risk.

Hotel quarantine is one line of defence for limiting transmission but needs to be complemented by other, secondary defences. The risk settings informing hotel quarantine in each State and Territory will depend on the maturity of their systems to capture the rare instances in which someone who is

COVID-19 positive is not captured by quarantine, this includes the testing and contact tracing regimes in each State and Territory.

A national quarantine facility in reserve

With a large number of Australian citizens and permanent residents currently offshore, the need to significantly increase arrival numbers, including for business and agricultural purposes, and the changeability of the COVID-19 situation, consideration should also be given to the establishment and maintenance of a national facility in reserve to facilitate large scale evacuations from international ports, if or when required.

Should there be a need to scale up services significantly and at short notice as the Northern Hemisphere winter descends and people continue to arrive into Australia from this region who require hotel quarantine, it would be beneficial to consider national facility for emergency or surge situations. Changeability or localised outbreaks may also necessitate large scale evacuations from particular regions.

The Australian Government has the capability to declare a human health response zone, as seen with evacuations of early quarantine cohorts to national facilities or State/Territory facilities gazetted for this purpose, including the Learmonth RAAF base or immigration detention facilities, and the Northern Territory's Howard Springs facility.

The Howard Springs facility has the capacity to house some 3,000 people and is well suited to the provision of this reserve capacity.

Recommendations

1. States and Territories should embed end-to-end assurance mechanisms and look to continuously improve hotel quarantine to ensure that it is delivered consistent with good practice.
2. Information on the quarantine system should be easy to access by travelers in order to ensure their understanding of quarantine and to better psychologically prepare them for the experience. This should be provided across relevant Commonwealth/State and Territory websites.
3. People in quarantine should have access to timely decision making, review processes and complaints mechanisms, including pathways for escalation.
4. Options for new models of quarantine should be developed for consideration by National Cabinet including a risk assessment of these options and an analysis of traveler suitability.
5. National Cabinet should consider exempting low risk cohorts, such as travelers from New Zealand, from mandatory quarantine.
6. The Australian Government should consider the establishment a national facility for quarantine to be used for emergency situations, emergency evacuations or urgent scalability.

Glossary

AHPPC is the Australian Health Principal Protection Committee. The AHPPC is the key decision making committee for health emergencies. It is comprised of all State and Territory Chief Health Officers and is chaired by the Australian Chief Medical Officer.

Aerosols are a collection of pathogen-laden particles in air. Aerosol particles may deposit onto or be inhaled by a susceptible person.

Border nurses are nurses employed by the State or Territory authorities which are positioned at the health screening point of the arrivals process into airports.

Droplets are particles of relatively larger size (more than 5 to 10 um in size) and produced in large numbers when people cough or sneeze and can also be produced when people speak, sing or shout. They are called droplets because they “drop”. This “drop” usually occurs for most droplets in under 1m from the source.

Fomite is any inanimate object that, when contaminated with or exposed to infectious agents (such as pathogenic bacteria, viruses or fungi), can transfer disease to a new host

Isolation means separation of ill or contaminated persons or affected baggage, containers, conveyances, goods or postal parcels from others in such a manner as to prevent the spread of infection or contamination. Quarantine and isolation as terms are frequently used interchangeably.

Jurisdictions for the purpose of the review process and this report refer to NSW, QLD, WA, SA, NT, the ACT and Tas. Victoria is excluded.

PAX is the abbreviation for passengers. It is commonly used in the aviation sector.

Quarantine is the restriction of activities and/or the separation of persons who are not ill, but who may have been exposed to an infected person. Quarantine and isolation as terms are frequently used interchangeably.

SARS is the abbreviation for ‘severe acute respiratory syndrome’, a viral respiratory illness caused by a coronavirus, called SARS-associated coronavirus (SARS-CoV). Earlier SARS-CoV outbreaks are generally referred to as SARS while SARS-Cov-2 is the strain that causes COVID-19.

States and Territories for the purpose of the review and this report refer to NSW, QLD, WA, SA, Tas, and the ACT and NT, respectively. Victoria is excluded.

Attachment A – Quarantine – National Statistics

			NSW	VIC	QLD	WA	SA	NT	ACT	TAS	Total
Number of incoming international flights	* including charter flights, but not freight	2 weeks: 14-28 August	150 (46%)	0 (0%)	98 (30%)	37 (11%)	10 (3%)	30 (9%)	0 (0%)	0 (0%)	325 (100%)
		28 March to 28 August	1663 (50%)	340 (10%)	714 (21%)	336 (10%)	36 (1%)	263 (8%)	3 (0%)	0 (0%)	3355 (100%)
Number of incoming international PAX	* excluding crew * including exemptions + hospital transfers	2 weeks: 14-28 August	4549 (62%)	0 (0%)	975 (13%)	1252 (17%)	478 (6%)	109 (1%)	0 (0%)	0 (0%)	7363 (100%)
		28 March to 28 August	50657 (49%)	21821 (21%)	15680 (15%)	11110 (11%)	2472 (2%)	1432 (1%)	516 (0.5%)	0 (0%)	103688 (100%)
PAX entering quarantine 28 March to 25 August ^ 1347 ACT home, 293 ACT hotel	Total PAX to quarantine (International + Domestic)		51660 (40%)	21027 (16%)	22026 (17%)	11168 (9%)	2913 (2%)	13203 (10%)	2143 (2%)	5726 (4%)	129866 (100%)
	International PAX to quarantine		48668 (94%)	19898 (95%)	14632 (66%)	9367 (84%)	2602 (89%)	355 (3%)	503 (23%)	14 (0.2%)	96039 (74%)
	Domestic PAX to quarantine		2992 (6%)	1129 (5%)	7394 (34%)	1801 (16%)	311 (11%)	12848 (97%)	1640^ (77%)	5712 (99.8%)	33827 (26%)
	2 weeks:		18	NA	0	4	0	0	0	0	22

		NSW	VIC	QLD	WA	SA	NT	ACT	TAS	Total
COVID-19 cases diagnosed in quarantine * not including Artania	17-30 August	(0.4%)		(0%)	(0.3%)	(0%)	(0%)	(0%)	(0%)	(0.3%)
	28 March to 28 August	393 (0.8%)	236 (1.1%)	Not provided	196* (1.8%)	24 (0.8%)	1 (0.01%)	0 (0%)	1 (0.02%)	851 (0.7%)

28

			New Zealand	South Island	North Island
Number of incoming international flights from NZ	* including charter flights, but not freight	2 weeks: 14-28 August	51 flights	9 flights	42 flights
		28 March to 28 August	423 flights	90 flights	333 flights
Number of incoming international PAX from NZ	* excluding crew * including exemptions and hospital transfers	2 weeks: 14-28 August	1386 (19%) * plus 158 crew (inc. freight) and 5 transit	29 (2%)	1357 (98%)
		28 March to 28 August	13015 (13%) * plus 894 crew (inc. freight) and 373 transit	416 (0.5%)	12599 (99.5%)

[28] Data regarding breaches is not included as there is no centralised data source for this information. Advice about breaches was provided to the review in written material and consultation with States and Territories.

Attachment B – International approaches

In response to the WHO's PHIEC declaration, many WHO member states declared a state of emergency, public health emergency, or similar, and implemented varying degrees of border restrictions and isolation or quarantine. The review has considered the quarantine approach adopted in similar economies and some current international approaches more broadly.

Canada

Like Australia, Canada implemented a complete ban on inbound travel with limited exceptions for citizens, residents and immediate family members. From April 2020, Canada's Quarantine Act required all arrivals to undertake 14 days isolation on entry to Canada[29]. Anyone entering Canada—whether by air, land or sea is required to:

- isolate for 14 days, if they have COVID-19 or symptoms of COVID-19, or
- quarantine for 14 days if they do not have signs and symptoms of COVID-19.

Either may be undertaken in the home environment provided it is suitable for isolation/quarantine. In the event it is deemed unsuitable, isolation/quarantine occurs in a designated quarantine facility chose by the Chief Health Officer. In June 2020, the Government of Canada extended the Emergency Order requirements related to mandatory isolation and quarantine for travelers entering Canada.[30]

Canada's exemptions are largely similar to Australia's, and exist for essential workers, transiting passengers, and those in Canada in the national interest, and, like Australia, Canada implemented extensive internal border restrictions. Many of those have now been lifted.

Singapore

From 18 March 2020 all arrivals into Singapore have been required to self-isolate for 14 days under a "Stay Home Notice" (SHN) in a hotel room or similar accommodation provided by the Singapore government.

Changes were made to the SHN regime in June 2020 for travelers from Australia, Brunei Darussalam, Hong Kong, Japan, Macao, Mainland China, New Zealand, Republic of Korea, Taiwan and Vietnam, all of which were low prevalence settings at that time. On the proviso that travelers could demonstrate 14 consecutive days in those settings, the changes removed the requirement for travelers from these countries to serve their SHN at dedicated

[29] https://www.canada.ca/en/public-health/services/publications/diseases-conditions/travelers-with-symptoms-return-canada.html
[30] https://orders-in-council.canada.ca/attachment.php?attach=39482&lang=en

SHN facilities and allowing those travelers to undertake 14 days self-isolation with family, their residence or accommodation at their own cost.[31]

Singapore has also now reduced the self-isolation duration from 14 days to seven days for travelers entering Singapore from low risk countries or regions (Australia - excluding Victoria, Macao, Mainland China, Taiwan, Vietnam, and Malaysia), with COVID-19 testing prior to the expiration of the seven day period.[32]

As of September 2020, travelers entering Singapore from Brunei Darussalam and New Zealand are no longer required to undertake self-isolation if they can demonstrate 14 consecutive days in those countries and receive a negative COVID-19 result upon testing at the airport.

Singapore also introduced mandatory electronic monitoring devices to boost compliance with quarantine. All incoming travelers, including Singaporeans, who complete quarantine at home or in hotels (rather than government facilities) are issued with a device on arrival for the duration of their 14 day quarantine. The devices use GPS and 4G/Bluetooth to determine if the person is within the range of their place of residence.

New Zealand

Since April 2020 ,all travelers entering New Zealand irrespective of previous travel locations are required to enter 14 days quarantine in a managed isolation/quarantine facility, enacted under the COVID-19 Public Health Response (Air Border) Order 2020 (the Air Border Order). New Zealand's borders remain closed, as such travelers entering New Zealand are citizens or permanent residents only.

The Air Border Order was amended on 13 July 2020 and remains in force until the end of September 2020, subject to any extensions.

Taiwan

Taiwan[33], similar in population to Australia, is widely lauded for its success in managing COVID-19 despite being closely located to the epicentre in mainland China.

Taiwan requires that all arrivals present a negative COVID-19 test taken three days before boarding a flight to Taiwan and quarantine for 14 days upon arrival, but has eased restrictions for short-term business travelers from 'low-risk' and 'medium-risk' countries. Business travelers from low-risk countries who present negative COVID-19 tests before and after arrival in Taiwan are only required to quarantine for five days rather than 14, while medium-risk arrivals must quarantine for seven days.

Taiwan's successful COVID-19 response and limited community transmission has also been linked to the integration of government health and immigration databases, enabling the government to monitor track individuals at high risk because of recent travel history in affected areas[34].

[31] https://www.moh.gov.sg/news-highlights/details/gradual-re-opening-of-travel-and-changes-to-border-measures

[32] https://www.moh.gov.sg/covid-19

[33] Taiwan is not defined as member state by the WHO

[34] Wang CJ, Ng CY, Brook RH. Response to COVID-19 in Taiwan: Big Data Analytics, New Technology, and Proactive Testing. JAMA. 2020;323(14):1341–1342. doi:10.1001/jama.2020.3151

South Korea

Travelers entering Korea after 1 April 2020 are subject to quarantine for 14 days from the day after entry in accordance with the Quarantine Act. Quarantine can be undertaken at home. Short-term travelers (foreign-nationals) without a confirmed address in Korea are subject to quarantine at a facility designated by the Korean government at their own expense.

South Korea was one of the first countries to experience a COVID-19 outbreak, with its first case, imported from Wuhan, China, reported on January 20 2020. The government established an emergency response committee within days of the case becoming known.

The number of confirmed cases ranged from zero to two per day for the first month of the outbreak, until a cluster was identified in Daegu. As soon as the first case was reported, South Korea turned its focus toward preparing for large-scale testing. In late January 2020, South Korea started requiring special entry procedures for travelers coming from Wuhan. Procedures initially included special entry lines and questionnaires, and later expanded to temperature checks, border-testing for all travelers, and mandatory quarantines that were monitored for 14 days.

Those identified as having had contact with a confirmed or suspected case were required to self-quarantine at home or in designated facilities for 14 days, as were travelers into the country. This policy of tracing and quarantining, rather than restricting entry, is in line with international health regulations, whereas border closures are not.[35]

Other

There is a mixture of other approaches internationally for managing travel into and out of countries and regions, including traffic light approaches, travel corridors or green lists, traveler cohorts, other means of monitoring and testing, in place of quarantine, as borders begin to open up. Generally, countries have adopted a combination of approaches.

Under a traffic light system, countries are designated as either green (low-risk), amber (medium-risk) or red (high-risk). Generally, travelers and nationals returning from 'green' countries are permitted to enter with no restrictions, while those from amber and red countries will be subject to some restrictions upon re-entry. Some countries operating a traffic light system are Belgium, Czech Republic and Ireland.

Although originally considering a traffic light approach, the UK has switched to a more binary system for its border settings in which designated countries are listed as red or green rather than red/green/amber. All travelers from countries not on the travel corridor list must self-isolate for 14 days. The UK's 'travel corridor' list is reviewed weekly and countries are added or removed depending on the situation in countries and regions.

Israel has a similar system, with countries designated as either green (with no quarantine required) or red (14 days quarantine required upon entry to Israel). Travelers from green countries who have been in a red country in the previous 14 days must isolate for 14 days upon entry to Israel.

Iceland's borders are currently open to EU/Schengen zone countries, as well as 14 'safe' third countries recommended for exemption from border restrictions by the European Commission. On arrival in Iceland,

[35] https://ourworldindata.org/covid-exemplar-south-korea

travelers are given the choice of 14 days quarantine or undertaking two screening tests for COVID-19, separated by five to six days and quarantining until the results of the second test are known.

While each country has determined its own border settings, the Council of the European Union determined a set of quantitative and qualitative criteria for lifting restrictions including being close to or below the EU average, whether cases in other countries have been stable or decreasing in the previous 14 days and the country's overall response to COVID-19 taking into account available information on aspects such as testing, surveillance, contact tracing, information and data sources.

Attachment C – State and Territory Arrangements

The review consulted States and Territories regarding these summaries, which are accurate as of 29 September 2020.

New South Wales

Legal overview

The Minister for Health and Medical Research has mandated that a person who has been in Victoria or overseas within 14 days of arrival in NSW by aircraft must generally quarantine in a government-designated facility. The requirement to be quarantined is mandated through the Public Health (COVID-19 Air Transportation Quarantine) Order (No 3) 2020.

The Public Health (COVID-19 Maritime Quarantine) Order (No 3) 2020 sets out the quarantine requirements for people arriving in NSW from overseas by vessel. These orders are made by the Minister under section 7 of the Public Health Act 2010, in exercise of his powers to give directions as he considers necessary to deal with a public health risk and its possible consequences. The Minister has also required that non-NSW residents who have been in Victoria in the previous 14 days and have not been authorised to enter NSW can be asked to leave NSW or stay in quarantine (clause 8 of the Public Health (COVID-19 Border Control) Order 2020). A state of emergency does not need to be declared to use these powers. The Minister for Health and Medical Research (or a duly authorised delegate) is responsible for exemptions to the requirement to quarantine in government-designated facilities.

Exemptions have been made relating to, for example, unaccompanied children (Exemption under Public Health (COVID-19 Air Transportation Quarantine) Order 2020), Year 11 and 12 students and teachers (exemption under Public Health (COVID-19 Border Control) Order 2020), and flight crew who have only been in a Victorian airport (Exemption under the Public Health (COVID-19 Border Control) Order 2020). Special arrangements are also in place for flight crew more generally (required to quarantine at home or accommodation arranged by their employer, subject to the provision of certain information to NSW Health). There are also certain classes of people who have been in Victoria in the previous 14 days who are not required to quarantine in a government-designated facility, subject to certain conditions. This includes (but is not limited to) NSW residents who have been quarantined in Victoria for the previous 14 days under Victoria's Public Health and Wellbeing Act 2008, border region residents, people providing critical services, people entering for medical services or on compassionate grounds, people needing to meet legal obligations imposed by a court or an Act, travelers transiting through NSW by air and consular officials. The exemptions also include the ability for people in quarantine to leave quarantine for short periods of time under supervision to enable them to visit loved ones who are having critical treatment or who are dying in hospitals under certain circumstances.

The Commissioner of Police designates premises or types of premises as appropriate quarantine facilities. The Chief Health Officer (or delegate) can clear someone for release after 14 full days of quarantine if they are satisfied that the person does not pose a risk of infecting others with COVID-19. They must have regard to the

results of any COVID-19 testing which occurs on day two and day 10 of hotel quarantine. A refusal to be swabbed on day 10 may result in a further 10 days quarantine.

The courts can issue fines of up to $11,000 or imprisonment of up to six months, as well as a further fine of $5,500 for each day the offence continues (Public Health Act 2010, s 10). Under Schedule 4 of the Public Health Regulation 2012, on-the-spot fines can also be issued.

Available remedies include a merits review (Public Health Act 2010, s 7(7)) and judicial review. Complaints can also be made to the Ombudsman about the conduct of a public authority. Complaints about the conduct of the NSW Police Force are to be directed to the Commissioner of Police or the Law Enforcement Conduct Commission instead of the Ombudsman. Damages or other compensation is not payable in any civil proceeding for damages or other compensation brought against the State or any authority of the State for alleged negligence, defamation or other breach of duty arising because of the exercise of, or the failure to exercise, any function under the Public Health Act 2010 in good faith (Public Health Act 2010, s 132).

Fees for hotel quarantine are $3000 for one adult, $1000 for each additional adult and $500 for each child over the age of three years. There is no charge for children aged under three. Hardship arrangements are available.

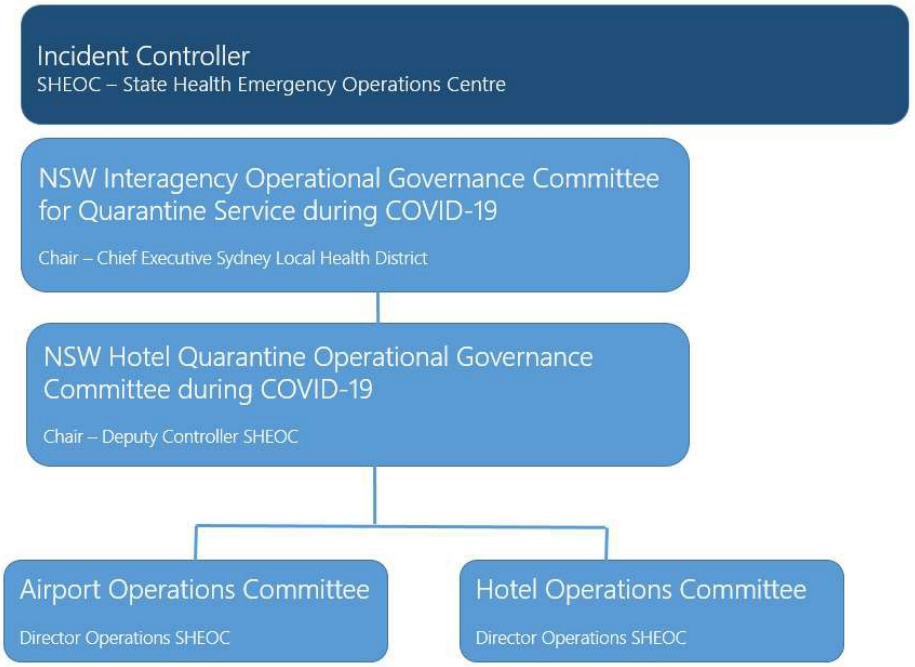
Governance arrangements

Hotel quarantine in NSW is a joint operation led by NSW Police and NSW Health and is supported by other government departments including the Department of Communities and Justice, the Department of Customer Service (Service NSW and Revenue NSW), the Department of Regional NSW (Public Works Advisory), Transport for NSW, NSW Treasury, and the Department of Premier and Cabinet.

The principle cross-agency governance body is the Interagency Operational Protocol Governance Committee for Quarantine Services during COVID-19, chaired by the Chief Executive of the Sydney Local Health District. This group is responsible for overseeing the interagency agreements and arrangements under which individuals arriving in NSW are required to quarantine in a designated quarantine hotel or health facility pursuant to the public health order.

Underneath this Interagency Governance Committee, sits the NSW Hotel Quarantine Operational Governance Committee during COVID-19, chaired by the Deputy Controller of the State Health Emergency Operations Centre (SHEOC). This group provides a forum for consultation between key stakeholders, including NSW Police and NSW Health, in relation to hotel quarantine.

The operational delivery of the quarantine system is oversighted by two committees, one responsible for airport operations and the other responsible for overseeing hotel operations. This overall structure is outlined in the diagram below, with agency representation at each forum detailed in their respective terms of reference.


Incident Controller
SHEOC – State Health Emergency Operations Centre
NSW Interagency Operational Governance Committee for Quarantine Service during COVID-19
Chair – Chief Executive Sydney Local Health District
NSW Hotel Quarantine Operational Governance Committee during COVID-19
Chair – Deputy Controller SHEOC
Airport Operations Committee
Director Operations SHEOC
Hotel Operations Committee
Director Operations SHEOC

Queensland

Legal overview

The Chief Health Officer has mandated that various people are required to quarantine in a premises nominated by the government. Under the Self-quarantine for Persons Arriving in Queensland from Overseas Direction (No. 5) (Overseas Quarantine Direction), this requirement applies to a person who arrives in Queensland from overseas (whether Queensland is the person's final destination or not) (paragraph 5). Under the Border Restrictions Direction (No. 14), this requirement applies to people who in the 14 days prior to arrival in Queensland;

- have been overseas,
- had contact with a confirmed COVID case,
- have been in a COVID-19 hotspot and have been permitted to enter,
- had a cleared case of COVID-19 and given an exemption to enter Queensland by the CHO,
- had symptoms consistent with COVID-19, or
- who are a Queensland-based border zone resident who travelled outside border zone in NSW.

These directions are made under section 362B of the Public Health Act 2005, in exercise of powers conferred specifically for the purpose of dealing with COVID-19. Under section 362B, the Chief Health Officer can give specified directions if she believes it is reasonably necessary to assist in containing, or respond to the spread of COVID-19 in the community. Such orders include; restricting the movement of persons; requiring persons to stay at or in a stated place; requiring persons not to enter or stay at or in a stated place, and any other directions the CHO considers necessary to protect public health.

Both the Self-quarantine for Persons Arriving in Queensland from Overseas Direction and the Border Restriction Direction contain provisions exempting certain classes of people from quarantine (e.g. border zone residents) or permitting quarantine to be completed in a premises other than that nominated by the government (e.g. certain government officials, law enforcement officials and military personnel, aircrew). Under the Directions the Chief Health officer (and where applicable the Deputy Chief Health officer or their delegate) may also grant exemptions for individual or classes of persons on compassionate grounds or where a person may be deemed essential for the proper functioning of the State).

The location of quarantine is directed by an emergency officer (public health). Emergency officers (general) include (s 333) people appointed by the Chief Executive by instrument if they are satisfied the person has the relevant qualifications, and they must be public service officers or employees, health service employees, persons employed by a local government, SES members under the Fire and Emergency Services Act 1990, ambulance officers, police officers, fire service officers and harbour masters. Emergency officers (medical) are doctors appointed by the Chief Executive if they are satisfied that they have the necessary expertise and experience.

Release occurs after completion of 14 days of quarantine (excluding the day of arrival). Under the Directions, a person may be quarantined for a further period of ten days from the end of the quarantine period if the person is not tested for COVID-19 when requested to do so by an emergency officer (public health). An emergency officer can use any necessary and reasonable force to enforce a public health direction (s 362L).

The courts can issue fines of up to $13,345 or 6 months imprisonment, unless there is a reasonable excuse (s 362D). On-the-spot fines of $1,334 can also be issued.

Available legal remedies include judicial review and complaint to Ombudsman. Excluded remedies include interlocutory orders staying operation of emergency powers (s 57, cf. s 109(4)) and remedies against people

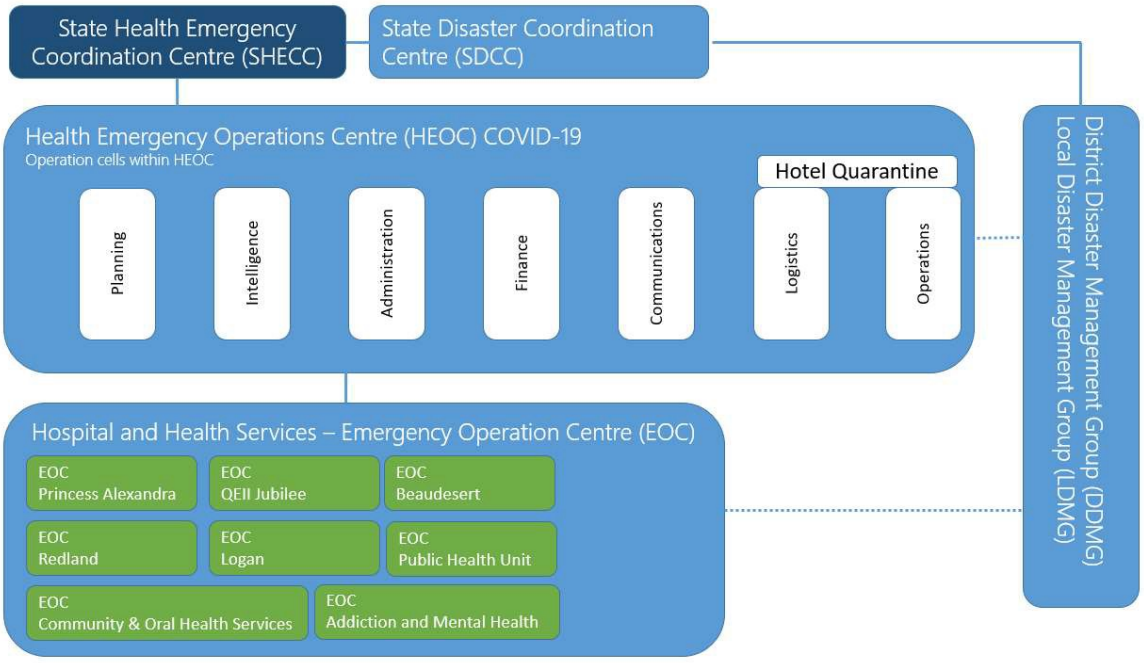
exercising functions under the Act in good faith (subject to the Police Administration Act 1978). This does not affect the State's liability (s 131).

Prescribed fees under the Public Health Regulations 2018 for hotel quarantine are $2,800 for an adult and $2,345 for a child. The fee includes components for accommodation (including cleaning) and meals. Where two or more people share quarantine accommodation the accommodation component of the fee is only charged for one of the relevant persons. A waiver can be sought from the payment of all or some of the fees for financial hardship or being a vulnerable person (s 362ME).

Governance arrangements

Queensland Police Services have lead agency status at the airport. Police officers serve the Quarantine Direction order and also are the lead enforcement agency onsite at each hotel.

Queensland Health is the functional lead agency for pandemics under the State Disaster Management Plan and is responsible for implementing state-wide strategies to manage the outbreak as well as advice and guidance to the State Disaster Coordination Centre and other agencies as required. This is centralised through Queensland Health's State Health Emergency Coordination Centre.



Western Australia

Legal overview

The Police Commissioner (in his capacity as the State Emergency Coordinator (SEC)) has given the Quarantine (Closing the Border) Directions (the Directions). The Directions create a general prohibition on entry to the State of Western Australia other than for exempt travelers. Even if a person is able to enter Western Australia as an exempt traveler, their entry may be subject to terms and conditions, which may include a quarantine direction (either at a quarantine centre or at suitable premises), physical distancing measures, or a requirement to present for testing for COVID-19. The terms and conditions that will apply to such a person will depend on the category of exempt traveler that the person falls into.

If a person enters Western Australia in breach of the prohibition and is not able to leave Western Australia immediately, the person is to be given a quarantine direction. In general, such a person is to be given a centre direction (a direction to remain in a quarantine centre, being one of a number of hotels run by the State Health Incident Coordination Centre (SHICC)). Some people are issued with self-quarantine directions where there are exceptional circumstances (such as disability or serious medical condition) and some may be issued with hospital directions (where their condition (COVID-19 related or not) requires hospitalisation). Western Australian residents who have completed a period of supervised quarantine in another State/Territory can be given a self-quarantine direction to quarantine for 14 days. Unaccompanied children are given a self-quarantine (unaccompanied child) direction along with a movement direction to parent/parents in to whose custody the child will be released.

The Directions are made under section 61, 67, 70 and 72A of the Emergency Management Act (EMA). In particular section 72A enables authorised officers to, inter alia, take, or direct a person or class of person to take, any action that the officer considers reasonably necessary to prevent, control or abate risks associated with a state of emergency. For the purposes of the Quarantine (Close the Border) Directions, authorised officers include the SEC, police officers, Member of the Australian Border Force or the Australian Federal Police and Emergency Officers (authorised by the Chief Health Officer under the Public Health Act 2016).

Where a person is required to undertake quarantine in a quarantine centre, the quarantine centre is specified on the direction issued to a person by an authorised officer. Release from the quarantine centre generally occurs after 14 days following receipt of two negative results after COVID-19 testing on Days 2 and 12, and a health screening on Day 14. If a person in a quarantine centre tests positive for COVID-19, they are then managed under the Isolation (Diagnosed) Directions and any close contacts identified are managed under the Quarantine and Isolation (Undiagnosed) Directions.

An authorised officer may do all such things as are reasonably necessary to ensure compliance with the direction. They can use as much force as is reasonable in the circumstances (EMA s 76). An officer may exercise a power under the relevant Part of the EMA with the help and using the force reasonable in the circumstances.

The courts can issue fines of up to $50,000 or imprisonment of up to 12 months for a breach of the directions made under the EMA, unless there is a reasonable excuse for non-compliance. On-the-spot fines of $1,000 can also be issued.

Available legal remedies include judicial review and complaint to the Parliamentary Commissioner (Ombudsman). A person who suffers loss or damage because of the exercise, or purported exercise, of certain powers under the EMA may apply for compensation. A person dissatisfied with a compensation decision may seek merits review in the State Administrative Tribunal.

The fee for hotel quarantine is $180 per room, per day with an additional $60 per day for each additional person in the room. There is no charge for children under the age of 6. Effective price for one child aged over six years and one adult is $3360.

Governance arrangements

The Commissioner of Police is the State Emergency Coordinator (SEC) and is authorised to make directions under the Emergency Management Act. While the centre directions are issued by the WA Police, the quarantine centres are managed by the SHICC.

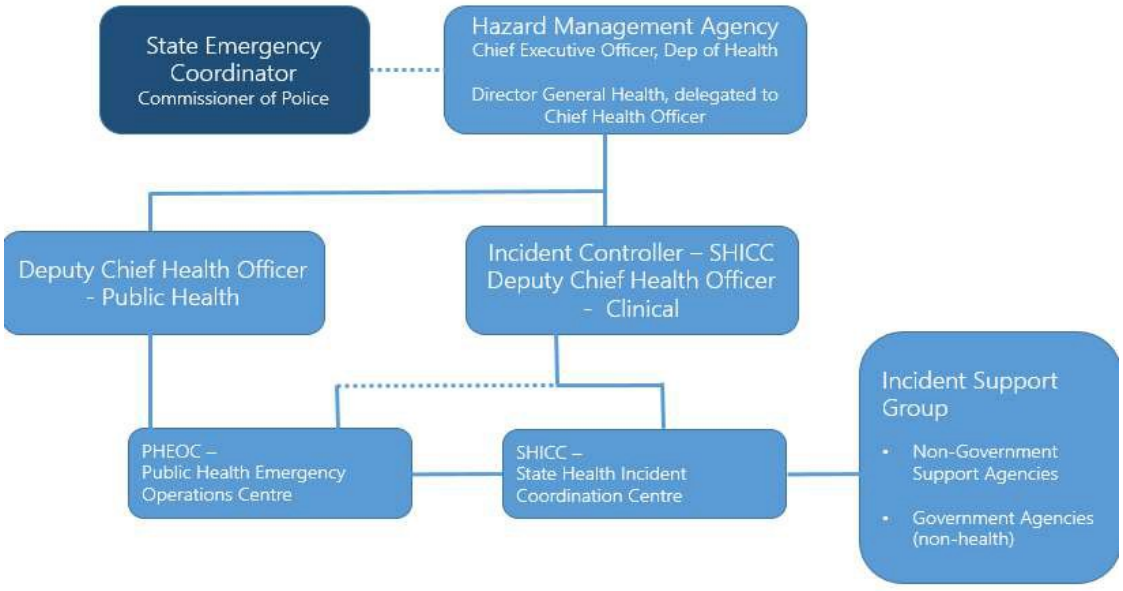
Under the EMA, the Hazard Management Agency (in this case, the Department of Health, represented by the delegate, the Chief Health Officer (CHO) for the purposes of the current WA State of Emergency) is responsible for appointing the Incident Controller, activating the Public Health Emergency Operations Centre (PHEOC) and activating the SHICC (if required). For the purposes of WA's current State of Emergency, the Deputy Chief Health Officer, Clinical Services, is the Incident Controller.

The PHEOC is headed by the Deputy Chief Health Officer, Public Health, who reports to the Chief Health Officer (the Hazard Management Agency), and oversees the public health activities of the pandemic response, including oversight of disease surveillance, data management, and public health management of infected persons and their contacts.

The SHICC is under the direction of the Hazard Management Agency (or Delegate – namely the Chief Health Officer in this case), addressing strategic management of an incident/disaster as well as facilitating management of state-wide events. During a human epidemic, clinical health services (including hospitals), and non-public health sector responses will be coordinated by the SHICC, in conjunction with the Hazard Management Agency.

Hotel quarantine is managed by the Non-Health Operations Cell in SHICC who deal with the logistics and management of security, and health and wellbeing within the quarantine centres. PHEOC provides and the public health management of any COVID-19 positive cases and any close contacts, including contact tracing.

The ADF and the Department of Communities feed into the SHICC either directly or via the Incident Support Group (ISG). Members of the WA Police sit on the ISG, hold roles within the SHICC, and also report through normal reporting lines to the Commissioner of Police.



South Australia

Legal overview

There is a major emergency declared under the Emergency Management Act 2004 ("the EM Act") in this State. The Police Commissioner (in his capacity as State Co-Ordinator) has mandated that people arriving from overseas must quarantine in government-designated accommodation. This includes people arriving in South Australia via a direct or connecting flight, or a person arriving in South Australia via a cruise ship. This requirement is mandated under the Emergency Management (Cross Border Travel No 15) (COVID-19) Direction 2020. The direction is made in exercise of the State Co-Ordinator's powers under section 25 of the EM Act. Section 25, inter alia, enables the State Co-Ordinator (or authorised officer) to do, or cause to be done, various things, to deal with a declared major emergency. Directions or requirements can be applicable to persons across South Australia and include:

- Directing or prohibiting the movement of persons, animals or vehicles
- Directing a person to remain isolated or segregated from other persons or to take other measures to prevent the transmission of a disease or condition to other persons
- Directing a person to undergo medical observation, examination (including diagnostic procedures) or treatment (including preventative treatment).

Various aspects of the emergency powers framework set out in the EM Act were amended by the COVID-19 Emergency Response Act 2020 ("the COVID-19 Act"). These amendments are time-limited and will expire within 6 months of commencement of s 6 of the Act (8 October 2020). On 24 September, an amendment Bill was passed by the Parliament of South Australia, extending the Act until 6 February 2020.

Upon returning to South Australia, following a period of quarantine in another State or Territory, a further 14 days of self-quarantine will apply in South Australia, unless the period of quarantine occurred in a State or Territory that is deemed to be a low community transmission zone.

The State Co-Ordinator has prescribed various exemptions from the requirement to essential travelers. Unaccompanied minors are not exempt, rather a carer must remain present with them in quarantine. Under s 25(6) of the EM Act (a temporary provision pursuant to the COVID-19 Act), the State Co-ordinator, or an authorised officer can exempt (conditionally or unconditionally) any person or class of persons from the direction. The State Co-ordinator may delegate any of his functions to an Assistant State Co-Ordinator, a person holding or acting in a particular person, or to any other person or body (s 18 EM Act).

Under the Emergency Management (Cross Border Travel No 15) (COVID-19) Direction 2020, the location of quarantine for overseas arrivals is determined by an authorised officer under the EM Act. A person can be released after 14 days of quarantine commencing on the day of arrival.

Under the temporary provisions of the COVID-19 Act, the State Co-ordinator or an authorised officer may use such force as is reasonably necessary to exercise or discharge powers or functions, or in ensuring compliance with a direction or requirement under s 25 of the EM Act. The courts can issue fines of up to $20,000 or two years imprisonment, unless there is a reasonable excuse under s 28 of the EM Act. On-the-spot fines of $1,000 can also be issued.

Available legal remedies against a direction or requirement under the EM Act include judicial review or a complaint to Ombudsman. No civil or criminal liability attaches to the Crown, or to any person acting in good faith, for acts or omission in connection with actions taken in response to COVID-19 under the EM Act.

Fees for hotel quarantine are $3,000 for an adult, $1,000 for each additional adult and $500 for each additional child (with the exception of a child under three for which there is no additional cost). Fees can be waived, reduced or refunded if the State Co-ordinator considers is appropriate (EM Act s 25AA).

Governance arrangements

As the control agency for COVID-19 in South Australia, SA Health is responsible for the planning and implementation of quarantine requirements. To be successfully implemented this requires a coordinated approach and to support SA Health a State Control Centre Health (SCCH) has been established with participation from emergency services, SAPOL, health professionals, private sector and local government.

As the SA Policy Commissioner is the State Coordinator under the EM Act, SAPOL leads the instruction of drafting of legal directions under this Act taking into consideration the public health advice and other relevant factors.

To support the planning and development of quarantine arrangements, an Effective Quarantine Workstream has been established within SA Health as part of SA Health's COVID-19 response structure to provide advice on systems and controls for the provision of high quality, safe and sustainable quarantine arrangements[36].

[36] A schematic for South Australian governance arrangements was not available.

Northern Territory

Legal overview

The Chief Health Officer has mandated that various people are required to quarantine in a specified place as determined by the Chief Health Officer. In most cases, this is one of the two government-designated facilities in the Northern Territory. The people required to quarantine are; people who enter the Northern Territory from a place outside of Australia; people who enter the Northern Territory from another State or Territory who in the previous 14 days were either in a place from outside Australia or in a COVID-19 hotspot and people who refuse to make a declaration required under the Direction (covering inter alia where they have been and where they intend to stay).

The requirement to be quarantined is mandated through the COVID-19 Directions (No. 49) 2020 Directions for Territory Border Restrictions, as amended by Directions No.50 2020 – Directions for Freight Workers). The Directions are made under section 52 of the Public and Environmental Health Act 2011, in exercise of the Chief Health Officer's powers to take actions considered necessary, appropriate or desirable, to alleviate a public health emergency declaration. The Act specifically provides that the Chief Health Officer may take action to segregate or isolate persons in an area or at a particular place, prevent persons accessing or entering into an area of a particular place, or require people to undergo medical examinations.

The Chief Health Officer is responsible for exemptions to the requirement to quarantine in government-designated facilities. This includes exemptions granted by the Chief Health Officer to a person who has been in a place outside of Australia and had not been in an area that at the time of their entry into the Northern Territory, was a designated COVID-19 hotspot (Direction 28). The Chief Health Officer must be satisfied that the person poses a minimal risk to the public health of the Territory and has a compelling reasons to justify the exemption, such as; essential workers, that they may suffer an unusual, undeserved or disproportionate impact of being quarantined or the person is governed by a COVID-19 management plan imposed by the employer to prevent the transmission of COVID-19 to the public. This exemption provision is only valid while the person is in the Northern Territory. The Chief Health Officer (NT) does not have jurisdiction to provide an exemption to a person outside of the Northern Territory.

Other exemptions prescribed by the Chief Health Officer include freight/transport services (as per Directions No.50), maintenance/repair of critical infrastructure or health practitioners requested to enter the Territory (Direction 29 of Directions No.49). Flight crew have an exemption in place (Directions 26-27 of Directions No.49).

People must quarantine in a place specified by the Chief Health Officer and as directed by authorised officers. Authorised officers include the Chief Health Officer, persons appointed by the Chief Health Officer (subject to CHO being satisfied that the person holds qualifications, knowledge, skills or experience), and police officers exercising or purporting to exercise powers/functions under the Act.

Persons are released from quarantine following completion of 14 days (excluding day of arrival). However if they have been in a declared hotspot within the last 14 days but then spent time in an area that is not a hotspot immediately before crossing the NT Border, that time is deducted from their 14 days in quarantine.[37]The Chief Health Officer can direct people to undergo COVID-19 testing conducted by an authorised person or another person approved by him. If that direction is refused then the person must remain quarantined for an additional 10 days.

[37] For example, if they were in an area that is not a declared hotspot for 5 days immediately before crossing the NT border, those 5 days will now be counted as part of the required 14 day quarantine period. This means they will be required to quarantine for 9 days in the NT.

Police officers who are authorised officers under the Act can assist the Chief Health Officer by any means that the Chief Health Officer considers necessary, appropriate or desirable, to ensure compliance with directions he made (COVID-19 Directions (No. 5) 2020 Assistance of Police Officers).

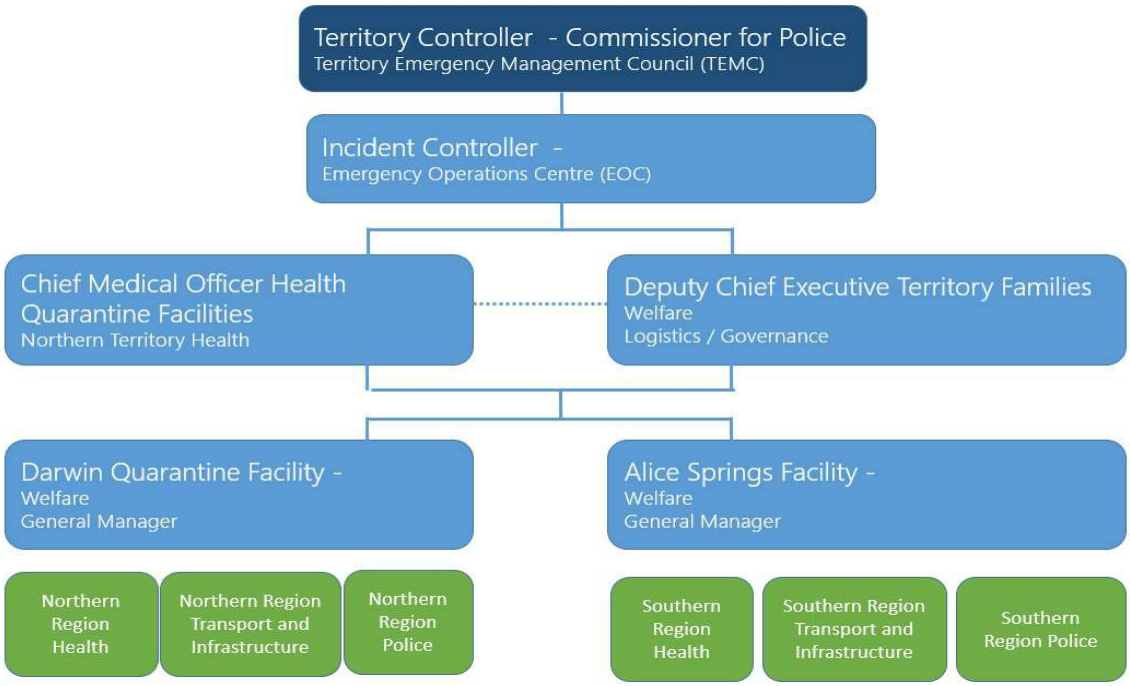
If a person contravenes a direction made by the CHO under section 52(1) of the Public and Environmental Health Act, the person may be found to have committed an offence under section 56 of the Act. The maximum penalty that may be imposed by a court is 400 penalty units ($63, 200). A Defence is available if there is a reasonable excuse. On-the-spot fines of $5,056 can also be issued.

Available remedies include common law judicial review and complaint to the Ombudsman. Excluded remedies include interlocutory orders staying operation of emergency powers (s 57, cf. s 109(4)) and remedies against certain people exercising functions under the Act in good faith (subject to the Police Administration Act 1978). This does not affect the Territory's liability (s 131).

The fees for hotel quarantine are $2500 for an individual for 14 days, with a family rate of $5000 for family groups of two or more people in shared accommodation. A daily rate will be applied to those who are not required to quarantine for the full 14 days ($175 for an individual and a family rate of $350 per day). An additional 10 days of quarantine is required if a test is refused and will cost $1750 for an individual or $3500 for a family. Australian residents with a low income may be eligible for a reduced quarantine fee of $1250 per person or $2500 for a family of two or more people. Low income threshold is $52,706 (singles) and $68894 (families). In the case of an unaccompanied minor the fee is $1250 and the accompanying adult does not get charged.

Governance arrangements

The Commissioner for Police is the Territory Controller and the lead of the operation. He works closely with the Chief Medical Officer Health Quarantine Facilities who provides the lead on infection control and medical support, while the Deputy Chief Executive of Territory Families is responsible for the lead on welfare and logistics.



Australian Capital Territory

Legal overview

The Chief Health Officer has mandated a requirement to quarantine in a government-designated facility if someone arrives in the ACT following a flight from outside Australia. The requirement to be quarantined is mandated through the Public Health (Returned Travelers) Emergency Direction 2020 (No 7).

This Direction is made under section 120 of the Public Health Act 1997, in exercise of the Chief Health Officer's powers to issue directions necessary or desirable to alleviate a specified emergency. The Act specifically provides the Chief Health Officer with powers to require people to move away from or to a specified area, to remain in a specified area, and to undergo a medical examination. In some circumstances, people arriving in the ACT from Victoria may be required to quarantine in government-designated facilities (Public Health (COVID-19 Interstate Traveler) Emergency Direction 2020.

The Chief Health Officer is responsible for exemptions from the requirement to quarantine in a government-designated facility and includes exemptions such as; previous 14-day quarantine in another jurisdiction, unaccompanied children (reside in premises), international flight crew, air ambulance or medevac crew, and consular staff (with risk mitigation guidance).

The Chief Health Officer or authorised officers (person authorised by the Chief Health Officer) approve the facilities in which a person can be held. A doctor appointed by the Director-General of the ACT Health Directorate can clear someone for release from quarantine after 14 days, if the person has been COVID-19 tested. Otherwise, the person will be released after an additional period of quarantine up to 10 days or until they return a negative COVID-19 test.

An authorised officer (police officer, member of the ambulance service or other person authorised by the Chief Health Officer) is able to exercise appropriate powers and assistance that is reasonably necessary. They can also require someone to provide identification and take all reasonable steps to ensure compliance with such a request.

Individuals that fail to comply with the public health direction can be issued with an infringement notice for which the penalty is $1,000, or charged with an offence for which the maximum penalty is $8,000.

Judicial review under the Administrative Decisions (Judicial Review) Act remains open to affected persons, as does the ability to lodge a complaint to the Human Rights Ombudsman. Public Health Emergency Directions and decisions pertaining to the administration of such decisions are not reviewable by the ACT Civil and Administrative Tribunal, and there is no right to compensation for loss or damage done in the exercise of a function under the Public Health Act under a COVID-19 declaration (apart from control or disposal of property)

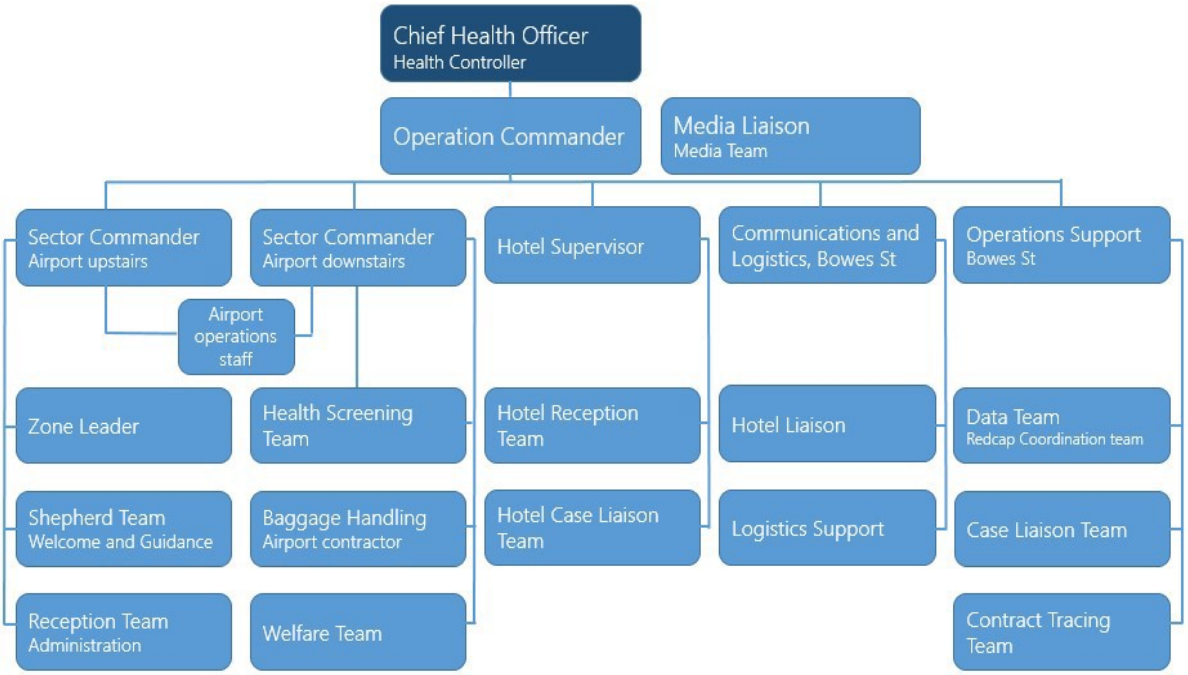
Costs of hotel quarantine were initially met by the ACT Government. However, since 14 August 2020 persons in quarantine are now subject to fee under the Public Health (Quarantine Fees) Determination 2020.

Governance arrangements

ACT Health is the lead agency in responding to the Public Health Emergency, and the Chief Health Officer is the Health Controller with overall responsibility for the health response and quarantine arrangements. The nominated Operation Commander has direct responsibility for quarantine operations, and reports directly to the CHO. The Chief of Police leads quarantine compliance activity reporting through to the CHO.

The ACT's Hotel Quarantine System is a low volume Hotel Quarantine System, although ACT also runs a larger Home Quarantine System in parallel.

The ACT has adopted a holistic philosophy towards hotel quarantine with a strong emphasis on the mental and physical wellbeing of returnees in quarantine. This approach has been used to ensure the experience for the quarantining person is acceptable while also reducing the likelihood of a breach of quarantine.



Tasmania

Legal overview

The Police Commissioner, in his role as State Controller[38], has mandated that people arriving into Tasmania must quarantine in government-designated accommodation. This includes those who; do not have a Tasmanian residential address, are displaying COVID-19 symptoms, have been overseas or disembarked a cruise ship within the previous 14 days, have COVID-19, are a close contact with a COVID-positive person, or have been in an affected area or premises.

The primary requirement is mandated under the Directions in Relation to Persons Arriving in Tasmania (General). However there are a separate set of requirements, titled Directions in Relation to Persons Arriving in Tasmania from Affected Regions and Premises that apply to people who have arrived in the State from Affected Regions and Premises which have a higher risk of COVID. These directions are made in exercise of the State Controller's powers under section 40 of the Emergency Management Act 2006. Section 40, inter alia, enables the State Controller to authorise the exercise of emergency powers if they are satisfied that there is an emergency or threat of emergency occurring in Tasmania. This means that there are reasonable grounds to exercise those powers to protect people from distress, injury or death. Authorisations can be made irrespective of whether a State of Emergency has been declared.

Schedule 1 specifies the emergency powers that can be exercised, including to;

- prohibit, direct, regulate or limit the movement of persons into, within or out of Tasmania, any area in Tasmania or any premises,
- require any person to answer any question asked by an authorised officer or provide any document or other information required, or
- give directions to, and make requirements of, a person as necessary or practicable, for the purposes of exercising emergency powers.

Schedule 2 specifies special emergency powers that can be exercised if a State of Emergency is declared, including to;

- direct the resources of the State and any council or other person be made available for emergency management, and
- requiring the owner or person in charge of resources to surrender them and place them under the control of any person in emergency management, and
- take such other action as the State Controller or Regional Controller considers appropriate.

The State Controller has prescribed various exemptions from the requirement to quarantine in government-designated facilities including; unaccompanied minors, those with a Tasmanian address who have not travelled from an affected area, and those entering Tasmania for essential work purposes related to national and state security and governance (eg: on duty military personnel); health services; transport, freight and logistics; specialist skills critical to maintaining key industries or businesses; paramedics and ambulance officers; police officers and any other persons approved by the State Controller such as on compassionate grounds. In relevant cases, expert advice and recommendations are considered in making essential traveler decisions.

[38] On 7 September 2020 the State Controller delegated all his functions and powers under the Emergency Management Act 2006 and any other Act to the Deputy State Controller for the purpose of carrying out functions and powers relating to the emergency management response to the COVID-19 pandemic. The Deputy State Controller is the Deputy Commissioner of Police.

The quarantine accommodation facility is specified by an authorised officer who is authorised by the State Controller. Police officers are authorised officers. Biosecurity Tasmania officers have also been authorised by the State Controller to exercise powers in relation to specifying quarantine facilities.

Authorised officers or persons assisting and under direct supervision of an authorised officer may use such force as is reasonably necessary (s 52). Police officers can use reasonable force as necessary to arrest a person where the officer reasonably believes that a person is committing, has committed or is about to commit, an offence against s 60 of the Act (including failing to comply with a lawful requirement or direction of an emergency management worker) (s 60B).

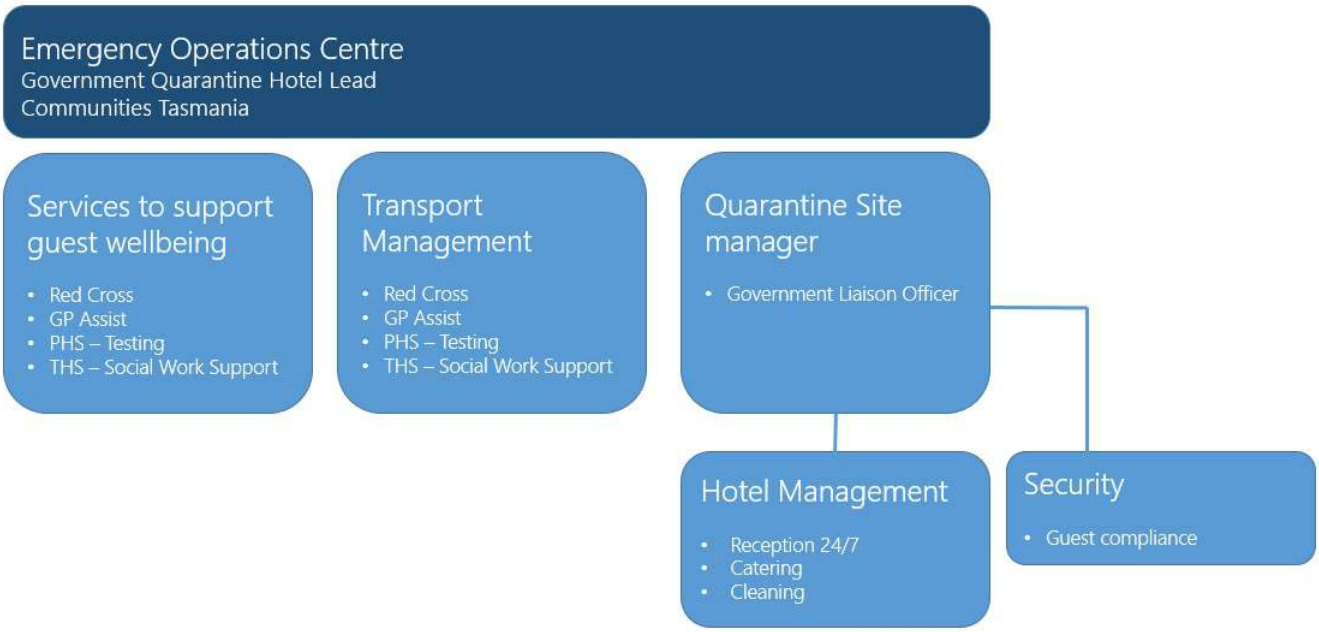
The courts can issue fines of up to $17,200 or 6 months imprisonment. Police can issue on-the-spot fines of $774. Available remedies include judicial review and complaint to Ombudsman. Excluded remedies include a merits review.

Fees for hotel quarantine are $2,800 for an adult, $1,000 for each additional adult, and $500 for each child over the age of three years. The fee is capped at $4800. People can make application for a fee waiver or reduction on the grounds of financial hardship, compassionate or medical reasons for travel and exceptional circumstances that would make it unreasonable or unfair to pay fees.

Governance arrangements

On 19 March 2020, the Premier of Tasmania declared a State of Emergency under the Emergency Management Act 2006, and the State Emergency Management Controller (State Controller) began co-ordination of the whole-of-government activities.

On 28 March, the Premier announced the State Controller's Direction that from midnight Sunday 29 March any non-essential traveler arriving in the state either through airports or through ferry ports will be placed into quarantine for 14 days in a government-run facility.



Attachment D – Domestic Legal Framework

Commonwealth

Commonwealth biosecurity legislation and State and Territory public health and emergency response laws provide a legislative framework to underpin the domestic actions that have been taken in response to the COVID-19 outbreak.

The Commonwealth Constitution contains only one specific power which directly relates to public health[39]; the power to make laws in relation to quarantine, which are typically enacted through the Commonwealth Biosecurity Act 2015. The quarantine power may be exercised concurrently with the States and Territories.

States and Territories

States and Territories have legislative powers that enable them to implement biosecurity arrangements within their borders and that complement Australian Government biosecurity arrangements. They also have a broad range of public health and emergency response powers available under public and emergency legislation for responding to public health emergencies. Consequently the breadth of legislation made in respect of COVID-19, the core requirement for various categories of people to be held in hotel quarantine, and the requirements imposed on them while they are in quarantine are made and enforced at the State or Territory level.

In most jurisdictions, the legislative framework used to regulate hotel quarantine requirements is triggered upon the declaration of a 'state of emergency' (or similar). In the two jurisdictions that do not specifically require some kind of declaration (NSW and Tasmania), the relevant decision maker must still be satisfied that there is a 'public health risk' or an 'emergency' warranting the exercise of the relevant powers. In most jurisdictions, reliance has been framed on the general emergency management framework that has already been legislated. In the case of Queensland and South Australia, however, the legislative framework is wholly or to a significant extent built on powers specifically conferred for dealing with COVID-19.

Exercising Powers

Jurisdictions adopt a range of approaches to authorising officials to exercise powers in respect of the hotel quarantine requirements. In some instances there is a level of specificity around who can exercise powers under the relevant directions or orders, or specific powers. This may be explicitly stated or indicated through notes in the relevant directions or orders.

Often reference is often made to 'authorised officers' as empowered under enabling legislation. In some instances, these personnel are specified or traceable, in other cases the discretion is conferred broadly (sometimes guided by particular criteria or requirements) or relies on authorisations being made that are not always readily visible (whether such authorisations have been issued or who those authorisations have been conferred to).

[39] The Commonwealth also has powers for various medical benefits. The Commonwealth may also have recourse to other constitutional heads of powers (e.g. in relation to external affairs and immigration and emigration) to achieve public health

Attachment E – COVID-19

In December 2019, China reported cases of a viral pneumonia caused by a previously unknown pathogen that emerged in Wuhan, a city of 11 million people in central China. The pathogen was identified as a novel (new) coronavirus (recently named Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)), which is closely related genetically to the virus that caused the 2003 outbreak of Severe Acute Respiratory Syndrome (SARS). SARS-CoV-2 causes the illness now known as Coronavirus disease 2019 (COVID-19)[40].

Due to heightened and growing global concerns around the pandemic potential of COVID-19, on 30 January 2020 the World Health Organisation (WHO) declared the outbreak of COVID-19 as a Public Health Emergency of International Concern (PHEIC). The WHO declared COVID-19 a Pandemic on the 11th of March 2020. The virus has now spread widely around the world, and did so within a few months of being first reported in China.

COVID-19 spreads readily from person to person. All major authorities (CDC in the US[41] WHO in Geneva[42] and the Australia Government[43]) have the view that current evidence suggests the transmission of COVID-19 is predominantly by respiratory droplets, as opposed to aerosols. Aerosols carrying virus are produced by people with COVID-19 and can cause infections; however, they are unlikely to be a major factor in transmission unless produced in large numbers, for example during some medical procedures. COVID-19 is also spread by fomites, making hand hygiene washing, and in some circumstances the use of gloves, important components of infection prevention and control.

Droplets appear to be the main way that most respiratory pathogens spread. The most effective way to stop the spread of COVID-19 is to prevent or reduce the spread of droplets from person to person. Interventions that likely will be very effective are; physical distancing, the use of appropriate Personal Protective Equipment (PPE), especially facemasks and face shields in higher risk situations, hand hygiene, although this has a lower impact owing to the nature of COVID-19 transmission, keeping away from others who are sick with respiratory symptoms, isolating when feeling unwell, isolation of confirmed infections, and closing international borders from countries/regions with high prevalence of infections.

Laboratory tests for COVID-19 aim to detect the causative virus, SARS-CoV-2, or an immune response to SARS-CoV-2. Since COVID-19 is a recent emerging viral infectious disease, evidence available is more limited to assess the accuracy and clinical utility of all available COVID-19 tests. Available evidence mainly comes from symptomatic patients, and therefore the reliability of COVID-19 tests for detecting asymptomatic carriers is less clear.

The indications (reasons) for conducting a COVID-19 test have changed through the course of the pandemic. The current testing criteria can differ between each State and Territory, but for people with symptoms, generally includes some of these; fever; respiratory symptoms such as cough, sore throat, shortness of breath and/or other symptoms such as; runny nose, headache, muscle or joint pains, nausea, diarrhoea, vomiting, loss of sense of smell, altered sense of taste, loss of appetite and fatigue.

The three main types of SARS-CoV-2 tests are:

[40] https://www.who.int/news-room/detail/29-06-2020-covidtimeline

[41] https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/how-covid-spreads.html

[42] https://www.who.int/news-room/commentaries/detail/modes-of-transmission-of-virus-causing-covid-19-implications-for-ipc-precaution-recommendations

[43] https://www.health.gov.au/news/health-alerts/novel-coronavirus-2019-ncov-health-alert/what-you-need-to-know-about-coronavirus-covid-19

1. Nucleic acid PCR detection tests - to detect SARS-CoV-2 viral (Ribonucleic acid) RNA;
2. Rapid antigen tests - to detect antigen viral proteins from the SARS-CoV-2 virus; and
3. Serology tests - to detect antibodies (IgM and/or IgG) against SARS-CoV-2.

Polymerase Chain Reaction (PCR) tests detect SARS-CoV-2 RNA. Most of these assays typically take several hours (including specimen processing time) to generate results and require complex laboratory equipment and trained technicians. There are now some instruments available that can be used outside of a laboratory. These systems can provide quicker results, but cannot do as many tests at once as in a laboratory. PCR tests are currently considered to be more sensitive than antigen testing for detecting early infections. Serology is much less reliable in detecting early infections.

Rapid antigen tests intended for use at the point-of-care detect the presence of viral proteins from SARS-CoV-2 and have been used in the diagnosis of a SARS-CoV-2 infection in a symptomatic patient. COVID-19 antigen tests are generally intended for use with nasopharyngeal, throat or nasal swabs and testing should be performed by health professionals in accordance with the manufacturer's instructions for use.

While rapid antigen tests can provide a result within 15-30 minutes, they are generally considered to be less sensitive than a PCR test which is still currently the gold-standard in SARS-CoV-2 diagnosis. There are marked differences in performance with different antigen kits and many in the past have had poor performance. However, more recently rapid antigen tests with much better performance are becoming available.

Serology tests detect antibodies to SARS-CoV-2 from blood samples. These tests look similar to common pregnancy tests and results take about 15–30 minutes. However Antibodies can take up to two weeks or more to become detectable in blood after infection with SARS-CoV-2. While IgM antibodies develop earlier than IgG antibodies, there is still a delay of many days after infection before IgM antibodies develop. IgG antibodies take even longer to develop. So consequently serology testing generally provides historic information about viral exposure and are not very useful in diagnosing active infections. They can however indicate whether an individual has past exposure to SARS-CoV-2.

Current clinical management of COVID-19 cases focuses on early recognition, isolation, appropriate infection control measures and provision of supportive care[44]. There is no specific antiviral treatment currently recommended for patients with suspected or confirmed COVID-19 and there is currently no safe vaccine. As such, most of the principles underpinning successful interventions relate to isolation and social distancing.

[44] https://www1.health.gov.au/internet/main/publishing.nsf/Content/novel_coronavirus_2019_ncov_weekly_epidemiology_reports_australia_2020.htm

Attachment F – Definition of good practice

Planning and Preparedness

Governance and multidisciplinary approach is the existence and application high level Governance arrangements in addition to incident control governance structures and mechanisms for managing hotel quarantine. Governance and incident control are underpinned by emergency management principles which enables good accountability, decision making, escalation pathways and line of sight for operations.

Pre-flight information is the availability and accessibility of information about hotel quarantine as early as possible in the system; ideally prior to boarding an aircraft, including on Commonwealth, State and Territory websites.

Information should be comprehensive, easily accessible, meet web-accessibility guidelines and be available in several languages, and should be located with minimal navigation.

Operational briefing may be referred to as a 'toolbox' briefing or 'huddle'. Good practice includes preparatory, comprehensive, situational information relative to all agencies participating in the airport arrivals process and processing of passengers through transfer and check-in, including command structure and how staff/officers/members should navigate any uncertainty.

Airport arrival should be a well-coordinated disembarkation and processing through the various agencies operating in the environment. Agencies are well integrated and operating seamlessly with one another. Strong IPC practices with due regard for environmental risks will be evident and the process should be mindful of the customer experience.

Transfers is how travelers are moved from the arrivals process through to and including transport to the hotel. Features of best practice include proper marshalling, appropriate PPE and handling of luggage, timeliness of transfer (that is, travelers are not confined to a bus for a long period of time) and appropriate distancing.

Transfers extends to the management of transit passengers through and in airports and, where relevant, into and from hotel quarantine.

Hotel check-in is the process and expediency for arrivals at the hotel including offloading from buses, transit through the hotel foyer and into hotel accommodation. Strong IPC practices will be evident and due regard for environmental risks.

Hotel Quarantine Framework

Strong end to end IPC incorporates proper IPC practice applied throughout the entire hotel quarantine process. Standard IPC precautions include hand and respiratory hygiene, the use of appropriate PPE, safe waste management, proper linens, environmental cleaning, and sterilization of patient-care equipment. Implementing

standard precautions as a first-line approach to IPC minimises the risk of transmission of infectious agents from person to person, even in high-risk situations.

Strong IPC is commensurate with environmental risks should be evident during the all stages of the hotel quarantine process and in the hotel environment.

Comprehensive IPC training is regular and as-needed face to face training including demonstrations of correct donning and doffing and disposal of PPE and environmental cleaning practices. Ideally training is competence based.

Assurance processes include scheduled and/or random compliance checks by appropriately qualified IPC experts. Good practice demonstrates the use of IPC practitioners to audit IPC practices, and treatment plans for rectification of identified issues. Assurance processes should be incorporated as a regime for organisational improvement.

Case management/data integration is the integration of various records pertinent to a hotel quarantine guest's quarantine period. Data integration should reflect good case management supported by ICT infrastructure. Data should be accessible to relevant parties and accurately capture an individual's hotel quarantine journey.

Clinical overlay is the presence, physical or virtual, of clinical supervision and treatment for hotel quarantine guests. Clinical overlay is cognisant of the duty of care responsibilities that are inherent in the hotel quarantine system and should be applied conscious of the risks posed by failures to identify all health needs of travelers. Good practice also includes pathways for escalation and evidence of clinical governance structures. The level of clinical overlay and strong clinical governance structures evident in the system provides additional assurances.

Testing includes testing early in the hotel quarantine period and on approaching exit. Typically occurring at the 2 and 11 day mark and largely in line with national guidelines.

Exemptions and leave is evidenced by a robust decision making framework, clear lines of accountability and role definition as it pertains to temporary (leave) or permanent exemptions from quarantine. The framework should document how and when decisions are made about who is exempted from quarantine, how risk has been considered and applied in the approach and escalation or appeal pathways.

Risk strategies is the existence and application of an overarching risk policy statement or similar regarding the risk appetite for the hotel quarantine process. Successful hotel quarantine models are hallmarked by and strong coordination of all components within the Hotel Quarantine System, clear lines of accountability and ownership of risk.

Risk strategies should be supported by statements, frameworks and/or matrixes that identify the range of environment and system risks associated with hotel quarantine including how risk controls are captured, applied and measured.

Hotel infrastructure is the environment or physicality of the hotel/quarantine venue insofar as it supports the wellbeing of hotel quarantine guests. Hotel infrastructure should enable access to open spaces and fresh air independently (that is, without escort).

Procurement

Supervision of contracts is evidenced by strong administration processes and accountability structures to manage external service provider contracts. Documented contractual management and oversight will be evident.

Procuring hotels is well documented decision making, including relevant tender or single select, or similar, processes under standard government procurement processes or under powers associated with state emergency/public health legislation.

Quality of hotels is the variation in hotel type within a local region. Hotels should be of similar quality and rating for the regional context.

Health, Mental Health and Wellbeing

Health screening is a comprehensive health and wellbeing assessment to identify all health needs of returned travelers. Health screening is proper health assessment to ensure that the amount of intervention and clinical input needed is properly determined in order to manage risk and ensure proper care.

Good practice health screening is not limited to whether a traveler is symptomatic for COVID-19 and should include assessments for any mobility or cognition issues, comorbidities, mental health concerns, drug and/or alcohol health issues, pregnancy including any high risk indications, or any other issue that may affect someone's capacity to undertake or manage the hotel quarantine environment.

Health screening is relevant to clinical overlay.

Triage and placement is based on health screening to determine appropriate placement in hotel quarantine. Ideally triage results in appropriate placement in the hotel quarantine system that segregate COVID-19 positive and negative populations and that are commensurate to a hotel quarantine guests other health and wellbeing needs.

Mental health is the presence of assertive mental health screening and treatment available to hotel quarantine guests. Good practice includes assertive in-reach in a timely manner including administering mental health assessment tools. Ideally this is in-reach and undertaken on day one of hotel quarantine to identify immediate concerns, and with daily follow up with guests to identify emerging or escalating psychological distress, until guests decline further contact and/or support.

Mental health screening and support should not be reliant on the guest seeking out support and is relevant to clinical overlay.

Addictions is the evidence of screening for alcohol, nicotine and/or other drug issues. Ideally it is undertaken during the health screening process or shortly thereafter. On identification appropriate treatment plans, replacement therapies and counselling is available to hotel quarantine quests.

Vulnerable groups is the identification process and support available for people with, for example, a disability, cultural and linguistically diverse populations, the elderly and risk for falls, the availability of occupational therapy and other non-clinical support. This feature is relevant and complemented by good health screening and clinical overlay.

Customer Experience

Entertainment is the presence of engagement or entertainment activities, either in person with appropriate controls or through online platforms, which may include exercise, craft, trivia etc. Good operations are mindful of the need to provide hotel quarantine guests opportunities to engage in a 'structured day' and opportunities to establish a routine, both of which has been shown to be effective against mental fatigue, feelings of isolation, and vulnerability.

Food is the availability and reliability of quality meals delivered in a timely fashion and available for all dietary requirements. Good practice also entails unrestricted access to meal and/or grocery delivery services. It should not be limited to one a day; guests should be able to receive these as requested.

Community is the existence of online platforms in which hotel quarantine guests and their children can engage in facilitated conversations, share experiences and build a sense of community.

Support for parents is quarantine systems that recognise the challenges for parents with young children in the hotel quarantine environment. Good practice involves support for parents in the form of counselling, strategies and/or tools that may assist in managing children in the hotel quarantine environment.

This is particularly relevant for single parents and those with very young children, and ensuring there are opportunities for those parents to exercise self-care practices. This is distinct from mental health screening.

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Appendix 1 – Terms of Reference

Hotel Quarantine

National Cabinet agreed to a national review of hotel quarantine arrangements. The review will be undertaken by the former Secretary of the Commonwealth Department of Health, Jane Halton AO, in consultation with states and territories. AHPPC recommends, and National Cabinet has agreed, that a review should address:

- Infection prevention and control training (clinical, hotel and security staff)
- Compliance with infection prevention and control requirements (clinical, hotel and security staff)
- Evidence of community cases attributed to cases in international travelers in hotel quarantine (including cases in hotel and security staff)
- Rates of compliance with testing
- Legislative or contractual basis for mandatory testing
- Management of suspected and confirmed cases
- Provision and effectiveness of support services (medical, mental health, social services, financial support)
- Management of vulnerable people
- Management of cultural diversity
- Logistics arrangements
- Administrative arrangements
- Changing capacity requirements related to changes in border restrictions

States and territories are moving toward a model of charging for hotel quarantine. Further details will be provided by states and territories in the coming days, with National Cabinet agreeing to work toward a uniform model across the country.

Queensland Human Rights Commission

Hotel quarantine

Unresolved complaint report under section 88 *Human Rights Act 2019*

15 October 2020

For public release

Introduction

1. The *Human Rights Act 2019* (Qld) (**HR Act**) creates obligations on public entities to act or make decisions in a way that is compatible with human rights, and give proper consideration to human rights when making a decision.[1] This means a public entity, through its acts and decisions, can only limit human rights to the extent that is reasonably and demonstrably justifiable.[2]

2. The Queensland Human Rights Commission (**Commission**) receives complaints from individuals alleging breaches of the HR Act by public entities for resolution through conciliation.

3. This report has been prepared by the Commissioner in relation to an unresolved human rights complaint in accordance with section 88 of the HR Act. It contains the:

   a. substance of the complaint;

   b. actions taken by the Commission to try to resolve the complaint; and

   c. details of action the Commissioner considers Queensland Police Service (**QPS**) and/or the Department of Health, as respondents to the complaint, should take to ensure its acts and decisions are compatible with human rights.

4. The QPS and the Department of Health were given an opportunity to make submissions in response to the recommendations contained in this report. The QPS's submissions by letter dated 9 October 2020 and the Department of Health's submissions by letter dated 12 October 2020 have been incorporated into this final report.

5. A copy of this report has been provided to all the parties, who must agree before it can be used in any proceeding in relation to a contravention of the HR Act.

6. It is intended that the Commissioner will publish this report under section 90 of the HR Act.

Substance of the complaint

7. The complaint was received on 10 August 2020. At that time, the complainant (**C**) had been in self-funded mandatory hotel quarantine for 5

[1] *Human Rights Act 2019* s 58.
[2] *Human Rights Act 2019* ss 8, 13.

days. C says she had been asking every day for ‘wellness walks’ as her room was small with no opening windows. C says she was aware that other hotels used for quarantine allowed time for fresh air every day.

8. C says that ‘police say it's Queensland Health that have to organise [the wellness walk]’ but when she called reception daily she was told they will get the police to call her back.

9. C says Queensland Health ‘rang and said they don’t deem it necessary for us to leave our rooms’. C says she was not provided a contact number, a full name, or an email address to follow these decisions up.

10. C alleges that ‘2 heavily armed police arrive[d] at our door to state that we knew we were coming to quarantine and this is what quarantine is we can't leave [our] room and why can't 'you people' just get it’.

11. C says she was ‘being treated like criminals without any regard for our mental health’.

12. The Commission was informed by C that she never left her room during her 14 days of quarantine.

13. C’s complaint was made against the QPS and the Department of Health.

14. In the Commission’s assessment, the complaint alleged a possible breach of the rights to recognition and equality before the law[3], humane treatment when deprived of liberty[4], and freedom of movement.[5]

Outline of response

15. The Department of Health provided a response to the complaint by email dated 24 August 2020.

16. The Department of Health says they were ‘advised that both Venue Health Managers and QPS staff attempted to engage with [C] from 08/08/2020 until 15/08/2020 in regards to facilitating a wellness walk however due to [C’s] behaviour they were unable to obtain the necessary information in order to determine if [C] qualified for a wellness walk and the verbal abuse received meant that this could not be offered at this time.’

17. The Department of Health says that ‘the State Disaster Coordination Centre has been and continue[s] to work closely with industry to identify appropriate hotel accommodation for those individuals in self-quarantine.

[3] *Human Rights Act 2019* s 15.
[4] *Human Rights Act 2019* s 30.
[5] *Human Rights Act 2019* s 19.

The increase in the number of people in self-quarantine with the introduction of mandatory hotel quarantine for persons travelling to Queensland from COVID-19 hotspots, has put additional pressure on accommodation resources.'

18. In relation to facilitating fresh air breaks, the Department of Health says:

> Moving people around in and out of quarantine, before the completion of 14 days, represents a transmission risk. The appropriateness of wellness breaks must be considered in this context as moving people in and out of quarantine may defeat our goal of isolating persons who may have COVID-19. To properly facilitate a wellness break would potentially put additional people at risk, including other guests, hotel staff and Queensland Government staff managing quarantine.
>
> Any consideration of alleged violation of human rights or allegations of deprivation of liberty in this instance must be considered through the lens of the current worldwide pandemic and the health response to minimise infection and death. The principle of isolation is to ensure that a person does not pass an infection on to another, or alternatively is infected by another person. The isolation is for their protection, and the protection of others. Offering 'fresh air breaks' is not a simple process. The person must be escorted to a safe outdoors area. All surfaces they come in contact with during this break must be cleaned after the break to minimise cross-infection risks. Personnel escorting the person (this is always two, either QPS or [Australian Defence Force] or a combination) must wear personal protective equipment (PPE) to minimise the risk that they may be infected, however it is noted that this minimises but does not completely eliminate this risk. A fresh air break is a resource intensive exercise.
>
> It is simply not within the scope of available resources to offer external fresh air breaks to all who may want them, and therefore these breaks have been facilitated on a needs basis.

19. Further submissions made by the Department of Health and the QPS are referred to later in this report.

Actions taken to try and resolve the complaint

20. Under section 65(1) of the HR Act, C is required to wait 45 business days after making an internal complaint with the QPS and Department of Health before lodging a human rights complaint with the Commission. The Commissioner waived this requirement because C may have been deprived of the opportunity to obtain an effective remedy by waiting for the 45 business days to elapse.

21. The Commission attempted to resolve the complaint between the parties through early intervention by:

a. making enquiries of the parties;

b. discussing the complaint with each of the parties;

c. receiving a written response to the complaint from the Department of Health and providing a copy to C for her consideration; and

d. conducting conciliation through negotiations.

22. C remained unsatisfied with the information provided to her by the respondents.

Discussion and recommendations

Hotel quarantine

23. The Department of Health provides the following background in relation to hotel quarantine:

> Self-quarantining in approved government accommodation is seen as the least restrictive option in balancing the effects of COVID-19 transmission to the wider community.
>
> The Commonwealth Government announced that as at 23:59 pm 28 March 2020, those arriving from international travel must be quarantined in state government accommodation for 14 days in whichever state their international flight arrives. The Commonwealth Government's public health response to this pandemic, which is supported by Queensland, is to require travellers to enter Quarantine accommodation as opposed to the strategies of herd immunity or community lockdown.
>
> The responsibility of transport, accommodation, compliance and primary health care to these travellers was delegated to State Governments for the duration of their quarantine period. On 28 March 2020, the Chief Health Officer of Queensland issued a Direction for persons arriving in Queensland from overseas, and updated on 7 April 2020, referred to as the Self-quarantine for persons arriving in Queensland from overseas Direction (No.2).

24. As at the date of this report, people travelling from overseas continue to be subject to quarantine in nominated premises under the Chief Health Officer's *Self-quarantine for Persons Arriving in Queensland From Overseas Direction* (No. 5, 8 July 2020). The requirement to quarantine in nominated premises has expanded, since 3 July 2020[6], to include certain people travelling to Queensland from within Australia. This is currently

[6] See Chief Health Officer, *Border restrictions Direction* (No. 6, 3 July 2020)

provided for by the Chief Health Officer's *Border restrictions Direction* (No. 15, 1 October 2020). Under the Directions, a person must not leave the nominated premises for 14 days except in certain circumstances, including if permitted under a direction given to the person by an emergency officer appointed under the *Public Health Act 2005*.[7] 'Nominated premises' include government-nominated accommodation such as a hotel.[8]

25. The QPS says that it commenced Operation Sierra Cottonwood to respond and give effect to the Chief Health Officer's Directions and works with a wide range of government agencies, non-government agencies and local councils to achieve its role. The QPS confirms that QPS officers appointed as emergency officers under the *Public Health Act 2005* have been requiring persons who arrive in Queensland from overseas to self-quarantine in nominated premises in accordance with the Chief Health Officer's Directions. The primary responsibility of QPS officers at quarantine hotels is to provide a security presence with support from the Australian Defence Force and Protective Service Officers to ensure quarantined persons do not leave the designated hotel or their room. The QPS notes that while the Directions do not expressly provide for fresh air breaks and wellness walks, 'the QPS has been cognisant of the human rights aspects of quarantine and has implemented arrangements for fresh air breaks and wellness walks, where operationally viable.' This is reflected in the QPS Operation Cottonwood Procedures Manual.

26. People subject to hotel quarantine, therefore, are in the control of the Queensland Government and reliant upon the government to have their needs met. Correspondingly, the government has a responsibility to meet those needs; the HR Act provides a framework against which to measure the scope of that responsibility.

27. This complaint raises the issue of whether C has a right to regular access to fresh air while in hotel quarantine. The windows of the hotel room did not open and she was not given a fresh air break from her room, despite daily requests. There is disagreement between the parties about the reasons why C was not given a fresh air break and C in particular disputes allegations made about her behavior. The Commissioner has not considered it necessary to determine these disputed facts for this report.

[7] Chief Health Officer, *Self-quarantine for Persons Arriving in Queensland From Overseas Direction* (No. 5, 8 July 2020) [6b]; Chief Health Officer, *Border restrictions Direction* (No. 15, 1 October 2020) sch 2 - Quarantine requirements [1c].
[8] Chief Health Officer, *Self-quarantine for Persons Arriving in Queensland From Overseas Direction* (No. 5, 8 July 2020) [20]; *Border restrictions Direction* (No. 15*,* 1 October 2020*)* [43].

Humane treatment when deprived of liberty

28. Section 30 of the HR Act provides:

> (1) All persons deprived of liberty must be treated with humanity and with respect for the inherent dignity of the human person.
>
> …
>
> (3) An accused person who is detained or a person detained without charge must be treated in a way that is appropriate for a person who has not been convicted.

29. The right creates a positive obligation on public entities to treat persons in detention with humanity and respect for dignity, and complements the prohibition on torture and cruel, inhuman or degrading treatment[9], although the latter is a more general protection for all people against the worst forms of conduct.[10]

30. To assist with the interpretation of rights, the HR Act provides that regard can be had to international law and the judgments of domestic, foreign, and international courts and tribunals.[11] This includes international human rights treaties, such as the *International Covenant on Civil and Political Rights* (**ICCPR**), and General Comments published by the Human Rights Committee, a body of independent experts who monitor the implementation of the ICCPR by its State parties. General comments provide the Human Rights Committee's interpretation of provisions of the ICCPR. Standards and advice prepared by United Nations agencies and other human rights treaty bodies can also provide guidance.

31. Section 30 of the HR Act is modelled on articles 10(1) and 10(2)(a) of the ICCPR, but also 'expands on article 10 by requiring certain treatment of an accused person or a person who is detained without charge under subclause (3)'.[12] General Comment No 21 makes clear that article 10 applies to anyone deprived of liberty by the State, and provides a non-exhaustive list of examples such as people held in prisons, hospitals, and detention camps.[13] It goes on to explain that the right protects people from any hardship or constraint other than that resulting from the deprivation of liberty.[14] Given the fundamental principles of humanity and dignity the right

[9] *Human Rights Act 2019* s 17.
[10] *Castles v Secretary to the Department of Justice* (2010) 28 VR 141; [2010] VSC 310, [99].
[11] *Human Rights Act 2019*, section 48; Explanatory Notes, Human Rights Bill 2018 31.
[12] Explanatory Notes, Human Rights Bill 2018 24-25.
[13] Human Rights Committee, *General Comment No. 21: Article 10 (Humane treatment of persons deprived of their liberty), 44th sess,* (10 April 1992) [2].
[14] Ibid [3].

protects, the General Comment states the application of the rule should not be dependent on the material resources available to the State party.[15]

32. Daily access to fresh air and one hour of outdoor exercise, as distinct from artificial ventilation, has long been regarded under international law as a minimum standard of treatment for people in correctional facilities.[16] During the COVID-19 pandemic, the Subcommittee on Prevention of Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment has published advice reinforcing the need to respect minimum requirements for daily outdoor exercise, within the limits of necessary public health measures, in detention settings such as prisons, immigration detention centres, closed refugee camps, psychiatric hospitals, and other medical settings.[17] The European Committee for the Prevention of Torture and Inhuman or Degrading Treatment or Punishment takes one step further by recognising the right of daily access to open air of at least one hour extends to 'newly-established facilities/zones where people are placed in quarantine.'[18]

33. The World Health Organization's interim guidance on *Considerations for quarantine of contacts of COVID-19 cases* (**WHO Interim Guidance**) was recently updated on 19 August 2020.[19] The guidance now clarifies that it is for the implementation of quarantine for people who have been in contact with known or probable cases of COVID-19. It was not drafted for a person in C's position, who was quarantined under Queensland's Public Health Directions as a traveller to Queensland from an area deemed to be a high risk of community transmission. Nonetheless, it details the WHO's recommendations on levels of ventilation with fresh and clean outdoor air needed for quarantine accommodation, encouraging natural ventilation (opening windows) at least in cases where quarantine is at home.

34. In relation to traveller quarantine, the WHO Interim guidance recommends that such measures be implemented 'based on a risk assessment and

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[15] Ibid [4].
[16] United Nations, *Standard Minimum Rules for the Treatment of Prisoners* (30 August 1955) r 11(a); *United Nations Standard Minimum Rules for the Treatment of Prisoners (the Nelson Mandela Rules)*, GA Res 70/175, UN Doc A/RES/70/175 (17 December 2015) rr 14(a), 23(1), 42.
[17] Subcommittee on Prevention of Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, *Advice of the Subcommittee to States parties and national preventative mechanisms relating to the coronavirus disease (COVID-19) pandemic*, UN Doc CAT/OP/10 (7 April 2020), [9(i)].
[18] Council of Europe, European Committee for the Prevention of Torture and Inhuman or Degrading Treatment or Punishment, *Statement of principles relating to the treatment of persons deprived of their liberty in the context of the coronavirus disease (COVID-19) pandemic* CPT/Inf(2020)13 (20 March 2020).
[19] World Health Organization, *Considerations for quarantine of contacts of COVID-19 cases: Interim guidance,* WHO/2019-nCoV/IHR_Quarantine/2020.3 (19 August 2020).

consideration of local circumstances'[20]. It also refers to the *International Health Regulations* (2005)[21] to which Australia is a party. Article 32 reiterates that:

> … State Parties shall treat travelers with respect for their dignity, human rights and fundamental freedoms and minimize any discomfort or distress associated with such measures, including by:
>
> …
>
> (c) providing or arranging for adequate food and water, appropriate accommodation and clothing, protection for baggage and other possessions, appropriate medical treatment, means of necessary communication if possible in a language that they can understand and other appropriate assistance for travelers who are quarantined, isolated or subject to medical examinations or other procedures for public health purposes.

35. At a minimum, international law and guidance supports a right of people in hotel quarantine to daily access to fresh air. If the State decides to limit this right then it needs to justify the limitation. The right is strengthened, and requires greater justification if limited, in cases where an individual's physical or mental health deteriorates as a result of limited access to fresh air. Health is a fundamental aspect of human dignity and a failure to provide adequate health services has been found to engage the right to humane treatment when deprived of liberty.[22] However, where conditions of detention interfere with a person's physical or mental health, it is not enough to respond with the provision of health services, when it is reasonably within the government's power to change the conditions causing the distress, and absent persuasive reasons not to.

Recommendations

36. Sections 88 and 90 of the HR Act authorises the Commissioner to publish details of action the Commissioner considers the respondent for a complaint should take to ensure its acts and decisions are compatible with human rights.

37. The Commissioner acknowledges the significant efforts of the Queensland government in responding to the COVID-19 pandemic. A human rights approach serves to enhance that response, by requiring proper

[20] Ibid 1.
[21] World Health Organization, *International Health Regulations* (3rd ed, 2005).
[22] *Castles v Secretary to the Department of Justice* (2010) 28 VR 141; [2010] VSC 310, [106], [108].

consideration of a broad range of relevant matters, and scrutinising restrictions against the values of a free and democratic society.

38. The Commissioner considers that the State of Queensland's failure to provide C with daily access to fresh outdoor air has limited her right to humane treatment when deprived of liberty. The HR Act requires that the government address that failing, unless it is able to demonstrably justify the limitation of C's rights. As noted by the Department of Health, this report has not considered whether there are other human rights of C that have been limited.

39. The HR Act provides a list of factors which may be relevant to whether a limitation is demonstrably justified. Those factors are:

> (a) the nature of the human right;
>
> (b) the nature of the purpose of the limitation, including whether it is consistent with a free and democratic society based on human dignity, equality and freedom;
>
> (c) the relationship between the limitation and its purpose, including whether the limitation helps to achieve the purpose;
>
> (d) whether there are any less restrictive and reasonably available ways to achieve the purpose;
>
> (e) the importance of the purpose of the limitation;
>
> (f) the importance of preserving the human right, taking into account the nature and extent of the limitation on the human right;
>
> (g) the balance between the matters mentioned in paragraphs (e) and (f).[23]

40. The Department of Health in its submissions acknowledges the importance of treating people in hotel quarantine with humanity and respect for their inherent dignity, but ultimately considers the importance of providing fresh air to people for the limited time they are in quarantine is outweighed by the need to have a hotel quarantine system in place in order to protect the Queensland community from the very real risks posed by COVID-19. Similarly, the QPS submits that 'the limitations being imposed are objectively reasonable given the nature, seriousness and potentially catastrophic consequences of the failure to effectively

[23] *Human Rights Act 2019* s 13(2).

quarantine as directed by the Chief Health Officer in the context of an unprecedented and rapidly evolving declared public health emergency.'

41. In the Commissioner's view, the legitimate purpose of protecting the Queensland community's right to life could be achieved while still providing those in quarantine with daily access to fresh outdoor air, for example, by only using accommodation that has opening windows or balconies for quarantine.

42. The Department of Health notes that under the Queensland State Disaster Management Plan, the District Disaster Management Groups (**DDMGs**) are responsible for planning and coordinating resources for disaster operations in their districts. The Department of Health has supported DDMGs to select suitable accommodation for hotel quarantine. Limitations faced by the DDMGs on the selection of appropriate hotels is outlined as follows:

> The purpose of selecting the hotels which were selected was to quickly develop capacity to quarantine return travellers in the context of a global pandemic, taking into account a wide range of factors, including: location, proximity to healthcare, length of time needed, room types, facilities, transportation, privacy, security, the availability of common areas for occupants, catering arrangements, availability, and consent of owners. Ultimately, the purpose behind the rapid rollout of hotel quarantine was to reduce the risk of importing COVID-19 into Queensland.

43. In response to a proposed recommendation that all quarantine hotels have, as a minimum standard, opening windows or a balcony, the Department of Health says:

> The draft report recommends that hotels only be selected which have open windows or a balcony. The difficulty with requiring that as a hard rule is that there is a shortage of hotel supply. Taking into account all the other requirements for selecting hotel quarantine, it is simply not possible to only select hotels with opening windows or balconies. Adopting that rule would mean that there are fewer quarantine beds than needed. In this context, Queensland Health disagrees with the proposed finding in [24] of the draft report that protection from hardship or constraint does not depend on availability of material resources. While this obviously applies in the context of prisons, hospitals and detention camps, Queensland Health submits this does not apply in emergent short-term situations where there is limited capacity to increase accommodation infrastructure to cater for an influx in accommodation available for quarantine, even if resources would permit this in the long or medium-term. Accordingly, Queensland Health submits that a hard rule of the kind proposed in

the draft report would not be a reasonably available alternative way to achieve the purpose. Queensland Health nonetheless acknowledges that hotels with opening windows or balconies should be selected over others, all else being equal.

44. With respect, having regard to the time that has passed since the start of hotel quarantine measures and the expectation that this will continue into the foreseeable future, there needs to be more progress to ensure hotels used for quarantine are appropriate to satisfy the government's obligations, under section 58 of the HR Act, to treat individuals there quarantined with humanity and respect for their inherent dignity. While acknowledging the complexities of hotel selection, the Commissioner recommends that opening windows or balconies be included as a minimum standard for the selection of hotels. Correspondingly, plans should be put in place to decommission currently used premises that do not meet these minimum standards.

45. Alternatively, the right to humane treatment when deprived of liberty may be fulfilled by the provision of fresh air breaks.

46. The Department of Health submits, and the QPS has not disagreed, that the QPS has primary responsibility for the operational aspects of the management of hotel quarantine, including fresh air breaks.[24] The QPS provides the following excerpt from its QPS Operation Cottonwood Procedures Manual, 'Officers are to be cognisant of the requirements for public entities to act and make decisions in a way compatible with human rights. With this in mind it is requested that where possible people are to be allowed outside of their rooms in to a suitable area (under escort) for comfort/smoke breaks.' It further says 'The frequency and length of fresh air breaks should consider the needs of the quarantined guest and the needs of other quarantined guests. (IE equity and consistency)'. The QPS says that its policy balances:

    - The contagious nature of the virus;
    - The recognition that persons travelling into Queensland from interstate or overseas are at a heightened risk of carrying the virus;
    - The need to contain the virus and reduce the risk of community transmission;
    - The need to ensure that the Qld health system is able to cope with infections;

[24] See also evidence given by Commissioner K Carroll, Queensland Police Service to the Health, Communities, Disability Services and Domestic and Family Violence Prevention Committee, *Public Hearing – Inquiry into the Queensland government's response to COVID-19 Transcript of proceedings* (19 August 2020), 21.

- The safety of members of the community and the preservation of life, particularly amongst particularly vulnerable groups including young children, the elderly, members of the indigenous community, and persons from culturally and linguistically diverse backgrounds;
- The needs of persons in isolation, including their safety;
- The length of the quarantine period (14 days);
- The legal obligation imposed upon the State of Queensland under the Work Health and Safety Act 2011 to provide a safe work environment;
- The right of those QPS officers called upon to interact with quarantine persons to be protected from a contagious and deadly disease;
- The effectiveness of PPE in reducing the risk of harm to such officers;
- Resource limitations.

47. QPS says it will facilitate fresh air breaks under this policy, however, where a quarantine hotel houses hundreds of people, limited resources means it is not possible to provide air breaks to everyone who wants them.

48. The Commissioner commends the efforts of the QPS and others involved in facilitating fresh air breaks in a way that ensures the safety of guests, hotel staff and Queensland Government staff, and minimises the risk of transmission of COVID-19 to the community. The Commissioner further acknowledges the operational challenges with facilitating fresh air breaks and that available resources may limit the ability to safely conduct fresh air breaks for everyone in hotel quarantine. What these issues and the circumstances of this complaint highlight is that compatibility with human rights would be best achieved through the selection of appropriate hotel accommodation as identified above. Given this recommendation, it has not been necessary to determine disputes of fact regarding why fresh air breaks in this particular case were not provided for this report.

49. Two further recommendations are made to ensure the government decides and acts compatibility with the human rights of people in hotel quarantine.

50. First, there is a need to better identify, for people in quarantine, the responsibilities of the many departments and other organisations involved in their care, and provide relevant contact details. For example, in relation to this complaint the Department of Health says that QPS attempted to ascertain C's eligibility for wellness breaks in accordance with its procedure but was unable to complete the procedure due to C's behavior. QPS appears to provide a slightly different version of events, saying that QPS officers told C that if she had mental health issues that were being

exacerbated, then she should approach Queensland Health who 'would make a determination as to whether or not they should have a wellness walk'. If so, then QPS would facilitate this. While not making any findings of fact, this demonstrates there is still a need for clarity regarding with whom ultimate authority for room breaks rests and for this to be clearly communicated to people in quarantine. Another example is the need for public confirmation of who has responsibility for quarantine hotel selection. Without clear lines of responsibility and authority, people are unable to progress their complaints, are frustrated by inconsistent information, and risk falling between service gaps.

51. Second, information provided to people in quarantine needs to include information about their rights, how to report issues with restrictions, and how to appeal or request a review of decisions. The information should also set realistic expectations about the rights available to people in quarantine (including room breaks) given safety, resource, and other constraints. Complaint mechanisms and transparency provide fundamental safeguards for the protection of human rights of people in quarantine.

52. In relation to the last two recommendations, the Department of Health advises that the State Disaster Coordination Centre is working with key agencies to address ongoing concerns and issues.

Conclusion

53. The complainant in this matter did not get access to fresh outside air during her 14 day stay in mandatory self-funded hotel quarantine. The windows of her hotel room did not open, and she was not given a fresh air break from her room. The complainant and the respondents, the Queensland Police Service and the Department of Health, disagreed about the reasons for the lack of room breaks. The complaint was not resolved.

54. In this unresolved complaint report, the Commissioner considers that the complainant's right to humane treatment when deprived of liberty has been limited and that the respondents have to demonstrably justify the limitation of the complainant's rights.

55. In accordance with section 88(4) of the HR Act, the Commissioner considers that the respondents should take the following actions to ensure their acts and decisions are compatible with human rights:

a. Include opening windows or balconies as a minimum standard for the selection of quarantine hotels, and put in place plans to decommission currently used hotels that do not meet these minimum standards;

b. Provide information to people in quarantine that clearly identifies the responsibilities of each entity involved in the care of that person, which will facilitate complaint management, improve consistency of information, and reduce the risk of people falling between service gaps; and

c. Provide information to people in quarantine about their rights, how to report issues with restrictions, their rights of review or appeal, and that sets realistic expectations about the conditions of quarantine.

Preface

Throughout 2020, the COVID-19 pandemic has wreaked havoc, inflicting widespread catastrophic loss of life in its wake. It has been a challenging and distressing year all over the world. Some countries have been hit harder than others for a range of reasons that will be important to understand in time to come.

Our own nation has much to learn, as well as much for which it can be grateful, as this dangerous and highly infectious virus continues to overshadow our lives.

As noted in the Interim Report, the movement of the virus through Victoria placed our state in sadly unique circumstances in contrast to the rest of the nation.

By May 2020, active cases in the Victorian community had fallen to 57 from a peak of 541 as of 28 March 2020. But, in the wake of breaches of containment in the Hotel Quarantine Program operating in Victoria at the time, a second wave descended upon us with devastating consequences. Hundreds of lives were lost bringing suffering, sadness and grief to so many. Due to scientific evidence inextricably linking this second wave in Victoria to the transmission of infections stemming from returned travellers detained in the Hotel Quarantine Program, this Inquiry was established by an Order in Council dated 2 July 2020.

From the outset, it was clear to me that this Inquiry must be conducted in full public view. An Inquiry team of lawyers and necessary support staff was established and quickly commenced targeting and compiling material from a range of government departments, government agencies and private entities. An Inquiry office was established and a hearing venue was sourced. An opening statement was made by Senior Counsel Assisting the Inquiry on 20 July 2020, foreshadowing public hearings that were due to commence on 6 August 2020 in hearing rooms and facilities arranged at the Fair Work Commission in Melbourne.

On 2 August 2020, a State of Disaster in Victoria was declared and, shortly thereafter, stage 4 coronavirus lockdown restrictions were introduced in Melbourne, affecting our ability to conduct the hearings in a public venue. Determined to ensure we could continue our work and do so in public, considerable effort went into reorganising and operating the Inquiry remotely. To enable this to be done, the first public hearings were shifted to 17 August 2020.

I acknowledge and thank members of the public who contacted the Inquiry team and provided information, and I acknowledge and thank media organisations for their interest in, and comprehensive reporting of, the Inquiry's work, particularly as the public hearings were underway.

I thank all witnesses who appeared before the Inquiry, acknowledging that it is a considerable strain to do so.

I recognise that the Inquiry caused significant strain on the Victorian Public Service as it was leading Victoria's response to the COVID-19 pandemic while cooperating with the Inquiry. The Inquiry found no evidence of public servants acting in bad faith in regard to the Hotel Quarantine Program and I acknowledge and appreciate the work they have done to support Victoria and Victorians. There was considerable evidence of long hours and dedication to public service demonstrated by many public servants engaged to perform roles in response to COVID-19.

I also wish to acknowledge the many hundreds of people working on-site in hotel quarantine facilities, who put themselves in harm's way to perform their work, and the thousands of people who went through the Hotel Quarantine Program, an experience reported to be quite difficult for some.

In the early weeks of the Inquiry, the impact of the increased restrictions, the need to set up remote systems to receive and examine the thousands of documents that were being provided to the Inquiry, and the work involved in the set up and conduct of live streaming remotely, made it clear that it would not be possible to meet the original reporting date of 25 September 2020. I sought, and received, an extension from the Governor to deliver the Inquiry's final report by 6 November 2020. The Inquiry

was required to conduct a significant amount of work in a very short time frame. To do so, the original estimates of staffing and support for the Inquiry expanded considerably as the scale of the task and its complications became apparent.

As noted in the Foreword to the Interim Report, following the conclusion of its public hearings, the Inquiry began work to consolidate the information and evidence received in preparation for delivery of the Final Report by 6 November 2020.

After the public hearings were completed, final submissions by Counsel Assisting were made on 28 September 2020. Written submissions in reply were received by 13 parties with Leave to Appear on 5 October 2020. In the wake of the submissions in reply, the Inquiry was put on notice that there was additional material, of potential significance to the Inquiry, that had not been produced to it.

This caused a request for a further extension to the report date to 21 December 2020 so that this material could be gathered and considered.

Notwithstanding this disruption, to assist in the timely re-opening of international points of entry to Victoria, the Interim Report was prepared and delivered to the Governor on 6 November 2020.

In presenting this Final Report I acknowledge the contribution of every staff member who worked on this Inquiry. I particularly thank and acknowledge the outstanding work of Counsel Assisting the Inquiry: Mr Tony Neal QC, Mr Ben Ihle and Ms Rachel Ellyard, Ms Jess Moir and Mr Steven Brnovic. The Counsel Assisting team was supported by a hardworking and tireless legal team ably led by Mr Will Yates, who was seconded to the Inquiry from the Victorian Government Solicitor's Office.

I acknowledge the excellent work undertaken by the Intake and Assessment team, led by Ruth Baker, who endeavoured to ensure that every person who contacted the Inquiry felt heard and treated with respect. The team also provided broader support to witnesses across the Inquiry.

I also acknowledge the outstanding work of Shilpa Bhim and her team to whom so much is owed in the development and delivery of both the Interim Report and this Final Report.

The Inquiry drew on a range of skillsets from 34 staff engaged in legal work and a range of other tasks, including the technical support to undertake hearings, setting up and maintaining an electronic hearing book, setting up and maintaining the Inquiry website and publishing exhibits and transcripts as they were released, responding to phone calls and emails from the public and the media, and assisting in the preparation and delivery of these two Reports. To undertake this work in six months is no easy feat, and I am grateful for the diligence and hard work undertaken by each and every Inquiry staff member who helped to make this happen. I am particularly appreciative of the support and contribution of chief executive, Jo Rainford, to the Inquiry's operation.

I thank all Victorians for their patience and understanding as the Inquiry has undertaken its work. The second wave of COVID-19 cases led to a series of restrictions in the state and had devastating impacts on peoples' lives, livelihoods and mental health. It made what was already a difficult year far more difficult. We have endeavoured to provide as much clarity as possible to all Victorians on the operation of Victoria's Hotel Quarantine Program. While we cannot turn back the clock, we hope the Inquiry's findings and recommendations provide some assistance for the road ahead.

On behalf of the entire Inquiry team, I extend condolences to the families, friends and loved ones of each individual whose life has been lost to this terrible virus.

The Honourable Jennifer Coate AO
Chairperson
Board of Inquiry into the COVID-19 Hotel Quarantine Inquiry

Executive summary*

From early this year, the World Health Organization (WHO) and governments all over the world were grappling with how to reduce the spread of COVID-19 and avoid overburdening health systems and workers in such a connected world.

Commonly used measures to reduce the spread of COVID-19 throughout 2020 have included social distancing, lockdowns and restrictions on the movement of people in the community plus, in the case of people entering a country from overseas, a period of quarantine.

These measures have been, and continue to be, used across Australia. Of significance to the work of the COVID-19 Hotel Quarantine Inquiry was the 14-day period of mandatory quarantine that was announced on 27 March 2020 and implemented for all international arrivals into Victoria from 29 March 2020.

The stated purpose of mandatory quarantine was to try to slow the spread of COVID-19, with the majority of COVID-19 cases in Australia, at the time, attributed to returned travellers.[1] Across Australia, quarantine for returned travellers was (and continues to be) almost exclusively undertaken in hotels.

Within the first week of the Hotel Quarantine Program being established in Victoria, the number of returned travellers in the Program was between 1,550[2] and approximately 2,000.[3] At any one time, there were between 1,500 and more than 4,000 individuals in quarantine across 10–16 hotels.[4]

Victoria's Hotel Quarantine Program ran for three months from 29 March–30 June 2020. In this time, a total of 21,821 returned travellers went through the Program, with a total of 236 (1.1 per cent) of those returned travellers testing positive for COVID-19 while in quarantine.[5]

Despite the relatively low number of positive COVID-19 cases in the Hotel Quarantine Program, breaches of containment in the Program, in May and June 2020, were inextricably linked to the second wave of COVID-19 cases in Victoria,[6] with devastating social and economic consequences for the State.

Due to the established link between the second wave of COVID-19 cases and the outbreaks from a Hotel Quarantine Program, this Inquiry was established on 2 July 2020 to examine a range of matters related to the Program, including:

- decisions and actions of government agencies, hotel operators and private contractors
- communication between government agencies, hotel operators and private contractors
- contractual arrangements
- information, guidance, training and equipment provided to personnel in hotels
- policies, protocols and procedures.[7]

Within the first three months of the Inquiry being established, it held public evidentiary hearings over 27 days, acquired evidence from 96 witnesses and received more than 350,000 pages of documents. On 6 November 2020, the Inquiry delivered its Interim Report, which made recommendations for a more robust Quarantine Program for Victoria as the State began re-opening to international arrivals.

This Final Report is to be read in conjunction with the Interim Report. The recommendations from the Interim Report find their evidentiary basis and rationale in the contents of this Final Report, which examines why the Hotel Quarantine Program was established, decisions made and actions taken in its establishment, what went wrong, what went well and what could, and should, be done better. The further recommendations contained in this Final Report are to be read in conjunction with the recommendations contained in the Interim Report.

* This summary has been prepared to provide an overview of the contents of the Report and its conclusions. It is not a substitute for the contents of the Report or the conclusions contained therein.

The emergence of COVID-19

Chapter 1 of this Report summarises the background to COVID-19 in the international and national context.

After emerging in late 2019 in Wuhan, China, COVID-19 rapidly proliferated across the globe, leading the WHO to declare the virus a 'pandemic' on 11 March 2020.[8]

The first Australian case of COVID-19 was reported on 25 January 2020,[9] with 12 cases confirmed by 1 February 2020.[10] Local case numbers then continued to increase with more than 3,000 confirmed cases of COVID-19 in Australia by 27 March 2020.[11]

As these numbers continued to swiftly rise, so too did concern among government, medical and scientific communities, and the general public. As highlighted by Dr Annaliese van Diemen, Victoria's Deputy Chief Health Officer (DCHO), the anticipated trajectory of the virus posed a significant risk to public health.[12]

At a state level, the Victorian response included the activation of the State Control Centre (SCC)[13] and a declaration of a State of Emergency, after which came a series of Directions prohibiting various gatherings, and Directions to returning travellers to 'self-isolate' for 14 days upon their arrival into Victoria.[14]

At the federal level, the National Cabinet was established on 13 March 2020 with the stated aim of ensuring consistency in Australia's response to the COVID-19 pandemic.[15]

Many of the National Cabinet's agreed measures were aimed at addressing the concern that international arrivals were fuelling the rise in domestic COVID-19 case numbers. These measures included imposing a self-isolation requirement for international arrivals and a ban on foreign cruise ships,[16] as well as prohibiting the entry of non-citizens and non-permanent residents.[17]

It was in this context that the National Cabinet, at a meeting on 27 March 2020, resolved to implement a mandatory 14-day quarantine period for international arrivals,[18] setting the wheels in motion for the establishment of Victoria's Hotel Quarantine Program.

The science behind COVID-19

To understand the context of the Hotel Quarantine Program, it was important to understand the nature and the science of COVID-19, as outlined in Chapter 2.

While acknowledging that there is a continuous state of learning with respect to the COVID-19 virus, the weight of the expert knowledge, at the time, was that the COVID-19 virus had an incubation period of up to 14 days for the majority of patients, with most patients being non-infectious at the end of that 14-day period. On that basis, the 14-day quarantine period, imposed for the purposes of the Hotel Quarantine Program, was a reasonable and appropriate period.

There was a general understanding among the experts of the modes of transmission of the virus as of 29 March 2020. These included that:

A. the virus primarily spread from person-to-person via droplets, aerosols and fomites (for example, transmission by contact with a contaminated surface)

B. droplet transmission occurred when a person was in close contact (within one metre) with someone who had the virus

C. airborne transmission was possible in specific circumstances and settings in which procedures or support treatments that generate aerosols were performed.[19]

These methods of transmission were of critical importance when considering the use of hotels as facilities for mass quarantine.

Asymptomatic transmission (including by way of super spreaders) led to particular complexities for infection control and testing regimes in the Hotel Quarantine Program. The public health community had a knowledge of the risk of asymptomatic transmission of the virus by March 2020.

The weight of the expert evidence to the Inquiry was that between 17–20 per cent of cases would be asymptomatic, which had flow-on impacts in terms of appropriate testing requirements. To address the risk inherent in asymptomatic spread of the virus, it was necessary to require testing of all people at the end of their quarantine period, regardless of whether they were reporting symptoms. This issue had ramifications for the testing regime in place during the Hotel Quarantine Program.

Hotel quarantine's link to the 'second wave'

The expert evidence, based on genomic testing, was that 99 per cent of Victoria's second wave of COVID-19 cases in the community came from transmission events related to returned travellers infecting people working at the Rydges and the Stamford Plaza Hotel. The movement of the virus from these infected workers into the community was characterised by high rates of local transmission.[20]

Prior to the second wave, Victoria's COVID-19 cases were largely attributed to infection acquired overseas.

Mass quarantining and the science

The conclusions that can be drawn from the scientific evidence provided to the Inquiry are that three fundamental safety features must be built into any program that seeks to house together potentially infected people in a quarantine facility. They are:

A. the importance of expert advice, input and ongoing supervision and oversight of infection prevention and control (discussed in chapters 8 and 9)

B. the importance of a rapid and effective contact tracing regime (discussed in Chapter 9)

C. the importance of an evidentiary base for the testing regime (discussed in Chapter 10).

The state of pre-pandemic planning

Victoria's Hotel Quarantine Program was established over the course of one weekend in March 2020. Chapter 3 analyses the state of pre-planning for mandatory, mass quarantine in Australia prior to the Hotel Quarantine Program.

Both the State and Commonwealth governments were aware, prior to 2020, of the possibility of a pandemic and its potentially devastating consequences.

However, none of the existing Commonwealth or State pandemic plans contained plans for mandatory, mass quarantine. Indeed, the concept of hotel quarantine was considered problematic and, thus, no plans for mandatory quarantine existed in the Commonwealth's overarching plans for dealing with pandemic influenza.

Prior pandemic planning was directed at minimising transmission (for example, via voluntary isolation or quarantine at home) and not an elimination strategy. Professor Brett Sutton, Victoria's Chief Health Officer (CHO), accepted that:

> One of the issues in both the Australian Health Management Plan for Pandemic Influenza and the Victorian plan reflecting it is that there probably wasn't sufficient consideration of coronavirus as a virus of pandemic potential, nor was there such explicit consideration of a program of quarantine essentially for the purpose of keeping a jurisdiction entirely free of the virus.[21]

While this Inquiry had no remit or jurisdiction to examine any action or inaction by the Commonwealth, given the role of the Commonwealth through the Commonwealth Pandemic Plan and the lead that it provides to the states and territories, it would be unfair to judge Victoria's lack of planning for a mandatory quarantining program given the Commonwealth, itself, had neither recommended nor developed such a plan.

Significantly, the Commonwealth undertook a review of its health sector response in the wake of the H1N1 pandemic in 2009. The Commonwealth's *Review of Australia's Health Sector Response to Pandemic (H1N1) 2009* recommended that the roles and responsibilities of all governments for the management of people in quarantine, both at home and in other accommodation, during a pandemic, should be clarified. The Review recommended that a set of nationally consistent principles could form the basis for jurisdictions to develop operating guidelines, including plans for accommodating potentially infected people in future pandemics and better systems to support people in quarantine. Further, this review recommended an examination of the policy on quarantine and isolation, including management, support systems and communication.[22]

The Commonwealth Pandemic Plan and the Victorian Pandemic Plan were updated following the *Review of Australia's Health Sector Response to Pandemic (H1N1) 2009* in respect of evidence-based decision-making, use of existing governance mechanisms, a scalable and flexible approach and an emphasis on communication activities, with work regarding the policy on quarantine and isolation to be clarified. Despite this, the evidence to the Inquiry was that this work regarding the policy on quarantine and isolation was not undertaken following the Review being published in 2011.

Had the work proposed by the Commonwealth's *Review of Australia's Health Sector Response to Pandemic (H1N1) 2009* been done, there would likely have been, at least, a set of guiding principles and a framework to support the establishment of the Hotel Quarantine Program, thus avoiding the Program needing to be set up in an *ad hoc* manner during a pandemic.

Just two weeks before the National Cabinet agreed to mass quarantining, Victoria published its 10 March 2020 *COVID-19 Pandemic Plan for the Victorian Health Sector*. It did not envisage the involuntary detention of people arriving from overseas. As with the Victorian Pandemic Plan, its focus, with regard to isolation or quarantine, was on the *voluntary* isolation of people in their own homes.

The lack of a plan for mandatory mass quarantine meant that Victoria's Hotel Quarantine Program was conceived and implemented 'from scratch', to be operational within 36 hours, from concept to operation. This placed extraordinary strain on the resources of the State, and, more specifically, on those departments and people required to give effect to the decision made in the National Cabinet and agreed to by the Premier on behalf of Victoria. This lack of planning was a most unsatisfactory situation from which to develop such a complex and high-risk program.

Given the future movement of people in and out of Victoria from across the nation, it is in Victoria's interests to advocate for nationally cohesive and detailed quarantine plans, as previously recommended in the *Review of Australia's Health Sector Response to Pandemic (H1N1) 2009,* to clarify roles and responsibilities between different levels of government, management and support systems and communication protocols.

Pandemic planning exercises

Emergency incident exercises, specifically related to infectious disease pandemics, have been undertaken regularly. These exercises considered associated public health and emergency management plans and are undertaken within the Department of Health and Human Services (DHHS) and with other agencies.

There was a perceived gap in terms of provision of pandemic planning across the broader health sector. There can be no doubt that there is a role for the broader health sector to play in emergency planning. DHHS should review its pandemic planning processes and activities, so as to consider an appropriate level of involvement from the broader health sector.

What drove the decision for a Hotel Quarantine Program?

Chapter 4 considers the factors behind the shift to a program of mass, mandatory quarantine.

As of 15 March 2020, Victoria adopted the agreement reached at National Cabinet to make precautionary self-isolation directions for all international arrivals in order to reduce the risk of community transmission from those potentially carrying the virus into Australia from international locations. At that time, positive cases were starting to rise in Australia and in Victoria. By 15 March 2020, Australia had a total of 298, and Victoria 57, confirmed COVID-19 cases. Dr van Diemen, and other experts considered that, without effective intervention, those numbers would continue to rise exponentially.

By 27 March 2020, there was a total of 3,162 cases in Australia with 574 of those cases in Victoria. This represented a tenfold increase in Victorian cases. During this period, there had been an outbreak on the Ruby Princess cruise ship, which had docked in Sydney, with infected passengers permitted to disperse across the nation. This event was linked to 800 cases in Australia.

The view of National Cabinet, echoed by the Victorian Premier, was that the majority of cases in the community, at that time, were linked to the virus coming in via international arrivals.

Together with the considerable concern raised in relation to the Ruby Princess disembarkation, there was evidence that some returned travellers were not adhering to Directions to self-isolate at home. On closer examination during the Inquiry, as reported in Section 2 of the Interim Report, the evidence of intentional non-compliance with Self-Isolation Directions was not extensive. Further, the evidence of 'non-compliance' was, at least, partly referable to the poor dissemination of information to returning travellers who were being directed to self-isolate.

As of 27 March 2020, the Australian Health Protection Principal Committee (AHPPC) had only recommended to the National Cabinet enforced quarantine for 'high-risk' cases. Nevertheless, both the National Cabinet and, in turn, the Victorian Premier took the decision to direct the mandatory detention of all international arrivals into designated facilities which, in Victoria, were hotels. Both the CHO and the DCHO supported the decision based on the following:

A. an exponential increase in COVID-19 cases

B. a link between returned travellers and community transmission rates

C. perceived rates of non-compliance with Self-Isolation Directions

D. perceived inadequacy of the Self-Isolation Directions.

As of 27 March 2020, there was a proper and grave concern being expressed about the extent to which Victoria's health system might be overrun by COVID-19. The situation in many countries was already very grave, with substantial rates of infection and serious illness causing demand for hospital care to exceed existing medical services.

It is readily accepted that quarantining for international arrivals is likely to be required in Victoria for some time to come. In this context, the Interim Report addresses the option of a home-based quarantine program. Recommendation 58 of the Interim Report stated that, in conjunction with a facility-based model for international arrivals, the Victorian Government should develop the necessary functionality to implement a supported home-based model for those international arrivals assessed as suitable for such an option.

Section 2 of the Interim Report set out the reasons for recommendations for the development of a home-based model. One of the reasons set out in Section 2 is that a major risk of the hotel model is the daily movement of personnel in and out of the facility and then into communities in which they live. Even in a best practice model, which has dedicated personnel not moving between facilities, clinical and non-clinical personnel are, of necessity, coming in and out of a facility which, by definition, contains potentially infected people.

Minimising the numbers of people working in such environments, by only having in the facility those unable to quarantine at home, reduces this risk of transmission to the broader community.

The decisions made in establishing the Hotel Quarantine Program

Chapter 5 considers the evidence as to decisions made, and actions undertaken, in establishing the Hotel Quarantine Program over the course of a weekend, including which department was in charge and who was responsible for the decision to use private security as the enforcement model.

Initial decision-making

As a consequence of there being no pre-planning for the large-scale detention of international arrivals into a mandatory quarantine program when the Premier committed Victoria to Hotel Quarantine, those who would have to implement the program in Victoria were required to do so with very little warning and without any available blueprint for what was required. The situation was further complicated by the fact that the decision would come into effect just 36 hours later, at 11.59pm on 28 March 2020.

To put the scale in context, information provided by the Prime Minister on 27 March 2020 outlined that 7,120 people had arrived at airports around the country on 26 March 2020, the day before the announcement of hotel quarantine.

The Premier was aware there was no pre-existing plan for large scale quarantine in Victoria and there had been no discussion in the State Cabinet about the National Cabinet decision. However, he considered the Program feasible to achieve based on his knowledge of the availability of hotel rooms and the dedicated team of people at the operational level able to rise to this challenge.[23] The initial responsibility for setting up the Program was given to the Department of Jobs, Precincts and Regions (DJPR) in a telephone call made by the then Secretary of the Department of Premier and Cabinet (DPC) to the Secretary of DJPR on 27 March 2020.

Other than the sourcing of numbers of available hotel stock, DJPR had no preparation for, or relevant expertise to operate, an enforced quarantine program. The capability and capacity of the hotels in terms of the provision of security, cleaning and catering had not been a factor in the decision to allocate the lead to DJPR, nor had the capacity of the hotels to accommodate large numbers of people in a manner that would prevent transmission of COVID-19 to the community been considered.

It was not appropriate to conceive of the Hotel Quarantine Program as an extension of, or substantially similar to, existing accommodation programs, such as the COVID-19 Emergency Accommodation Program (CEA Program). The logic of tasking DJPR to source hotels on the basis of its work for the CEA Program did not extend to it sourcing hotels for quarantine purposes; the nature and purposes of the two programs were significantly different and involved different levels of risk. DJPR understood from the outset that it would need the assistance of DHHS for crafting the legal framework for the Program and arrangements for the health and wellbeing of the people in quarantine.

Within a few hours of that call to the Secretary of DJPR, and without knowledge of that call, the Emergency Management Commissioner and the State Controller — Health at DHHS were setting up a meeting at the State Control Centre (SCC) on the understanding that this Program would be operated using the emergency management framework.

By the afternoon of 28 March, at a meeting of a number of agencies at the SCC, the Emergency Management Commissioner, in conjunction with the DHHS State Controller — Health, made clear that DHHS was in charge as the control agency of the operation, which would become known as Operation Soteria, after the Greek goddess of safety, and that DJPR was a support agency.

DJPR continued to provide the contracting and organising of many logistical aspects of the Program including hotels, security, cleaning contractors and general logistics, such as transport and aspects of catering.

Notwithstanding this expressed position from the Emergency Management Commissioner, there remained an ongoing dispute between DHHS and DJPR as to who was in charge of the overall operation of the Program, which continued throughout the Inquiry. DJPR was clear that it was DHHS while DHHS was adamant that it was only responsible for parts of the Program and that DJPR was jointly responsible and accountable for its delivery. This was the source of considerable and significant problems with the way in which the Program operated. It also occupied an inordinate amount of time during the Inquiry.

The decision to embark on a Hotel Quarantine Program in Victoria involved the State Government assuming responsibility for managing the risk of COVID-19 transmission. But even though that risk was assumed by the Government, and as critical 'decisions' were made with respect to enforcement measures, there was no detailed consideration of the risks that would be involved in such a program. This was a failure in the establishment of the Program.

It is beyond doubt that many people worked incredibly hard, in extraordinary timeframes, to deal with an unprecedented set of circumstances. But that is not a total justification for the deficiencies in some of the actions taken, and decisions made, in that first 36 hours, and it does not excuse the deficiencies found in the Program.

Decisions on the enforcement model: the use of private security

This issue occupied a considerable amount of time during the Inquiry and generated a great deal of heated dispute. Somewhat ironically, it occupied a far greater amount of time and energy during the Inquiry than it did during the March 2020 meeting at the SCC. No person or agency claimed any responsibility for the decision to use private security as the first tier of security. All vigorously disputed the possibility they could have played a part in 'the decision'.

The evidence was that the use of private security did not raise any particular concerns during the weekend setup of the Program or produce any considered discussion about how the enforcement model should work. No doubt, in the wake of the evidence that has emerged as to the links between infected security guards and the second wave of COVID-19, and problems more generally with the use of that workforce, positions have hardened as to any 'ownership' of the decision to use private security.

Ultimately, the evidence did not identify that any one person decided to engage private security in the Program. However, there were clearly people who influenced the position that was found to have been adopted at the SCC meeting on the afternoon of 27 March 2020.

Chapter 5 goes through the detail of the exchanges and discussions in the lead up to this meeting.

In short, it concludes that, while no request was made to Victoria Police to provide the 'first tier' of the enforcement model for hotel quarantine, the then Chief Commissioner of Police was consulted and expressed a preference that private security perform that role and Victoria Police provide the 'back up' for that model.

That position, expressed by the senior police representative present at the SCC meeting that afternoon, was clearly persuasive to those at the meeting. There being no particular discussion or dissent, this set in motion the actions, that evening, by DJPR to commence contractual engagement with three security firms. Notwithstanding the multiple submissions from a number of agencies represented at the SCC meeting, the conclusion of Chapter 5 is that this SCC meeting was where and when the decision to engage private security was made as the first tier of enforcement, with Victoria Police as the 'back up'.

At no time on 27 March 2020 did it appear there was any consideration of the respective merits of private security versus police versus Australian Defence Force (ADF) personnel in that first-tier role. Instead, an early mention of private security rather than police grew into a settled position, adopted by acquiescence at the SCC meeting.

There was no actual consideration of whether ADF personnel would have been a better option. The assessment that ADF was not needed on the ground at the hotels was an assessment made without any proper consideration of the anterior question of what would be the best enforcement option.

As of 27 March 2020, the decision not to request the assistance of the ADF for a role in the quarantine hotels was made by the Emergency Management Commissioner. It was open to be made in the sense that, once it was agreed private security would be used at the hotels, there was no longer a 'need' for ADF but, as there had not been any proper analysis of that private security arrangement, it was an assessment that proceeded without investigation.

As noted in Chapter 5, it is important to acknowledge the haste with which these decisions were being made. However, the fact remains that not one of the more than 70,000 documents produced to the Inquiry demonstrated a contemporaneous rationale for the decision to use private security as the first tier of enforcement, or an approval of that rationale in the upper levels of government. Such a finding is likely to shock the public. Unlike the formal application through the Expenditure Review Committee process for the funding for the CEA Program, no such process was uncovered for the use of private security in the Hotel Quarantine Program.

Chapter 5 concludes that the people of Victoria should understand, with clarity, how it was that such a decision to spend millions of dollars of public money came about. The people should be able to be satisfied that the action to proceed in this way was a considered one that addressed the benefits, risks and options available in arriving at such a decision. There was no evidence that any such considered process occurred, either on 27 March 2020 or in the days and weeks that followed, until the outbreaks occurred.

Chapter 5 notes that the decision to engage private security was not a decision made at the Ministerial level. The Premier and former Minister Mikakos said they played no part in the decision. Minister Neville was aware of the proposal but not responsible for it and Minister Pakula appears not to have been told until after private security had been engaged. Enforcement of quarantine was a crucial element of the Program that the Premier had committed Victoria to adopting, but neither he nor his Ministers had any active role in, or oversight of, the decision about how that enforcement would be achieved.

In his evidence, the Premier agreed that the question of how this occurred should be capable of being answered.[24] As the head of the Victorian Public Service at the time, the then Secretary of DPC acknowledged it was a fair point that, if no one knew who made the decision, there was an obvious risk that no one would understand that they had the responsibility for revisiting the decision if time and experience showed that it was not the correct one.[25] This was what occurred here. The decision was made without proper analysis or even a clear articulation that it was being made at all.

On its face, this was at odds with any normal application of the principles of the Westminster system of responsible government. That a decision of such significance for a government program, which ultimately involved the expenditure of tens of millions of dollars and the employment of thousands of people, had neither a responsible Minister nor a transparent rationale for why that course was adopted, plainly does not seem to accord with those principles.

The conclusions contained in Chapter 5 find that the decision as to the enforcement model for people detained in quarantine was a substantial part of an important public health initiative and it cost the Victorian community many millions of dollars. But it remained, as multiple submissions to the Inquiry noted, an orphan, with no person or department claiming responsibility.

The procurement and role of private security

Chapter 6 discusses the use of private security in the Hotel Quarantine Program. It finds that there were problems from procurement through to the scope of the role of security guards.

Chapter 6 concludes that there was no a basis to find anything other than the overwhelming majority of security guards who worked in the Hotel Quarantine Program did so honestly and with goodwill. None of those workers went to work to get infected with COVID-19. However, systemic governmental failings led to problems.

Decisions were not made at the right levels and with the right information

Chapter 6 concludes that outsourcing such a critical function warranted closer scrutiny from senior public servants and the Minister. Those who negotiated the terms of the contracts, and those who 'supervised' them, were doing so without any clear understanding of the role of security in the broader Hotel Quarantine Program and had no expertise in security issues or infection prevention and control. They had no access to advice from those who had been party to the decision to use security and had limited visibility over the services being performed.

Failings in the procurement process

Chapter 6 concludes that the process by which the security firms were selected was not appropriate or sufficiently rigorous. It was made in haste and without any risk assessment, led by staff that did not have the requisite experience and knowledge, and without any public health oversight or input. The speed with which security had to be contracted was some explanation, though not a sufficient explanation, for why the initial contacts were made in the way they were.

Chapter 6 also concludes that there were failures of proper procurement practice on the part of DJPR.

The first was a failure to make use of the State Purchase Contract (SPC) for security services when making initial arrangements for security over the weekend of 28 to 29 March 2020. Those involved in procuring security firms were not aware of that SPC or the existence of publicly available details of security service providers that were regularly used by the Government via the SPC arrangements. Those involved were also unaware of the applicable critical incident procurement policy and protocols, and that an exemption from the SPC was not needed.

Procurement policies are there for a reason. The existence of procurement policies in general, and the SPC specifically, reflect principles of value for money, as well as accountability, suitability and capacity to properly provide services, transparency and probity.[26] These contracts for security services represented tens of millions of dollars; it stands to reason that decisions made to spend public money on these providers should have been consistent with practices that are based on general procurement principles. That should have involved, as far as possible, reliance on existing SPC arrangements.

While it is true that there was a critical incident procurement policy that provided DJPR with the flexibility to source services outside of the SPC Panel, it did not follow that proper procurement practices and decision-making were irrelevant. Indeed, the Department of Treasury and Finance provided evidence that the Victorian Government Purchasing Board's communication to departmental procurement teams was that, wherever possible, SPCs should continue to be used during the pandemic.[27]

The second failure noted in Chapter 6 was in DJPR contracting longer term with the private security provider, Unified Security Group (Australia) Pty Ltd (Unified), despite advice that it was preferable to use those who were part of the SPC panel of providers.

Those tasked with procuring security services for the Hotel Quarantine Program should have heeded the specific procurement advice they were given, as to the risks of informally engaging a non-panel firm to provide quarantine security. They should have considered whether Unified was suitable to remain a service provider in light of their knowledge of the SPC arrangement.

Chapter 6 concludes that the third failure in the procurement process was in not making evidence-based decisions about the allocation of work between the three contractors with whom contracts were signed.

Even allowing for the use of Unified in the short term, it was a failure of government decision-making to contract a firm that had previously been refused admission to the SPC for security services for, what became, very significant sums of money, and then to allocate so much work to that firm.

There was a preference within DJPR for Unified. The preference appears to have been based on what was seen as a willingness by Unified to do the work asked of it, despite some of that work being outside the role it was engaged to perform.

The role of private security

The role performed by private security was ill-defined from the beginning and was, ultimately, a role not suited, without close monitoring and extensive and continued training, to the cohort of guards that was engaged.

The role of security guards changed over time, from 'static guarding' at the outset, to facilitating fresh air breaks later on. The expanded roles increased the risk of security guards being infected through contact with potentially infected guests and through contact with possibly contaminated surfaces in circumstances where overall infection prevention on the site was completely inadequate.

The introduction of those additional functions should have occurred following a proper re-evaluation of the infection control measures in place and an assessment of the increased risks to staff that they posed. No such assessment occurred because no person or agency regarded themselves as responsible and accountable for either the hotel site or the decision to use private security. Responsibility for revisiting the scope of the duties to be performed by security guards lay with DJPR as the contract manager. DJPR did not see that to be the case.

Contract development and management

The conclusions on this issue in Chapter 6 are that DJPR should not have been responsible for contract management throughout the Hotel Quarantine Program. DHHS was the appropriate body to manage those contracts and should have done so as control agency with overall responsibility for the Hotel Quarantine Program.

The contracts should have made clear that security guards were subject to the direction of DHHS in supporting their enforcement functions.

Explicit provision in the contracts would have provided greater clarity and certainty as to who was in charge of security services personnel, which may have led to a greater focus on supervising the work of those personnel.

It was not appropriate that the contracts placed responsibility for training and supervision, in relation to PPE and infection prevention and control, on the contractors in the manner they did. That should have been a responsibility that remained with the State as the architect of the Hotel Quarantine Program.

The contractual requirement for security services personnel to complete the Commonwealth Government Department of Health's COVID-19 online training module was an inappropriate mechanism to properly mitigate the risk of COVID-19 transmission in a hotel quarantine context. Commendable as it was to require training to be undertaken as a precondition of engagement in the Program, it was a failure in preparing those contracts that the content of such training was not based on advice specific to the risks at hotel quarantine sites. COVID-19-related training should have been specifically tailored for non-health professionals working at the quarantine hotels. That it was not, and that it was potentially confusing, meant that it was even more important that contractual requirements as to PPE and training were clear, specific and relevant.

Not having clear, consistent training and PPE requirements led to contractors having different levels of knowledge and sophistication when it came to the use of PPE: at one end of the spectrum, Wilson Security Pty Ltd (Wilson) had a significant suite of policies, practices and supports to mitigate the risk of virus transmission, and at the other, Unified was particularly reliant on DHHS to provide training and information.

Subcontracting security services

The heavy reliance on subcontracting posed a significant risk to the success of the Hotel Quarantine Program in terms of the quality and competence of security guards actually recruited. Notwithstanding this, DJPR did not have adequate oversight of the use of subcontractors in the Hotel Quarantine Program. That was due, in part to DJPR not being aware of the extent to which the head contractors would rely on subcontracting.

DJPR should have been more vigilant and proactive in requiring the security service providers to seek written prior approval for the engagement of subcontractors, as per their respective contracts. But so, too, should the security services providers have complied with their subcontracting obligations at the required time. The consequence of this was that DJPR did not give proper oversight to those performing security services.

It is a significant deficiency that DJPR was not in a position to know the extent to which the security providers actually engaged in subcontracting throughout the duration of the Hotel Quarantine Program, let alone be confident as to who was providing the services and whether they were properly equipped to do so.

Private security guards should not have been engaged without close monitoring

Security guards were not the appropriate cohort to provide security services in the Hotel Quarantine Program without close monitoring and extensive and continued training.

Consideration was not given to the appropriateness or implications of using a largely casualised workforce in an environment where staff had a high likelihood of being exposed to the highly infectious COVID-19. This, of course, had flow on impacts in terms of the spread of the virus.

That is not to say that staff, whether those who contracted security providers or the security staff themselves, acted in bad faith. However, greater consideration ought to have been given to the environment in which security staff were working and their prior infection control knowledge and training.

As an industry, casually employed security guards were particularly vulnerable because of their lack of job security, lack of appropriate training and knowledge in safety and workplace rights, and their susceptibility to an imbalance of power resulting from the need to source and maintain work. These vulnerabilities had previously been identified by the Government.

A fully salaried, highly structured workforce with a strong industrial focus on workplace safety, such as Victoria Police, would have been a more appropriate cohort, which would have minimised the risk of outbreaks occurring and made contact tracing an easier job in the wake of an outbreak.

The use of hotels and cleaners

Chapter 7 analyses the use of hotels and cleaners in the Hotel Quarantine Program.

Decision to 'stand up' hotels for the Hotel Quarantine Program

Once the decision had been made to adopt a universal quarantine program for all international arrivals within some 36 hours, the decision to use hotels as the designated facilities for the purpose of Victoria's quarantine program was an obvious enough choice.

Hotels were chosen because they were available, could be stood up quickly, would accommodate large numbers of returned travellers and would provide economic benefits. Even if afforded careful prior contemplation, hotels presented as the only readily available option in the absence of a purpose-built quarantine facility.

But that is not to make a virtue of necessity. Hotels were not designed as 'quarantine facilities'. The physical limitations of hotels, together with the highly infectious nature of the virus and the state of knowledge about transmission, meant that constant attention to all of the necessary infection prevention and control measures was needed to run the Program with minimum risk to the people in quarantine and those working in the Program.

Procurement and contracting of hotels

It is beyond doubt that the organisation of the hotels and the cleaning companies for the Program involved a significant logistical undertaking. DJPR entered formal agreements with 29 hotels (20 hotels were ultimately used for the Program).[28] It engaged three professional cleaning companies for specialised cleaning, initially only for those rooms that had been used by people who were known to be COVID-positive.[29]

There is no controversy that those contracts between the State and the hotels and cleaning companies were prepared and executed, on behalf of the State, by DJPR.[30] DJPR maintained the obligation of contract management throughout the period from March until July 2020, at which time primary control of the Hotel Quarantine Program transferred to the Department of Justice and Community Safety (DJCS).[31]

While DJPR had responsibility for management of the contracts, in a number of important respects, especially in relation to infection prevention and control measures, direction and management of those contractors was based on advice from DHHS. This resulted in a situation where those responsible for ensuring compliance with the contracts (DJPR) were not the ones with sufficient expertise to understand whether the contracts were being performed as they should. This was an unnecessarily complicated and unwieldy situation, and not a safe system of infection prevention and control. It was compounded by the internal management structures and available public health resources of DHHS that are discussed in Chapter 8.

Important information directed to infection prevention and control — the cornerstone of this Program — was merely transferred to the contractors via DJPR which, in turn, was obtaining such information as was available from DHHS; as a result, it created too many opportunities for its import to be diluted or, even, lost.

Additionally, this contractual framework complicated and obscured what was the necessary and appropriate, albeit apparently lacking, 'ongoing supervision and oversight'[32] by DHHS of the operational aspects of the Hotel Quarantine Program.

Insofar as those aspects were being delivered, or, at least, were intended to be delivered, by the hotels and cleaners who had been engaged, it is apparent that the DHHS Public Health Team and the infection prevention and control (IPC) expertise available to DHHS had little direct insight into how the Program was being administered and, indeed, no oversight.[33] At most, DHHS submitted that 'the Public Health Team had responsibility for the availability of infection prevention and control and PPE advice and guidance'.[34]

DHHS accepted it could have addressed this issue by taking over responsibility for the contracts. The impact of fragmenting responsibilities in this way as between DJPR, DHHS and the private contractors added to, or increased, the vulnerabilities inherent within the Hotel Quarantine Program in Victoria. The provision of policy advice and guidance on IPC measures, such as proper cleaning standards and methods, to DJPR, which had no expertise in the area and, therefore, no ability to oversee the correct implementation of these requirements, was not a safe way to minimise the risk of infectious outbreaks in hotel quarantine sites.

Apparently, with a realisation as to the unwieldy nature of the Program, from 3 July 2020, DHHS assumed responsibility for both the selection and contracting of all hotels in the Program.[35] Existing agreements with hotels were amended to reflect this transfer of responsibility from DJPR to DHHS.[36]

At a much earlier stage in the Program, DHHS and DJPR should have arranged for the transfer to DHHS of responsibility for the administration of contracts. This would have brought the department with public health expertise into a direct role in administering essential components of the Program and facilitated clear lines of accountability, responsibility and supervision of roles. Importantly, given it was an unplanned and untested Program with high risks, one agency overseeing the Program would also have likely embedded a proper, ongoing review of the Program in its operation.

Decisions to contract with hotels were made with reliance on DHHS's requirements as to what hotels were suitable; despite this, DJPR did not receive any specific documents from DHHS regarding whether hotels were assessed as suitable from an infection control perspective. The key consideration for such an assessment should have been the extent to which infection control measures could be successfully implemented.

Infection prevention and control in hotels: the ever-present risk of cross-infection

IPC measures are essential to a successful quarantine program. It was necessary to have those with the expertise in infection prevention and control deliver that training. Nothing short of constant reinforcement, supervision and oversight from those with the necessary expertise was what was required in such a highly infectious environment.

There were no infection prevention and control experts stationed at the hotel sites to give guidance, oversight or supervision on the range of risks to which hotel staff would be exposed and what they needed to do to mitigate those risks.

DHHS witnesses made clear that knowledge about the virus and its modes of transmission was evolving.[37] Dr Simon Crouch, a senior medical adviser in the Communicable Diseases Section of the Health Protection Branch of DHHS, gave evidence that:

> The understanding of COVID-19 continues to develop. As this has happened, so too has my understanding of the virus and its modes of transmission. I am not convinced that we yet fully understand how it is transmitted.

Given what Dr Crouch stated, it made it even more unsatisfactory that hoteliers were contracted to provide their own PPE, training and infection prevention and control. This was a wholly inappropriate situation.

The importance of cleaning

There was an inadequate focus, in the design and implementation of the Hotel Quarantine Program, on the need for specialised and rigorous cleaning to address the risk of virus transmission through environmental contact.

Given that the guidance from the WHO, in March 2020, specifically identified fomite transmission as a recognised method by which infection might occur, the Program should have been informed by the development of proper and authoritative guidance that dealt specifically with rigorous 'environmental cleaning and disinfection'.

This was especially so given the movement of people in quarantine, and the workers and staff and personnel working on-site, in and out of the hotels.

PROCUREMENT OF COMMERCIAL CLEANING COMPANIES FOR 'SPECIALISED CLEANING'

The requirement that hotels undertake specialised cleans of COVID-positive rooms was flawed. It was based on a presumption, upon rooms being vacated, that it would be known which people in quarantine were COVID-positive and which people were not.

Because of the possibility that people infected with COVID-19 might be asymptomatic or experience only mild symptoms, which they may not recognise or report, and because testing was initially not universal nor compulsory, it was reasonably possible that a person's COVID-positive status might not have been discovered. In such a case, a room that previously held a person infected with COVID-19 would potentially be cleaned by hotel staff or subcontractors rather than the specialised cleaners.

Irrespective of the contracting arrangements and who carried out the cleaning, it was imperative that proper auditing checks were conducted with due care, particularly given the known risk of environmental transmission.[38] There was no evidence that this was done.

CLEANING STANDARDS AND QUALITY CONTROL

There was no comprehensive, specific cleaning advice tailored to the Hotel Quarantine Program until 16 June 2020, when the document titled *Hotel Quarantine Response – Advice for cleaning requirements for hotels who are accommodating quarantined, close contacts and confirmed COVID-19 guests – Update'* was issued by DHHS.

It would have been prudent for advice that dealt specifically with hotels in the quarantine environment to have been provided as early as possible into the commencement of the Program. It could not have been expected that those DJPR officials engaging the cleaning contractors had sufficient IPC knowledge to know whether generic guidance was appropriate in that specific context. Where DJPR had made requests of DHHS for tailored hotel-quarantine advice and policies, those requests were reasonable.

The consequences of the 'split' as between DHHS and DJPR included delays in providing proper cleaning advice and services, hampering the ability of those within hotels to deal quickly with issues as they arose.

OVERSIGHT OF SPECIALISED CLEANING IN QUARANTINE HOTELS

Putting to one side the efficacy of the policies that were provided, as has already been noted, the lack of an on-site presence by those with expertise in infection prevention and control, supervising, monitoring and overseeing the implementation of those policies was a systemic flaw given the highly infectious nature of this virus and its risks of transmission including by indirect surface (fomite) contact.

DHHS assumed the management of all cleaning contracts (other than in relation to the Brady Hotel) in quarantine hotels from 1 July 2020.[39] Had DHHS taken over that function at an earlier point in time, it would likely have been more proactive in directing and managing hotels and cleaners in relation to IPC practices. The demarcation of roles resulted in a diffusion of responsibility, and led to an absence of appropriate oversight and leadership within the Program, in respect of this central tenet of IPC.

From the outset of the Program, there should have been a fuller implementation of processes that adequately identified the known risks of transmission. Whether this lack of full implementation arose due to the contractual arrangements, or the division of responsibilities between DHHS (as control agency and the department with the specific public health expertise) and DJPR (as the contracting party), or for some other reason, it is clear that this was an aspect of the Program that was inadequate.

The expertise to ensure proper standards were embedded and maintained did not lie with the contracting agency. This was a structural problem that permeated the Program. DHHS should have been responsible for ensuring implementation of its own standards.

VULNERABILITIES WERE CREATED BY THE ARRANGEMENTS WITH HOTELS AND COMMERCIAL CLEANING COMPANIES

It was not appropriate for the State to place contractual responsibility for infection prevention and control on hotels and commercial cleaners.

Contracts entered into by DJPR on behalf of the State allocated to hotels and cleaners key responsibilities for worker safety, including the need to provide PPE and to manage infection prevention and control.

It was not appropriate for the State Government to seek to impose the risk of transmission of COVID-19 onto the hotel and cleaning providers in the way in which these contracts purported to do. The Hotel Quarantine Program was not just a workplace or a private arrangement between employer and employee, or contractor and principal. It should not have been seen solely through that lens. It was, fundamentally, a measure to protect the public from a significant health threat.

There was simply too much at stake for the State to have conferred such responsibilities on private service providers, whose ordinary roles were so far removed from infection prevention and control measures.

The conclusions reached on this issue echo the evidence of the Premier, who stated that it would 'absolutely' be a concern if the relevant departments 'didn't take an active role in ensuring that there was proper infection control and prevention measures in place', especially where the State had assumed such risk by bringing members of the public into the hotels.[40]

DHHS as the control agency

What became clear through the course of this Inquiry was how complex and unclear the governance structures surrounding, and relevant to, the Hotel Quarantine Program truly were, and the intractable problems this caused throughout the Program. Indeed, the complexity of those governance structures presented like a Gordian knot that developed from the early days of the Hotel Quarantine Program. This matter is examined in detail in Chapter 8.

The commencement of the Hotel Quarantine Program in DJPR, during that March weekend, created the first fracture in the lines of accountability and governance from which aspects of the operation did not recover. Even though the Program was quickly reset within Victoria's emergency management framework, that DJPR held the contracts for hotels, security guards and aspects of cleaning contributed to the firmly held view in DHHS that it was in a model of 'shared accountability' with DJPR for the operation of the Hotel Quarantine Program.

Victoria's emergency management framework contains an extensive array of legislation, documents, manuals and plans that endeavour to address the range of emergencies that could transpire, and it sets out structures by which to respond to those various types of emergencies. One of the aims of the emergency management framework is to establish efficient governance arrangements that clarify roles and responsibilities of agencies, and to facilitate co-operation between agencies.

The emergency management framework classifies emergencies into different classes depending on the type of emergency being faced. The framework also specifies which agency will be designated as the 'control agency' depending on the expertise required to respond to that emergency. The COVID-19 pandemic is a Class 2 emergency and DHHS is designated the control agency for such emergencies.

The use of the emergency management framework to respond to the COVID-19 pandemic was the first time it had been used in Victoria for a large-scale Class 2 emergency.

While there was a range of plans in place to support this framework, none of those plans contemplated the mass mandatory quarantine of people in response to a Class 2 emergency.

While there was no controversy about the appointment of DHHS as the control agency for this Class 2 emergency, there was considerable controversy that persevered throughout the Inquiry as to what it meant to be the control agency.

A 'control agency' is the agency identified in the arrangements that is the **primary agency responsible** for responding to a specific form of emergency. The control agency's responsibilities are set out in the Emergency Management Manual Victoria (EMMV) and include the appointment of 'controllers' for the specific form of emergency.

The importance of having a control agency in emergency management is to ensure clear lines of command and control, as this is critically important to lead and manage the emergency, coordinate the response and ensure there is no ambiguity about who is accountable for the management of the emergency.

Notwithstanding that DHHS acknowledged it was the control agency, it characterised its role in the Hotel Quarantine Program as one in which it had a 'shared accountability' with DJPR. It relied on several lines of reasoning to characterise its role in this way. First and foremost, it relied on the concept that the overall response to the pandemic and the Hotel Quarantine Program fell within the meaning of a *complex emergency* as contained in the EMMV. In such circumstances, the need for 'shared accountability' is referred to but the reference goes on to make clear that, in these collaborative responses as between agencies, there is a need for a single agency to be responsible as the lead agency.

To the detriment of the operation of the Hotel Quarantine Program, DHHS did not accept that role or responsibility of being the single lead agency during the running of the Program or, indeed, even on reflection, during this Inquiry. This left the Hotel Quarantine Program without a government agency taking leadership and control and the overarching responsibility necessary to run a complex and high-risk program. DHHS was the government agency that had this responsibility. Not only was it the control agency in emergency management terms, but it was the repository of public health expertise and it was the government department that had responsibility for the legal powers exercised to detain people in quarantine.

Notwithstanding this fundamental mischaracterisation of its role and function, adopting the structure and language of the emergency management framework, DHHS appointed a range of 'controllers' and 'commanders' inside complex and, at times, inexplicable internal governance structures that served to complicate and obfuscate reporting lines and accountabilities rather than create clarity of role definition and lines of command.

Prior to the commencement of the Hotel Quarantine Program, the then Secretary to DHHS, on the advice of one of her deputy secretaries, departed from the expectation of the emergency management framework that the CHO would be appointed State Controller for a public health emergency and, instead, appointed two emergency management experts as State Controllers. This was despite the CHO's disagreement with this course of action.

This decision was taken on the basis that the CHO would not have the 'bandwidth' to fulfil all of the functions he had in the context of the state-wide emergency, and on the basis that the role required emergency management logistics (hence, the appointment of two such experts).

The impact of this decision had three important ramifications. First, it contributed to the mischaracterisation of the operation of the Hotel Quarantine Program as a 'logistics' and 'compliance' exercise rather than a public health program. Second, it created another fragmentation in governance of the Program, as it removed the head of the DHHS Public Health Team from much-needed operational oversight of the Program. Third, it meant that those in leadership roles for the Program were not people with public health expertise.

Both the CHO and DCHO expressed concern within DHHS that people were being detained using the legal powers authorised by them in circumstances where they did not consider they had sufficient authority, oversight or awareness in respect of how the operation was being run 'on the ground'. There was also considerable disquiet expressed from some senior members of the Public Health Team inside DHHS about there being a lack of clarity in the command structures adopted by DHHS for the operation of the Program.

Inside the DHHS internal governance structures, there was not an agreed view or consistent understanding between emergency management executives and the public health senior members as to who was fulfilling what functions and roles, and who was reporting to whom. In the context of the operation of the Hotel Quarantine Program, this created confusion and fragmentation in governance structures and, apparently, tension and frustration.

The mischaracterisation of the Hotel Quarantine Program as a 'logistics' and 'compliance' exercise meant that focus did not fall on the need for expert infection and prevention oversight to be embedded into the Program.

The impact of the pandemic and its demands on the Public Health Team inside DHHS revealed, among other shortages, a significant lack of much-needed public health infection prevention expertise employed by DHHS.

By mid-April 2020, it was recognised that the Hotel Quarantine Program would likely be in place for 12–18 months and therefore needed to be taken out of an emergency management response structure and run as a departmental program. To that end, a centre was set up, ironically called the Emergency Operations Centre, and run by DHHS 'commanders'. Unfortunately, DHHS did not take this opportunity to rethink its operation but, rather, continued to see itself as coordinating the day-to-day operation of the hotel sites without taking overall responsibility for the Program.

DHHS executives continued to see DHHS as responsible for providing 'broad' policy support, supporting the health and wellbeing of people being held in quarantine, obtaining advice and guidance from the public health arm of DHHS and passing that on to various agencies on-site, including DJPR, hotel operators and private security firms, in the firm view that each agency was responsible for its own operation on-site.

The on-site presence that DHHS did have was through its Team Leaders and Authorised Officers. Neither of these roles had functions of oversight or direction or supervision. The Team Leaders were seen as problem solvers or liaison points on-site. The Authorised Officers were responsible for the exercise of legal powers to detain people in quarantine. They exercised these legal powers to grant leave and exemptions and discharge people from quarantine at the end of their 14-day period. Neither had any role, authority or expertise in supervising the safety of the site generally.

Just as DHHS did not see itself as the control agency responsible for the Program, it did not see itself as 'in charge' on-site. This left brewing the disaster that tragically came to be. This complex and high-risk environment was left without the control agency taking its leadership role, which included the need to provide on-site supervision and management. This should have been seen as essential to an inherently dangerous environment. That such a situation developed and was not apparent as a danger until after the two outbreaks, tragically illustrated the lack of proper leadership and oversight, and the perils this created.

MINISTERIAL BRIEFINGS

During the course of the Inquiry, the issue of Ministerial briefings by senior public servants arose on more than one occasion.

It was a matter beyond the remit of this Inquiry to engage in an examination of the Westminster system of ministerial and public service lines of accountability and responsibility. However, evidence that emerged on this issue during the Inquiry signalled that an appropriate agency or entity should undertake an examination of what occurred to assess what action may be necessary. This is addressed in Recommendation 76.

Outbreaks at the Rydges and Stamford hotels

The 'second wave' of COVID-19 cases in Victoria was linked to outbreaks in two hotels — Rydges Hotel in Carlton (Rydges) and the Stamford Plaza Hotel in Melbourne's CBD (the Stamford). Chapter 9 analyses these outbreaks.

THE DESIGNATION OF A 'HOT HOTEL'

The idea of cohorting positive COVID-19 cases together in a single location or a 'hot hotel' was a sound public health measure. If appropriately and effectively done, it would have ensured that others in quarantine, who were not infected, had a reduced chance of being infected by reason of their quarantine.

Once the decision was made to establish a hot hotel, it behoved those involved in deciding to implement that concept to pay particular attention to the IPC measures deployed at that location, to ensure that the standards and policies were appropriate and that there was appropriate compliance and adherence to them. They should have had particular regard to the make-up of the workforce and habits of those undertaking duties there.

There were no documents before the Inquiry that answered the question as to who made the decision to use Rydges as a 'hot hotel' and why that decision was made. This is yet another instance of where it could not be made clear to the Inquiry who was responsible for critical decisions in the Program.

At the time the decision was made to cohort COVID-positive cases at Rydges, insufficient regard was paid to infection prevention and control standards across the entire Program and, particularly, to that location, given the appreciable and known increased risk of transmission commensurate with concentrating positive cases in one location.

ADDITIONAL SAFEGUARDS REQUIRED IN A 'HOT HOTEL' ENVIRONMENT

IPC expertise was not sufficiently embedded in the design of Rydges as a 'hot hotel.'

As many staff working in the Hotel Quarantine Program were engaged on a rotating rostered basis until at least 28 May 2020, the provision of episodic training sessions was inadequate to mitigate against the risks posed by not only a hot hotel environment, but any quarantine hotel.

What was necessary was a comprehensive and ongoing training program for all on-site personnel that was overseen by a supervisor, and on-site monitoring for compliance.

EPIDEMIOLOGICAL AND GENOMIC EVIDENCE

Breaches of containment in the Program, in May and June 2020, contributed to the 'second wave' of COVID-19 cases in Victoria, with all of its catastrophic consequences to life, health, wellbeing and the economy of the State.

As set out in Chapter 2, around 90 per cent of COVID-19 cases in Victoria since late May 2020 were attributable to the outbreak at Rydges. Just under 10 per cent of positive cases in Victoria since were attributable to the outbreak at the Stamford in mid-June.

The evidence does not provide the basis to find, with certainty, what specific event caused the transmission from infected traveller to worker. But it does show the likely mode of transmission at Rydges was through environmental transmission, particularly in light of the evidence of poor cleaning products, poor PPE use by security guards, security guards being used to provide some cleaning services and the lack of education around cleaning practices.

The evidence does not permit a conclusive finding as to whether the Stamford outbreak was due to person-to-person contact or environmental transmission.

Issues in respect of poor IPC practices at the Stamford mirrored what had been observed during the investigation into the Rydges outbreak.

Notwithstanding the considerably higher number of frontline staff who became infected at the Stamford, measures taken, whether by way of prompt and appropriate cleaning or because of the immediate and swift quarantining of all staff, or both, were more effective in preventing the spread of the virus into the community.

THE GENESIS OF EACH OUTBREAK

Infection prevention and control measures at both hotels were inadequate, namely in terms of cleaning, PPE use, and staff training and knowledge. Those inadequacies contributed to the transmission of the COVID-19 virus from returned travellers to those working in the Program. In particular, there were pervasive issues identified with delays in deep cleans and in quarantining exposed staff that may have also contributed to the outbreaks.

The need to quickly quarantine exposed staff was significant. As DHHS was aware of the risk posed by fomite transmission, and given there was no reliable data to exclude or limit its likelihood, a more prudent, safety-based approach would have been to furlough every member of staff that had been exposed to all reasonably perceived primary and secondary sources of transmission. This was a reasonable option that would have been apparent to those with the mandate to contain the virus. That this would have required effectively shutting down the hotel or bringing in a replacement cohort of staff (with corresponding substantially increased PPE and infection prevention and control measures) ought not to have been persuasive arguments against such cautious measures. The former approach was taken merely days later without apparent adverse consequence. The delay to isolate the staff earlier resulted in a lost opportunity to curb the further spread of this virus from the exposed workforce into the community.

With respect to contact tracing, timely and accurate information is vital to efforts to contain outbreaks. Detailed information about the movements of cases and close contacts is particularly vital to contact tracers.

A ‘two way’ flow of information is important for contact tracing. Just as it is important for individuals to be forthcoming with public health authorities, it is important for health authorities to provide individuals and private entities with information that would enable those individuals and entities to take appropriate action in the event of a possible exposure.

Although the use of hotels as a setting for mass quarantine may have been unprecedented, factors that played a part in the outbreaks from Rydges and the Stamford should have been foreseen had there been an appropriate level of health focus in the Program. It was an inescapable conclusion that the second wave that hit Victoria was linked to transmission events out of both of those hotels from returned travellers to personnel on-site and then into the community.

The testing regime in the Hotel Quarantine Program

Testing of those detained in the Hotel Quarantine Program was clearly an important aspect of its stated aim, being to minimise the possibility of COVID-19 transmission into the community via returning travellers. Chapter 10 of the Report considers the testing regime.

Initially, only those who showed symptoms were offered a test, and testing in the Hotel Quarantine Program remained entirely voluntary until July 2020. The mandatory testing powers contained in the *Public Health and Wellbeing Act 2008* (Vic) were considered but not used.

A new approach was implemented, in July 2020, when an additional 10 days of quarantine was introduced for those who refused testing on Day 11. This new approach was justified and appropriate.

It is understood that this will be bolstered in the revised hotel quarantine program with mandatory testing of staff and all on-site personnel working in the program, along with voluntary testing of their families and household contacts.

Both approaches represent substantial improvements to the initial testing program that risked undermining, at least to some degree, the efficacy and intentions of the Hotel Quarantine Program and, in doing so, risked transmission of COVID-19 from those detained in the Program into the community.

To further protect against these risks, the legal basis for, and utility of, a testing regime requiring returned travellers who refuse testing at the conclusion of their 14-day quarantine period to undergo mandatory testing should be further explored.

The pivot to a health hotel model

Chapter 11 discusses the shift, in late June 2020, from the Hotel Quarantine Program run by DJPR and DHHS to a health hotel model, with sole responsibility for the Program sitting with DJCS.

Notwithstanding the various explanations and justifications given in evidence, the Government's decision to remove the operation of this public health program (Hotel Quarantine) away from the department responsible for public health, DHHS, led to the conclusion that the Government formed a view, by July 2020, that a single department needed to run the Program and that it did not have confidence that DHHS was capable of running the Program on its own at that time.

The pivot created a governance framework whereby DJCS had clear and direct supervision and control over — and accountability for — those working within the Program, compared to the fragmentation and obfuscation of responsibility in the earlier iteration of the Program.

DHHS was slow to realise it needed to bring a greater clinical focus to the Hotel Quarantine Program. It was aware of, at least, some of the deficiencies in the Hotel Quarantine Program well before June 2020; it could, and should have, remedied them sooner.

By late June, after the second outbreak, only one hotel — the Brady Hotel — was operating under a model whereby Alfred Health provided clinical and infection prevention and control services to that hotel. An approach to Alfred Health could have been made sooner and the training and clinical governance developed by Alfred Health implemented more broadly than at one hotel.

The decision made by DHHS, in late June, to seek an alternative workforce to replace private security indicated that DHHS had the power and authority to make that decision and could have done so earlier, either by consultation with DJPR or by having the contracts transferred to itself.

The 24/7 police presence at the 'health' hotels recognised the value of a trained, salaried security presence that had supervised occupational health and safety operating procedures as required by a strong industrial advocate in the Police Association, and a recognition by Victoria Police of the need for worker safety operating procedures.

The involvement of unions and industrial advocates in the planning of the new model — there were multiple references in Crisis Council of Cabinet submissions to the importance of consultation with the Community and Public Sector Union, the Transport Workers Union and the Police Association — reflected the greater degree of concern attached to workplace health and safety for those government employees than appeared to have been the case when planning for workplaces that were to be largely staffed by private contractors.

Building consideration of returned travellers' rights and welfare into a future program

Chapter 12 analyses whether and how the rights and welfare of returned travellers were approached in the Hotel Quarantine Program and considers how a future quarantine program could be strengthened in this regard.

THE VICTORIAN CHARTER OF HUMAN RIGHTS AND RESPONSIBILITIES

Chapter 12 concludes that Dr van Diemen, in making mandatory detention orders, did give serious and proper consideration to her Charter obligations, in the circumstances, and she assessed her obligations with the evidence available to her at that time.

While it is accepted there were extraordinary pressures and concerns impacting upon the decision to impose the mandatory Hotel Quarantine Program in March 2020, a more considered and orderly approach to finding measures that are the least restrictive should now be properly undertaken for the next iteration of a quarantine program for returning travellers.

The recommendations made in Section 2 of the Interim Report regarding the option of a home-based quarantine model are adopted for this purpose.

Mandatory home-based quarantine or a hybrid model involving initial reception into a quarantine hotel for a form of 'triage', taking into account all relevant factors for each returned traveller, with increased compliance mechanisms, should be given consideration, consistent with Charter requirements.

Such a model may also be, at least, as effective at achieving the objective of containing the virus and balancing the Charter obligations with the need to protect the health and wellbeing of all Victorians.

PSYCHO-SOCIAL IMPACTS OF QUARANTINE ON RETURNED TRAVELLERS

The health and welfare needs of people in the Hotel Quarantine Program had a considerable impact on the manner in which the Program operated and developed.[41] These needs created many problems for those in quarantine, in circumstances where the Program had to be deployed to receive hundreds of people at great speed, with little or no information about returning travellers before they arrived.[42]

In some instances, the manner in which these needs were handled increased the risk of transmission,[43] detrimentally affected the health and wellbeing of people detained in quarantine and created considerable strain on those working in the Program.

The health and wellbeing needs of returned travellers included the need to not be unnecessarily exposed to a risk of infection while being transported from the airport to the quarantine hotel. It was necessary that proper IPC measures be implemented with respect to the transit of returned travellers to their hotels, just as those measures were required to be implemented in hotels.

The health and wellbeing needs of those in quarantine must be a central feature of a future quarantine program.

In the Hotel Quarantine Program, expert advice should have been obtained in order to understand and account for the health and wellbeing risks that this type of quarantine arrangement posed to people and to provide guidance to the Program on how to best manage them. Such expertise could have spoken to the challenging behaviours that would likely be encountered as a result of the deprivation of liberty involved in the Program, and the measures that were needed to proactively account for them and other health and welfare issues.

The fact that such advice was not obtained was likely to be attributable to factors including the speed with which the Program had to be set up, that there was no developed plan or experience for holding people in mass quarantine facilities and, what has been found to be, the disproportionate focus of those designing and implementing the Hotel Quarantine Program on logistics, when health should have been given greater attention. What this evidence showed was that there was some, but not sufficient, attention given to the mental health and overall wellbeing of returned passengers. While the focus on health and wellbeing did increase as the Program developed, there were shortcomings or systemic gaps in meeting the health and human needs of those in quarantine, including:

A. not initially understanding, or adequately addressing the fact that:
    I. being detained in quarantine in a hotel room for 14 days would be a very difficult and stressful experience for some
    II. a percentage of the people held in quarantine would have significant health needs, either physical or mental, or both, and would need particular support
    III. having no access to fresh air or exercise would be extremely difficult for some people
B. the information provided by airlines and/or Commonwealth officials to allow the State to make proper preparations to accommodate people's health and wellbeing needs was limited and inadequate
C. the State had no control of the numbers arriving at short or no notice, which made the health and wellbeing aspects of the Program very difficult to address adequately
D. transport arrangements on arrival at airports created an immediate stressor for some people as PPE was not consistently available or worn and buses were reported by some to be crowded
E. clear, consistent and accurate information was necessary but difficult to find or not available, or in a language that was not accessible. The system for acquiring and maintaining information on people in quarantine was inadequate
F. there was no clear, consistent and communicated process for people to raise issues and concerns about health and wellbeing and receive a timely response.
G. the process for accessing applications for leave and/or exemptions was not clear or consistent.

The difficulties these posed were not sufficiently revisited over time. That was particularly the case in the context of communication and the degree of responsiveness when those in quarantine attempted to resolve issues. There was a distinct lack of consistent, easily accessible and transparent information available to people detained in the Program regarding the circumstances of their detention and the policies that applied to it.

The Inquiry accepts that efforts were made to keep returning travellers safe and comfortable and to offer appropriate support to them. But meeting the health and wellbeing needs of such a wide range of returned travellers is a complex and nuanced task that needs proper attention. Those responsible for the welfare of people in quarantine needed to have been continuously mindful of performing their roles in a way that did not impose greater stresses than those already imposed by reason of a highly stressful and unusual situation.

Victoria's Quarantine Program: future options

This Inquiry investigated why the Hotel Quarantine Program was established and how it was managed. It identified failings in the Program's design and administration, including with respect to where focus, responsibility and accountability lay.

Fundamentally, this Inquiry highlighted that the Hotel Quarantine Program was administered without the focus on infection prevention and control that was necessary to properly contain the COVID-19 virus and the catastrophic consequences of its spread into the community.

This Inquiry has not been solely about identifying deficiencies or finding fault. To do so would be to miss opportunities for improvement in Victoria's future quarantine program.

There was evidence from some witnesses not just about what went wrong but, also, what could have been done better. Where deficiencies have been identified throughout the course of this Inquiry, it has given rise to lessons that can be learned. It has also given rise to 81 recommendations.

The Inquiry's Interim Report recommended options for the future quarantining of international arrivals. Those recommendations, which are adopted into this Final Report, set out two models that would operate concurrently: the first being a facility-based model and the second being a home-based model.[44]

Those models were proposed having taken into account, and in response to, the issues that were raised during the Inquiry.

A full list of the Inquiry's recommendations, flowing from the Interim Report and this Final Report are set out at pages 38–49.

Endnotes

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3 Exhibit HQI0130_RP Witness statement of Ms Pam Williams, 5 [15].

4 Exhibit HQI0135_RP Witness statement of Ms Merrin Bamert, 27 [94]; Exhibit HQI0130_RP Witness statement of Ms Pam Williams, 5 [15].

5 National Review of Hotel Quarantine, 'Attachment A - Quarantine – National Statistics', 34-35 <https://www.health.gov.au/sites/default/files/documents/2020/10/national-review-of-hotel-quarantine.pdf>.

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16 Prime Minister 'Coronavirus Measures Endorsed by National Cabinet' (Media Release, 16 March 2020) <https://www.pm.gov.au/media/coronavirus-measures-endorsed-national-cabinet>.

17 Prime Minister 'Update on Coronavirus Measures' (Media Statement, 20 March 2020) <https://www.pm.gov.au/media/update-coronavirus-measures-0>.

18 Prime Minister 'Update on Coronavirus Measures' (Media Release, 27 March 2020) <https://www.pm.gov.au/media/update-coronavirus-measures-270320>.

19 Exhibit HQI0106_RP Witness statement of Dr Sarah McGuinness, 7 [27]; World Health Organization, 'Modes of transmission of virus causing COVID-19: implications for IPC precaution recommendations: scientific brief' (Brief, 29 March 2020) <https://www.who.int/news-room/commentaries/detail/modes-of-transmission-of-virus-causing-covid-19-implications-for-ipc-precaution-recommendations>.

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25 Transcript of day 21 hearing 21 September 2020, 1770.

26 See Exhibit HQI0073_P Witness statement of Ms Hayley Baxter, 4 [15], 8–9 [28(c)], 12 [47].

27 Ibid 20 [79].

28 Exhibit HQI0049_RP Witness statement of Mr Unni Menon, 7 [23].

29 Exhibit HQI0082_RP Second witness statement of Ms Rachaele May, 3 [15].
30 Ibid; Exhibit HQI00049 Witness statement of Mr Unni Menon, 7 [21]-[23].
31 Exhibit HQI00035_RP Operation Soteria Operations Plan, DOJ.504.010.8488 (version 1.0); Exhibit HQI0126_RP Annexures to witness statement of Ms Melissa Skilbeck, DHS.0001.0001.1527 (version 2.0); DHS.0001.0001.2254 (version 3.0); Exhibit HQI0186_RP First witness statement of Ms Kym Peake, 49 [252]–[254].
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33 Exhibit HQI0160_P Witness statement of Dr Annaliese van Diemen, 4-5 [24].
34 Submission 03 Department of Health and Human Services, 31 [166].
35 Exhibit HQI0049_RP Witness statement of Unni Menon, 10 [37].
36 Exhibit HQI0041_RP Witness statement of Mr Shaun D'Cruz 4 [16].
37 Exhibit HQI0103_RP Witness statement of Dr Simon Crouch, 7 [37].
38 See Exhibit HQI0001_P Witness statement of Prof. Lindsay Grayson, 9 [42].
39 Exhibit HQI0128_RP Witness statement of Mr Michael Girgis, [13].
40 Transcript of day 25 hearing 25 September 2020, 2144.
41 Submission 03 Department of Health and Human Services, 59-64 [329]–[344].
42 Exhibit HQI0162_P Witness Statement of Ms Andrea Spiteri, 15 [59]; Submission 03 Department of Health and Human Services, 60 [330].
43 Exhibit HQI0191_RP Initial response to the Board of Inquiry from DHHS, 8; Exhibit HQI0130_RP Witness statement of Ms Pam Williams, 8-9 [22(c)]; Exhibit HQI0075_P Witness statement of Mr Noel Cleaves, 14 [76(a)-(b)]; Transcript of day 13 hearing 4 September 2020, 912-913.
44 Board of Inquiry into the COVID-19 Hotel Quarantine Program (Interim Report, 6 November 2020) 24 [5] <https://www.quarantineinquiry.vic.gov.au/reports>.

COVID-19 Hotel Quarantine Inquiry Recommendations

The COVID-19 Hotel Quarantine Inquiry delivered its Interim Report and Recommendations to the Governor of Victoria on 6 November 2020.

The Interim Report underpins this Final Report with recommendations that support the development and implementation of a robust quarantine system for the State of Victoria.

The Final Report incorporates and adopts the 69 recommendations presented in the Interim Report set out below. The Final Report recommendations flow on from the Interim Report and, as such, are numbered from Recommendation 70 onwards.

Interim Report Recommendations (Recommendations 1–69)

The Quarantine Program (Section 1 of the Interim Report)

Purpose of the Quarantine Program

1. The Quarantine Program for international arrivals into Victoria be clearly defined as a public health measure to address the need to contain the transmission of COVID-19 into the community while ensuring that the health and wellbeing of those placed into quarantine is properly addressed together with the need to ensure the safety of all personnel working in the Program.

Control of the numbers

FACILITY-BASED MODEL

2. To achieve an orderly and manageable process, the Victorian Government must do all things possible to ensure appropriate and necessary processes are put in place to control the numbers of international arrivals at any given time, informed by the availability of fully operational facilities that are ready and able to receive the agreed numbers.

HOME-BASED MODEL

3. The numbers of international arrivals also be controlled to make practical and achievable the individual engagement and suitability assessments required for home-based quarantine (see Recommendation 59).

Information gathering

4. The Victorian Government takes all possible steps to obtain the co-operation and assistance of Commonwealth agencies and officials, to ensure that the best available and most relevant information is provided to State officials as far in advance as possible for each international arrival, in order to facilitate an informed suitability assessment for appropriate placement in the Quarantine Program (including suitability to quarantine at home).

Electronic record-keeping

5. The Victorian Government liaises with the Commonwealth to develop a process whereby such information about each international arrival bound for a Victorian point of entry can be placed in an electronic file made available to the state authorities as expeditiously as possible prior to the arrival, and for that file to contain targeted information for State officials to assist in the management of the necessary quarantine arrangements.
6. All necessary actions be taken to have that electronic file follow the individual from international arrival through to the completion of their quarantine obligations and include all relevant information to assist in that person's safe transition into the community.

Safe and suitable physical environment for a quarantine facility

7. Given there are currently no identified specific purpose-built quarantine facilities in Victoria, that hotels remain a reasonable and viable option for international arrivals needing to be placed into quarantine. Relevant criterion for selecting suitable locations as quarantine facilities include:
    A. sufficient proximity to a hospital
    B. being within commuting distance for adequate numbers of appropriately skilled personnel for the facility
    C. the facility's:
        I. ability to allow for the physical separation of people
        II. ability to properly implement all necessary infection control requirements, as far as practicable
        III. capacity to make necessary modifications and additions to minimise the risk of transmission, as far as practicable
        IV. ability to provide safe access to outside areas for fresh air and exercise breaks
        V. ability to provide for specific needs such as mobility issues or the need to cater for infants.

Governance structure

8. The Victorian Government ensures that at the ministerial and departmental level, clear control and accountability structures are in place for the operation of the Quarantine Program (including the facility-based program together with any home-based program),to be operated by one Cabinet-approved department, with support from other departments as necessary, but in accordance with a clear line of command vesting ultimate responsibility in the approved department and Minister.

9. The Victorian Government ensures that the Minister and department approved as the single agency to be accountable for the operation of the Quarantine Program is the department that is the sole agency responsible for any necessary contracts.
10. The responsible Minister ensures that the departmental structure for the operation of the Quarantine Program has clearly defined roles that have the necessary expertise and advice embedded at appropriate levels of seniority in the operational structure (the departmental governance structure).
11. The responsible Minister ensures that the appropriate senior members of that governance structure form a body ('Quarantine Governing Body') that meets regularly, is chaired by the Secretary to the responsible Minister, maintains records of its meetings including records of all decisions reached, and provides reports to the Minister from those meetings including in respect to decisions reached.
12. The responsible Minister ensures that the Quarantine Governing Body provides regular, timely and accurate reports to the Minister as to the operation of the Quarantine Program, across all sites, and including all aspects of the entire Quarantine Program, including full and accurate reports as to compliance, monitoring and risks measured against the Purpose (as set out in Recommendation 1).
13. The responsible Minister ensures that the Quarantine Governing Body sets clear and consistent lines of accountability across all individual sites operating as quarantine facilities.
14. The Quarantine Governing Body ensures that each individual quarantine facility site has provided role clarity to all personnel working on-site.
15. The Quarantine Governing Body ensures that each quarantine facility has a Site Manager responsible for the overall operation of that facility, who is accountable to the Quarantine Governing Body.
16. The Site Manager role should be filled by a person who has experience in the management of complex healthcare facilities.

On-site role clarity

17. The Site Manager ensures that all personnel working in the quarantine facility understand their role and responsibilities.
18. The Site Manager ensures that all personnel on-site understand to whom they report and all lines of reporting and accountability on-site.

Appropriate mix of personnel on-site

19. The model contained in paragraph 21 of Section 1 be considered an appropriate model for the operating structure of a quarantine facility.
20. The Chief Commissioner of Police be requested to provide a 24/7 police presence on-site at each quarantine facility.
21. The responsible Minister and Quarantine Governing Body ensure that infection prevention and control expertise is embedded in each quarantine facility site, together with the necessary clinical personnel, to meet the mental and physical health needs of people in quarantine. To this end, the model presented and expanded upon at paragraph 21 of Section 1 [of the Interim Report] should be considered a good basis for all quarantine facilities.

Dedicated personnel

22. Accepting the need to bring in expertise, every effort must be made to ensure that all personnel working at the facility are not working across multiple quarantine sites and not working in other forms of employment.
23. To achieve the aims of Recommendation 20,every effort should be made to have personnel working at quarantine facilities salaried employees with terms and conditions that address the possible need to self-isolate in the event of an infection or possible infection, or close contact exposure, together with all necessary supports, including the need to relocate if necessary and have a managed return to work.

Infection prevention and control unit on each site

24. The Quarantine Governing Body ensures that each quarantine facility has a properly resourced infection prevention and control unit embedded in the facility with the necessary expertise and resources to perform its work.

Training and workplace culture

25. The Site Manager be responsible for ensuring that all personnel working on-site are inducted into a culture of safety, focussed on infection prevention and control provided by those with the expertise to deliver such training.
26. The culture of safety to be fostered by the Site Manager should encourage collaboration, open discussion as to mistakes and oversights and speaking up about concerns and potential health and safety risks.
27. The Site Manager be responsible for ensuring that all personnel working on-site are engaged in ongoing training in infection prevention and control provided by those with the expertise to deliver such training tailored to the specific roles to be performed on-site.
28. The Site Manager ensures that the personnel on-site who have the expertise in infection prevention and control are engaged in ongoing monitoring and supervision of all of the requirements in place for infection prevention and control, which includes matters such as individual behaviour, the use of personal protective equipment (PPE) and cleaning practices.

Acquisition and use of PPE

29. The Site Manager ensures that the infection prevention and control experts direct the acquisition, distribution and use of PPE with specific, clear and accessible directions to all personnel on-site (acknowledging that such instructions may vary according to role).

Cleaning practices in quarantine facilities

30. The Site Manager ensures that all cleaning practices throughout the site are developed, directed and overseen by personnel with infection prevention and control expertise, and include 'swab' testing as directed by the infection prevention and control experts.

Independent safety auditing

31. The Quarantine Governing Body ensures that each quarantine facility site has regular, independent safety audits performed (as against the Purpose set out in Recommendation 1) with reports from those safety audits to be provided to both the Site Manager and the Quarantine Governing Body.

Period of quarantine

32. A 14-day period in quarantine is appropriate, unless the current state of expert opinion changes, or as otherwise directed by the Chief Health Officer or their delegate.

Cohorting of positive cases

33. Any decision to cohort known positive cases at a particular quarantine facility should only occur after proper consultation with the appropriate experts as to suitability of the facility, any necessary adjustments to the facility, and the experts being satisfied that all necessary infection prevention and control precautions are in place at that facility.

Testing

34. All people in quarantine, whether facility or home-based, should be tested on such days as directed by the Chief Health Officer or their delegate, regardless of reported symptoms.
35. For those assessed as suitable for home-based quarantine, it should be a condition of such placement that a person agrees to be tested, as directed by the Chief Health Officer or their delegate.

Clinical equipment on-site

36. On advice from the appropriate experts, adequate and readily accessible on-site clinical equipment to address the range of possible health needs of those in quarantine should be placed at each quarantine facility, together with the necessary resources to effectively sanitise any such equipment.

Safe transport arrangements

37. Given the possible COVID-19-positive status of an individual in a quarantine facility or home-based quarantine, arrangements and protocols for the safe transporting of a person for either urgent or non-urgent health reasons should be developed.

Contact tracing unit

38. That the Quarantine Governing Body ensures that each quarantine facility has a contact tracing unit embedded in the facility that can build familiarity and trust with on-site personnel and has accurate and up-to-date information for such personnel, to enable a rapid and efficient response to any possible outbreak and provide ongoing training to all personnel as to what is required in the event of potential or actual infection.

Evacuation procedure on-site

39. Each Site Manager should develop an emergency evacuation plan for the site and ensure it is well understood and regularly rehearsed by all personnel working in the facility and communicated to each of those placed in the quarantine facility.

Health and wellbeing of people in quarantine

Daily health and welfare checks

40. The Quarantine Governing Body ensures that daily health and welfare checks be embedded into the operation of each quarantine facility.

41. Site Managers arrange standard daily health and welfare checks on people in quarantine, to be conducted with the assistance of available technology, such as a visual telehealth platform, where the individual is willing and able to participate in this way or as otherwise directed by the Clinical Manager (as per the model in paragraph 21 of Section 1).

42. The Quarantine Governing Body provides direction, advice and resourcing as to the use of visual telehealth platforms to enable a case management approach to an individual's health needs, which may enable family, interpreters, existing or preferred healthcare professionals and supports to participate in case conferencing directed to the health and wellbeing of those in quarantine facilities.

43. That the daily health and welfare checks be conducted by appropriately skilled personnel who are also able to screen for any unmet needs or concerns, rather than limited to a check on COVID-19 symptoms.

44. Suitable health and welfare checks by appropriately skilled personnel should be conducted on those in home-based quarantine.

FRESH AIR AND EXERCISE BREAKS

45. The Quarantine Governing Body ensures the ability to provide daily fresh air and exercise breaks for people placed in quarantine facilities is factored into not only the physical layout, but also the staffing of the facility, to ensure there is provision for safe, daily opportunity for people in quarantine facilities to have access to fresh air and exercise breaks.

COMMUNICATION WITH AND TO PEOPLE IN QUARANTINE FACILITIES OR PRIOR TO ENTRY INTO THE QUARANTINE PROGRAM

46. The Quarantine Governing Body ensures that each facility program operates on an understanding and acknowledgment that a number of people placed in quarantine facilities will experience a range of stressors as a result of being detained in a quarantine facility for 14 days.
47. The Quarantine Governing Body ensures that all reasonable steps are taken to assist those who will be particularly vulnerable and require additional skilled support by reason of their being held in quarantine.
48. The Quarantine Governing Body ensures that every effort is made to provide multiple forms of communication of information throughout the period of quarantine to assist in reducing the distress and anxiety that some people will experience in quarantine.
49. The Quarantine Governing Body should address the need to provide accurate, up-to-date and accessible information to all people seeking to enter Victoria through international points of entry, including in community languages, to ensure best efforts at communication are made for all international arrivals.
50. Site Managers ensure that clear, accessible and supportive styles of communication should be regularly used to enable people to have consistent and accurate information about what supports are available to them and who to contact if they have a complaint, a concern or an enquiry while quarantined in a facility.
51. To assist in creating support for people in quarantine facilities and ensuring that there is information available in a range of formats and languages, Site Managers should assign a role to an appropriate person who can coordinate communications and use various platforms (for example visuals, signs, social media, etc.) to encourage those in quarantine facilities to connect with one another. These platforms can also be used to regularly communicate general and relevant information.

Exemptions and temporary leave

52. Authorised Officers ensure that each person placed in quarantine, whether facility or home-based, is made aware of the process for requesting temporary leave or an exemption and the criteria upon which such requests will be assessed.
53. Authorised Officers make decisions about whether or not to grant an exemption or temporary leave as promptly as practicable.
54. Authorised Officers ensure that any conditions or restrictions on such grants should be clearly communicated to the person making the request, address the need to manage the risk of transmission of COVID-19 while that person is in the community and is monitored for compliance.
55. To assist Authorised Officers and enhance consistent decision-making, that each Authorised Officer be provided with a checklist and guidance material on all relevant considerations when determining applications for exemptions and temporary leave applications.

Language is important

56. Language such as ‘resident’ rather than ‘detainee’ be used to reduce the risk of such language having a negative effect on the culture of the facility and to reflect that quarantine is a health measure and not a punitive measure.

Transitioning out of quarantine facilities

57. People leaving quarantine facilities should be offered an opportunity for a 'de-brief' to assist with their transition out of the facility and also to enable the opportunity for feedback to be passed to the Site Managers to assist in maintaining a culture of continuous improvement.

Home quarantine model (Section 2 of Interim Report)

Home quarantine as an option

58. In conjunction with a facility-based model program for international arrivals, the Victorian Government develops the necessary functionality to implement a supported home-based model for all international arrivals assessed as suitable for such an option.

Control on numbers arriving

59. The Victorian Government does all things possible to ensure that appropriate controls are put in place to limit the number of international arrivals at any given time to make the necessary individual engagement and assessment for a home-based model practical and achievable.

Assessment of risk factors for home quarantine

60. The Victorian Government engages the appropriate expertise to develop a list of risk and protective factors to be used in the assessment of individual suitability for the home-based model.

61. To assist the Chief Health Officer and Authorised Officers in making such assessments, the Victorian Government engages personnel with the appropriate expertise and training, supported by the necessary resources, to support the Chief Health Officer and Authorised Officers to apply those risk factors to the individual circumstances of international arrivals.

62. The Victorian Government ensures that the Chief Health Officer and Authorised Officers are provided with the capacity and necessary resources to efficiently confirm the accuracy of information being provided for individual assessments of international arrivals.

Individual engagement

63. The Victorian Government takes all necessary steps to address the language and cultural needs of all international arrivals to ensure that accurate information is both obtained for assessment purposes and received and understood by the person subject to the Home Quarantine Directions.

64. The Victorian Government takes all reasonable steps to assess and provide any reasonable supports that may assist an individual or family to quarantine at home.

Conditions of Home Quarantine Direction accepted in the form of a personal undertaking

65. Accepting the need to do all things necessary to mitigate against the risk of non-compliance with a Home Quarantine Direction made by the Chief Health Officer or Authorised Officer, the Chief Health Officer or Authorised Officer could consider making the Home Quarantine Direction conditional upon the eligible person entering into a written undertaking, which could contain specific requirements that they must agree to, including (but not limited to):

    A. to submit to such COVID-19 testing during the period of home quarantine as is specified by the Chief Health Officer or Authorised Officer

    B. to allow such people as are required to carry out such testing to enter the premises at which the person is detained to conduct such testing

    C. to provide during the period of detention such information as is reasonably required by the Chief Health Officer or Authorised Officer in order to review whether their detention continues to be reasonably necessary.

66. Further, to underscore the gravity of any non-compliance, such an undertaking or agreement could also include an assurance from each person (over the age of 18 years) that they understand and agree to comply with each of the conditions of their quarantine and have understood the penalties that apply to any breaches.

Monitoring and compliance

67. The Victorian Government considers enhancing the range of methods for monitoring compliance with Home Quarantine requirements, such as electronic monitoring using smart phone technology and the use of ankle or wrist monitoring systems.

Penalties for non-compliance

68. The Victorian Government, in recognition of the risks to public health associated with any non-compliance with the Home Quarantine Directions, considers whether the current penalty regime is sufficiently weighted to enforce compliance.

69. The Victorian Government, in recognition of the risks to public health associated with any non-compliance with the Home Quarantine Directions, considers whether an offence should be created to apply to any person who knowingly enters a place where a person has been directed to Home Quarantine, unless that person has been authorised by the Chief Health Officer or Authorised Officer to do so.

Additional Final Report Recommendations (Recommendations 70–81)

Pre-pandemic planning (Chapter 3)

70. The Victorian Government, through the various national structures available to the Premier, the Minister for Health, the Secretary to DHHS and the Chief Health Officer, advocates for necessary action to be taken to address the recommendations from the *Review of Australia's Health Sector Response to Pandemic (H1N1) 2009* as to clarity on roles and responsibilities between different levels of government, management, support systems and communication and policy on quarantine and isolation.

71. The Secretary of DHHS engages with the appropriate representative bodies from the medical profession with a view to developing agreed plans as to the availability of medical expertise and resources in the event of a public health emergency and the need for future surge demands.

72. The Secretary of DHHS ensures that future pandemic planning exercises should specifically address the need for clarity of roles, structures and accountabilities to ensure the necessary detailed focus and preparedness as to the importance of these issues is widely understood and well-rehearsed.

73. The Secretary of DHHS, in consultation with representative bodies from the broader health sector, reviews the range of participants currently invited to pandemic planning exercises to assess how the range of representative participants could be expanded to include the broader health sector.

Role of the control agency and Ministerial accountability (Chapter 8)

74. The Emergency Management Commissioner clarifies the language used in the Emergency Management Manual Victoria to ensure that there is no possibility of any ambiguity about the role and responsibility of the control agency, including a more fulsome definition of what constitutes a complex emergency and the role of the designated control agency in a complex emergency.

75. The Secretary of DHHS engages in discussions with the President of the Australian Medical Association to address the availability of medical expertise to meet current and future surge and planning demands for public health emergencies.

76. That the Public Sector Commissioner examines the evidence that emerged in this Inquiry as to the lines of accountability and responsibility as between Departmental heads and Ministers and gives guidance across the public service as to the obligations, both in law and in practice, on heads of departments and senior public office holders.

77. The Emergency Management Commissioner, in collaboration with the Chief Health Officer, the Secretary of DHHS and other relevant agencies, reviews the suitability of the Emergency Management Manual Victoria framework to Class 2 public health emergencies, including how the Emergency Management Manual Victoria intersects with the *Public Health and Wellbeing Act 2008* (Vic).

Testing regime (Chapter 10)

78. To provide clarity to the Chief Health Officer and his delegates on the circumstances in which mandatory testing powers may be exercised and, to further minimise the risks of community transmission arising from the revised hotel quarantine program:

    A. the Responsible Minister should obtain detailed legal advice from the Solicitor-General on the range of circumstances in which ss 113 and 200(1)(d) of the *Public Health and Wellbeing Act 2008* (Vic) may be exercised to require that those refusing testing at the conclusion of their quarantine period undertake mandatory testing

    B. the request for such advice should provide a detailed list of practical scenarios that commonly arise, or are expected to arise, in the context of returned travellers refusing to undergo testing in the Hotel Quarantine Program

    C. recognising that it will not be possible to provide absolute certainty on the range of circumstances in which these powers may be available, the advice should provide practical guidance to the Chief Health Officer and Authorised Officers in their exercise of the powers under ss 113 and 200(1)(d) and consider matters including those listed above in paras 41.a–41.h

    D. the request for advice should also include a request for a 'checklist' to be developed in order to assist those working in the Hotel Quarantine Program to determine when mandatory testing powers and/or the option of imposing an additional 10 days' quarantine should be exercised

    E. to accompany this advice, the Responsible Minister should identify an appropriate person who will be available to provide legal advice, at short notice and when required, to the Chief Health Officer and delegates, on the exercise of mandatory testing powers and/or the option of imposing an additional 10 days' quarantine.

79. To protect against the risk of infection spreading to the community via staff or personnel working in the program who have contracted the virus from returned travellers, the Responsible Minister should ensure, or continue to ensure, that:

    A. all on-site staff and personnel, including frontline workers and cleaners, are required to undergo daily saliva testing and weekly nasal swab testing

    B. family and household members of such frontline staff and personnel are provided with, and given support to access, voluntary testing on, at least, a weekly basis.

Returned travellers' rights and welfare (Chapter 12)

TRANSITIONING INTO QUARANTINE FACILITIES

80. The Quarantine Governing Body (called COVID-19 Quarantine Victoria) should ensure proper infection prevention and control measures are applied in the transit of returned travellers to their quarantine facility, in the same manner as those measures are applied at hotels. Those measures should include proper social distancing, cleaning and PPE practices.

81. To further reduce the risk of transmission during transit, the Quarantine Governing Body should require that:

    A. buses used to transport returned travellers to quarantine facilities must be used only for that purpose and not to provide non-quarantine related transport services to members of the public

    B. every effort be made to ensure that drivers of buses used to transport returned travellers to quarantine facilities are not permitted to work in other forms of employment (or to drive buses for any other purpose), consistent with Recommendation 22.

About this Report

The COVID-19 Hotel Quarantine Inquiry was established on 2 July 2020 to examine matters related to Victoria's Hotel Quarantine Program.

Specifically, the Inquiry was tasked with looking into decisions by, actions of and communication between government agencies, hotel operators and private contractors involved in the Hotel Quarantine Program, along with associated contractual arrangements, information, guidance and training, and policies, protocols and procedures.

The Inquiry's Final Report examines the workings of Victoria's Hotel Quarantine Program and provides associated findings and recommendations based on evidence and information tendered to the Inquiry.

The Final Report is to be read in conjunction with the Inquiry's Interim Report, which was delivered on 6 November 2020 and contained 69 recommendations that supported the development and implementation of a robust quarantine system for the State of Victoria. As explained in the Interim Report, those recommendations were based on the evidence and information before the Inquiry at that time. The Interim Report was delivered to the Governor to assist in developing and implementing a future quarantine program for the proposed re-opening of international points of entry into Victoria.

The Final Report incorporates and adopts the 69 recommendations presented in the Interim Report, as set out in the previous section. The Final Report recommendations flow on from the Interim Report and, as such, are numbered from Recommendation 70 onwards.

Evidence and information contained in this Report

To inform its work, the Inquiry received evidence from 96 witnesses (with 63 of these witnesses appearing at hearings to give evidence) and sat for 27 hearing days, during which 263 exhibits were tendered into evidence. There were 30 parties with Leave to Appear, from whom 414 pages of closing written submissions were received.

While all of this material has been considered, only those parts of the evidence or submissions necessary to explain reasoning or findings or recommendations are referred to in the body of the Report. The fact that a piece of evidence or a submission is not referred to in this Report does not mean that regard was not had to it.

Intake and Assessment Team received a considerable range of information

From 15 July 2020, the public was able to make contact with the Inquiry via telephone and email channels as per details provided on the website (see Chapter 14: How we went about our work).

The Inquiry had an Intake and Assessment Team whose role it was to receive and respond to those who contacted the Inquiry. In this way, the Inquiry received information from a range of people involved in the Hotel Quarantine Program, including returned travellers, nurses and security guards.

Information provided to the Inquiry from some of these sources has been included in the Report in the form of narratives and quotes. Some of the narratives contain the full story of a person's experience in the Hotel Quarantine Program as reported to the Intake and Assessment Team; some of the quotes in the Report are a snippet of an experience.

The information provided to the Inquiry and included in the narratives and quotes is important and valuable. However, it is noted that, generally, this information was not provided to the parties with Leave to Appear to respond to or test. As such, these narratives and quotes are not referenced as 'evidence' but are, instead, referenced as 'information provided to the Inquiry'.

Terms of Reference

You are required to inquire into, report and make any recommendations considered appropriate in relation to the following terms of reference:

1. The decisions and actions of Victorian government agencies, hotel operators and Private Service Providers, including their staff/contractors and any other relevant personnel involved in the Quarantine Program (each Relevant Personnel), relating to COVID-19 Quarantine Containment;
2. Communications between Victorian government agencies, hotel operators and Private Service Providers relating to COVID-19 Quarantine Containment;
3. The contractual arrangements in place across Victorian government agencies, hotel operators and Private Service Providers to the extent they relate to COVID-19 Quarantine Containment;
4. The information, guidance, training and equipment provided to Relevant Personnel for COVID-19 Quarantine Containment and whether such guidance or training was followed, and such equipment was properly used;
5. The policies, protocols and procedures applied by Relevant Personnel for COVID-19 Quarantine Containment; and
6. Any other matters necessary to satisfactorily resolve the matters set out in paragraphs 1 to 5.

COVID-19 Transmission in the Peppers Waymouth Hotel, Adelaide, November 2020

14 January 2021

Government of South Australia
SA Health

Contents

INTRODUCTION

Background

Coronavirus disease 2019 (COVID-19) is caused by the novel coronavirus acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Most cases have only mild symptoms, whereas others may experience severe illness requiring urgent and intense medical care and support. Symptoms of COVID-19 include fever or chills, cough, sore throat, runny nose, shortness of breath, diarrhoea and vomiting, and loss of taste or smell. SARS CoV-2 is typically spread through close contact with an infectious case via droplets or through touching surfaces that have been contaminated with droplets or secretions from an infected person. Transmission via aerosols may also be possible during aerosol-generating procedures and certain behaviours but is not considered the primary mode of transmission.

Setting

As part of the Commonwealth Government's national strategy to contain COVID-19, the Australian borders were closed to all non-citizens and non-residents from 20 March 2020, with Australians who were still overseas urged to return. Subsequently, dedicated quarantine facilities were established to facilitate a mandatory 14-day quarantine of returned international travellers. In South Australia, hotels were used in a medi-hotel model. Initially this involved one hotel, but was subsequently expanded to include the Peppers Hotel. The Peppers Hotel was constructed in 2001-2002 and is an establishment with 18 floors, with 12 rooms on each floor, six of these with balconies.

In November 2020, an outbreak of COVID-19 resulting in 33 associated cases occurred in Adelaide. The outbreak is also known as the Parafield Outbreak, and as subsequently shown by genomic analysis of case swabs started with transmission at the Peppers Hotel. Five clusters occurred as part of this outbreak, including the original cluster related to the Peppers Hotel. This hotel cluster consisted of 10 cases; three staff at the hotel, five family members of one of the staff and two returned travellers in quarantine at Peppers. Five cases will be discussed in this report; the three staff at Peppers Hotel and the two returned travellers.

Staff who worked at the hotel comprised of:

- Australian Defence Force personnel
- South Australian Police officers
- Private security guards
- Nursing staff
- Hotel staff including cleaning staff.

Trigger

Since August 2020, South Australia had not recorded a COVID-19 case acquired in the community. Prior to November, cases had been notified in returned international or interstate travellers who were placed into mandatory 14-day quarantine within medi-hotels (or home quarantine for interstate travellers) upon their arrival into South Australia.

On the 15 November 2020, a confirmed COVID-19 case who was diagnosed in the community was notified to the CDCB. This initial case was a close contact of a cleaner at the Peppers Hotel who subsequently tested positive for COVID-19. Following this, all staff who worked at Peppers Hotel from 31 October 2020 were initially directed to undergo testing for COVID-19 and placed into 14-day

quarantine (from last exposure to the hotel) either at home or in a medi-hotel. This testing returned two positive results, identified as security guards from Peppers medi-hotel.

On 17 November, whole genome sequencing linked the cases to a returned traveller from the United Kingdom (UK) who arrived on 2 November. Therefore, quarantining of all staff at Peppers medi-hotel was changed to only include staff who worked from 2 November.

On 22 and 23 November, two international arrivals who had returned from overseas on the 11 November tested positive for COVID-19 during their quarantine at Peppers medi-hotel. One returned traveller was tested on 21 November after becoming symptomatic on the same day. The test was confirmed as positive on 22 November. The partner was then tested as a close contact on 22 November and returned a positive result on 23 November. Both had received an initial negative test upon arrival on 12 November. Serology for the couple was negative on 25 November.

By 24 November, all above cases were linked by whole genome sequencing to a returned traveller (the primary case), from the UK who had been in quarantine at Peppers Hotel since 2 November and was notified as a confirmed case on 4 November. While a small number of returned travellers from the UK have distantly related strains, no previous case in South Australia shared the same sequence with these six cases.

As the common sequence suggested potential transmission within Peppers, an urgent risk assessment was conducted, and a Peppers Hotel Outbreak Investigation Taskforce was initiated.

No further cases associated with the Peppers cluster were notified and the cluster was closed on 5 December. The overall community outbreak was closed 28 days after isolation of the last outbreak associated case on 23:59 on 23 December.

Objective

The objective of this investigation is to identify potential sources of transmission within the Peppers medi-hotel. This report will describe the epidemiological and laboratory investigation of the outbreak that occurred and provide recommendations to reduce the risk of transmission of SARS-CoV-2 within South Australian medi-hotels.

INVESTIGATION

Case definitions

The operational case definitions for this outbreak were:

Confirmed case: Any laboratory confirmed case (according the Series of National Guidelines (SoNG) definition) of COVID-19 notified to the South Australian Communicable Disease Control Branch since 14 November 2020 in a person who has resided, worked at or visited the Pepper's medi-hotel, or in a person who is epidemiologically linked to an infected person who has resided, worked at or visited the Peppers medi-hotel.

Suspected case: Any case of illness notified to the South Australian Communicable Disease Control Branch since 14 November 2020, with symptomology compatible with COVID-19, in a person who has resided, worked at or visited the Peppers medi-hotel, or in a person who is epidemiologically linked to an infected person who has resided, worked at or visited the Peppers medi-hotel, who has not had COVID-19 confirmed by laboratory testing.

Investigation and results

This outbreak was investigated using several methods. Laboratory testing, including whole genome sequencing, assisted with initial diagnosis and linking of cases. Further investigation into these links was facilitated by case interviewing, review of staffing rosters and Closed-Circuit Television (CCTV) footage, and examination of the ventilation and air-conditioning system and hydraulics at Peppers Hotel.

Whole Genome Sequencing

Whole genome sequencing by SA Pathology was used to establish possible links between cases based on similarity of individual case viral sequences.

All outbreak cases with adequate viral loads to obtain a sequence (31/33 cases) underwent whole genome sequencing. All sequences matched the infection of the primary case (not included in outbreak numbers).

While the outbreak clade belongs to a SARS-CoV-2 lineage that has been reported in the UK and several other areas internationally including the Middle East, this clade has not previously been detected in SA.

Both the primary case and the couple transited through Doha airport; therefore, it is possible that the three returned travellers may have acquired their infection overseas prior to arriving in SA. However, the degree of genetic similarity required a public health response and investigation into possible transmission within Peppers medi-hotel.

Case interviews

All cases of COVID-19 in South Australia undergo a standardised interview by contact tracers to identify their symptoms, medical risk factors, contacts, and a very detailed social history of their 14 days incubation period to identify their exposure, and detailed prospective history since their onset to identify contacts who have likely been exposed.

Interviewing and classification of contacts is undertaken in accordance with the CDNA SoNG for the Management of COVID-19 for Public Health Units.

All close contacts are directed to isolate for 14 days since their exposure to a confirmed case. CDCB conducts daily symptom checking with all close contacts to rapidly identify and request testing for potential cases.

All cases were interviewed several times by staff at CDCB and South Australian Police. Details were verified using phone geolocation data, staff rosters, CCTV footage and confirmation of CCTV footage stills with cases.

Contact Tracing summary

Contact tracing for the Peppers cluster included staff who worked at Peppers medi-hotel and returned travellers quarantined within Peppers medi-hotel.

- 321 staff worked at Peppers medi-hotel since 2 November (date of arrival for the primary case). All staff were directed to quarantine and to present for testing as soon as possible and on the 12th day since their last date of exposure. These included:
  - 53 Hotel staff
  - 18 Australian Defence Force personnel
  - 46 Nursing staff

- 89 South Australian Police officers
- 115 Private security guards

Of the 321 staff above, 258 staff who worked at Peppers medi-hotel since 11 November were additionally directed to present for a COVID-19 test between 23-25 November. This included:

> 13 security guards who worked near confirmed COVID-19 cases or other security guards who may have been infected; all of whom returned negative tests.

> 245 other staff who worked at the Hotel, all of whom returned negative tests.

> Complete testing rates among this cohort suggest further undetected infection is unlikely.

Linkage between the couple from overseas and the outbreak using whole genome sequencing prompted a third round of testing of all staff and returned passengers who had been at the medi-hotel since 11 November 2020 to assess if further transmission had occurred. This testing was conducted on all relevant staff in quarantine between 23 and 25 November and returned no positive results.

CCTV footage and rosters

CCTV footage from outside the primary case's room was reviewed by multiple staff at CDCB, including the Infection Control Service, with the aim to identify issues with infection control practice and a plausible route of transmission from the primary case to either security guard or the cleaner. Staff rosters were used to target days and times of the footage.

CCTV footage was also used outside the room of the two cases who were in quarantine from overseas, again with the aim of identifying breaches in infection control practice and a plausible route of transmission from the staff to the couple. Again, rosters were used to target specific days and times.

The Infection Control Service at CDCB reviewed the CCTV footage.

Importantly, there was no observed significant breach in personal protective equipment (PPE), and no direct contact between guests and medi-hotel staff. However, on multiple occasions the primary case opens the room door without wearing a mask, including while Security guard 1 is stationed outside the door and when the cleaner is in the corridor, and the primary case touches the door/handle regularly without cleaning in between. A small amount of airflow from the room of the primary case out into the corridor, primarily under the door, due to inadequate air exhaust from the room (rectified at the time of review) and a lack of door seals was also noted (see Ventilation below). This may have created heavier contamination of the environment immediately adjacent to the room (e.g. when door is opened), increasing the risk of transmission.

Different infection control practices were also noted to be put in place once a guest is identified as having COVID-19 (i.e. red-dot system), which creates the potential for more relaxed practices prior to a guest testing positive. CCTV footage of the common areas and tea rooms for staff to determine the interaction between all three cases was not available.

Ventilation

An investigation into the ventilation and air-conditioning at the Peppers Hotel was undertaken by a desktop review and a site visit. The site visit included:

> Confirmation of installation matching to the design documents

> Smoke test on sample rooms to confirm airflow and to identify potential leakage pathways

> Assessment of any potential for contamination between hotel levels

- Verification of the nature of supply and extract plant, and
- Assessment of potential and absolute limitations to adjust existing mechanical system for improvement of system safety

The air in each guest bedroom suite is changed over via the toilet exhausts extracting air from the bedroom suite, which is replenished via the fresh air supplied via the corridor plenum with 1.5-2 air exchanges per hour estimated. This is equivalent to the minimum requirements for standard hospital inpatient bedrooms.

Smoke testing indicated that the airflows between the bedroom suites and the corridors was variable and directly linked to bedroom fan coil unit's fan speed. When the bedroom fan speed was set to high or medium, air generally flowed into the corridor under the bedroom suite entrance door. With the fan speed set to low, the air generally flowed from the corridor into the bedroom.

During an inspection of room XXX, smoke testing indicated the toilet exhaust had reduced flow of air into the exhaust system, and a small volume of air flowing under the entry doorway into the corridor even with the bedroom's fan coil unit turned off.

Room XXX occupied by the couple who became secondary cases was also inspected. The air conditioning, airflows and room sealing appeared to be consistent with all other bedrooms – i.e. there were no identified deficiencies. Smoke testing validated that the airflow into the toilet exhaust was reasonable and airflows under the entry doorways was consistent with other bedrooms; with the dedicated bedroom fan coil unit speeds set to medium and high the flow of air was generally into the corridor from the bedroom, with the fan coil unit turned off or with the fan speed set on low the flow of air was generally into bedroom from the corridor.

There is no possibility of transmission between the primary case in room XXX and room XXX via the air conditioning system.

Hydraulics

Discussion with architects and technicians regarding the plumbing of the Peppers Hotel occurred to determine if there could be transmission between rooms via plumbing. Service penetrations at Peppers Hotel were smoke tested, this included service penetrations associated with shower heads, toilets and other hydraulic fixtures.

Smoke testing of service penetrations associated with shower heads, toilets and other hydraulic fixtures, indicated that these penetrations were well sealed and presented very limited risk of leakage pathways.

Air movement within the sewer system is controlled by gully traps (P-Trap or Bottle Trap) and this is a requirement of plumbing codes. These traps introduce a water barrier at each waste connection which prevents the movement of air within the pipework. The operation of the trap as intended (and that the water barrier has not dried out through lack of use) could be validated by a lack of unpleasant sewer odours in the room.

The risk of airborne transmission through the sewer system or via associated hydraulic penetrations are non-existent.

Figure 2: Timeline of events at Peppers Hotel, November 2020 (note, does not include 5 cases in household contacts of security guard 2)

DISCUSSION

In Australia where COVID-19 has been largely eliminated, transmission of SARS-CoV-2 from quarantining returned travellers to quarantine facility staff remains the highest risk of re-introduction into the community. Transmission from medi-hotels has been reported in Victoria, New South Wales, Western Australia and New Zealand previously. From October 1 to 15 November, an estimated 2,667 international returned travellers were quarantined in a medi-hotel in South Australia. Of this group, 58 travellers (2.2%) tested positive for SARS-CoV-2 during their quarantine period, including 7 assessed as historical infection presenting no risk. The fact that more transmissions from medi-hotels has not occurred despite the high number of infectious returned travellers suggests that South Australia has a robust medi-hotel system and a high standard of infection control practices. Thorough investigation of this outbreak has not identified a clear mode of transmission from the primary case to the staff, and then from the staff to the couple returned from overseas. It appears more likely that a series of lower-risk events and factors, in combination, has created the potential for transmission of SARS-CoV-2 within Peppers medi-hotel.

Of note, the interaction between the primary case, security guard 1 and the cleaner does not meet the definition of close contact according to the Communicable Disease Network of Australia (CDNA) Series of National Guidelines (SoNG). Neither does the interaction between security guard 1 and the couple returned from overseas. This was also true for other cases in the Parafield Outbreak, not directly related to the Peppers medi-hotel cluster, indicating that other factors aside from duration of contact with an infectious case may have been important in this outbreak for example…….transmissibility of virus and transmission through surface contact and consideration of airborne spread.

Since February, the World Health Organisation (WHO) recognised droplets and fomites from a person infected with SARS-CoV-2 as the predominant modes of human-to-human transmission, noting that “airborne spread has not been reported…” and “is not believed to be a major driver of transmission based on available evidence” (1). As further evidence emerged and following medical experts’ appeal, WHO has recognised airborne transmission as one of the possible modes of transmission (2). When aerosolised, SARS-CoV-2 has been evaluated to remain viable for at least 3 hours and potentially propagated through long distances (3-6). Importantly, the distinction of droplets and aerosols have been disputed; and an underestimation of airborne transmission also highlighted (7, 8). As the exhaust fan in the primary case’s room was not functioning adequately, this may have led to airflow from the bedroom suite to the corridor, rather than the designed airflow from the corridor into the bedroom suite. This could potentially explain the transmission to both security guard 1 stationed close to the door and the cleaner when walking past the room of the primary case, just after the door had been opened. Supportive computational studies and COVID-19 outbreaks attributing propagation of infected droplets to air flow had also been reported (10-14). This supports the recommendation to monitor, fix and maintain the efficacy of the exhaust fans.

Further, when the primary case opened the door from the bedroom suite into the corridor he was not wearing a mask. A study on masks and face coverings found substantial reduction in outward emission of particles when surgical masks or particulate filter respirators (e.g. P2 or N95 masks) were used, and to a lesser extent when cloth and paper masks were used (15). This supports the recommendation for guests to wear masks when opening bedroom suite doors, a recommendation that was in the medi-hotel policy at the time of the outbreak. While it reduces outward emission of particles, it is inconclusive whether mask wearing prevents infection of COVID-19 (16-18).

Security guard 1 stationed in proximity to the case's room during the case's infectious period was wearing a mask at all times. However, it is plausible that when rubbing his eyes/touching his face without performing hand hygiene prior, self-inoculation occurred (19).

Investigation into the activities of staff at Peppers medi-hotel did not show any significant contact between the cleaner and the security guards. All staff have access to a communal staff kitchen, but each staffing group spent meal times in separate break room areas. This suggests that both the cleaner and security guard 1 may have been infected separately by the primary case. Security guard 1 worked several shifts with security guard 2, who returned a positive result on 15 November. Whilst they were stationed on separate floors, interaction in the security guard break room area, or staff kitchen may have led to transmission. The security guards do not associate outside of work.

For transmission from the staff to the returned travellers from overseas, the only contact with an infectious case was on 13 November when the security guard sat outside their room. The couple opened the door multiple times without wearing masks and regularly touched the door and door handles while holding the door open to collect food or other deliveries. As the air flow in the hotel generally flows from the corridor into the room, there may have been transmission via contamination of the room door, or into the room itself. However, security guard 1 was observed on CCTV to be wearing a mask (while in view), which would have significantly reduced the potential for this to occur. The other possibility is that the couple acquired their infection prior to arriving at Peppers medi-hotel (e.g. overseas on in transit to South Australia). The high degree of genomic sequence similarity with other cases in the Peppers cluster makes this hypothesis less likely. No other plausible alternative hypothesis could be established.

RECOMMENDATIONS

1. All guests in a medi-hotel must be treated as potentially COVID-19 positive

> Increased PPE requirements, with eye protection to be worn in addition to surgical masks by any staff member entering the corridors (i.e. orange zone) regardless of distance from a case, distance from a door or any level of contact anticipated with guest.

> Review and clarification of zone signage and PPE requirements for each zone.

> Enhance enforcement that all guests must wear a mask when opening their room door, and improve guest signage.

2. Re-enforce PPE protocols and infection control practices for staff

> All staff must again be made aware not to touch their face, nose, eyes and mouth and the importance of hand hygiene to reduce risk of self-contamination.

> Hotel housekeeping (cleaning) staff must be made aware and be trained in the use of PPE.

> Staff maintain >1.5m distance when interacting with guests and other staff, with assistance of floor markings.

3. Improve infection control practices for housekeeping

> Increase regular cleaning of outside guest door surface/handles and other high-touch points (e.g. lift buttons).

> Improve use of 'clean' trolleys and trays when delivering/collecting food and rubbish, reduce potential for mixing 'dirty' and 'clean' items on the cleaning trolleys (for room clean prior to guests entering).

4. Reduce interaction between staff and guests

> Greater usage of actively monitored CCTV, door alarms and roving security on all guest floors and other critical areas, rather than have staff stationed on quarantine floors.

5. Air flow

> Action recommendations from Medi-Hotels Ventilation and Air-Conditioning Investigation (SA Health Infrastructure) to improve air flow from corridor into the room, including ensuring all guest rooms have adequate door seals and ensure building exhaust fans are set to high.

> Recommend not using blow heaters and fans.

> Continued regular maintenance of hotel HVAC systems.

6. Transfer of all COVID-19 cases to dedicated medi-hotel facility

7. Commence testing of all medi-hotel staff

CONCLUSION

No single event or significant breach in infection control practices appears to be clearly responsible for the transmission of SARS-CoV-2 from the primary case to medi-hotel staff or the other guests (couple from overseas). Rather a combination of events and factors, including minor breaches in infection control practices and airflow, are considered most likely to have created an environment where the potential for transmission could occur. A number of recommendations have been made to address these factors and reduce the risk of transmission occurring again within a medi-hotel. While the overall risk remains low, transmission within a medi-hotel remains one of the highest risks for re-introduction into the South Australian community, and requires ongoing vigilance and system quality assurance.

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Queensland Police Service

Queensland Health

Queensland Health and Queensland Police Service joint agency continuous improvement review of the COVID-19 infection of a hotel worker (Hotel Grand Chancellor)

Review report

January 2021

Queensland Government

Executive summary

Background

The SARS-CoV-2 (COVID-19) global pandemic is arguably the most significant issue of the present time and one that continues to impact the Queensland community in terms of safety, the economy and confidence in government. The situation has warranted an unprecedented multi-agency response to effectively and efficiently reduce the risk of spread of the virus in Queensland.

At the time of this review, Queensland had recorded in excess of 64,800[1] people having been accommodated, largely without incident. Mandatory government-run hotel quarantine for returning international travellers was implemented on 28 March 2020 with Australia receiving approximately 165,000 travellers arriving by air up to 20 November 2020[2]. Of these, 1.2% tested positive for COVID-19[3]. A cumulative total of 544,656 room nights have been occupied for quarantine in Queensland since 28 March 2020[1]. Of those quarantined in Queensland since the commencement of the program, in excess of 32,800[1] were international arrivals. Since the commencement of the mandatory hotel quarantine program, 74 quarantine hotels have been engaged as part of the program with 20 quarantine hotels remaining in use at the time of this review.

This review considered the circumstances leading to a cluster of COVID-19 infections at a government-run mandatory quarantine hotel venue in Brisbane, Queensland, in January 2021. This is the first identified transmission of the virus in hotel quarantine in Queensland. The infected persons were four returned international travellers in two separate groups, a hotel cleaner and the cleaner's domestic partner. The review was undertaken jointly between Queensland Health and the Queensland Police Service (QPS). The Terms of Reference required a rapid and thorough investigation focussed on the circumstances of this particular cluster, conclusions related to its causal links and to provide recommendations acknowledging some of these may have application to the entire hotel quarantine program.

Brief chronology

The infections can be viewed as three pairs.

Cases 1 and 2 (Pair 1) are returned travellers via Doha arriving in Brisbane on 30/12/20. Case 1 tested positive on 03/01/21 and Case 2 tested positive 06/01/21.

Cases 3 and 4 (Pair 2) are a hotel cleaner and their domestic partner. Case 3 tested positive on the 06/01/21 after working on the 02/1/21 including cleaning unoccupied rooms on floor 7. Case 3 had no direct contact with Cases 1, 2, 5 or 6 and did not enter their rooms on floor 7 at any time.

[1] State Disaster Coordination Centre reporting 21/1/21

[2] https://www.health.gov.au/news/australian-health-protection-principal-committee-ahppc-statement-on-australias-national-hotel-quarantine-principles

[3] https://www.health.gov.au/news/health-alerts/novel-coronavirus-2019-ncov-health-alert/coronavirus-covid-19-current-situation-and-case-numbers

Cases 5 and 6 (Pair 3) are returned travellers via Doha arriving in Brisbane on 01/01/21. Both tested negative on 04/01/21, however, Case 5 tested positive on the 11/01/21 and Case 6 tested positive on 12/1/2021.

Pair 1 and Pair 3 commenced their journeys to Australia from different continents, but both pairs transited through Doha, Qatar.

Methodology for the review

The review team conducted investigations using multiple methods including:

- QPS interviews (Queensland Health participated as appropriate) with 5 of the 6 infected persons, 2 hotel management, 8 cleaners, 3 other hotel staff, 17 other guests from floor 7 and email contact with 116 other hotel guests.
- Reviews of a range of documents including policies and procedures, training material and instructions, operational logs from QPS and the hotel, emails and contracts and CCTV footage.
- Genomic analysis, environmental swabbing and epidemiology including incubation timeline analysis.
- Consideration of previous reviews including the National Review of Hotel Quarantine, the Victorian COVID-19 Hotel Quarantine Inquiry and the South Australian COVID-19 Transmission in the Peppers Weymouth Hotel, Adelaide.

Findings

The review team were unable to determine the exact root cause of transmission. No direct breaches in quarantine or security were identified and no matters were identified to support any conclusion that offences were committed. It is considered that the cluster is most likely a result of multiple gaps in Infection Prevention and Control (IPC). The review team have made multiple recommendations in relation to strengthening the IPC systems and processes and in compliance monitoring. Further review of hotel airflows and the analysis to identify live virus from the environmental swabs is continuing. The review team however have excluded the hotel air-conditioning systems as a cause of transmission.

In summary, it is the review team's position that:

Case 1 acquired the infection overseas and likely passed it to Case 2 in a domestic hotel setting. Case 3 most likely acquired the infection in the hotel on the 02/01/21, through indirect contact with a surface exposed to the virus by Cases 1 or 2. Case 4 acquired the infection from Case 3 in a domestic household setting. Cases 5 and 6 likely acquired the infection at around the same time as each other and while overseas acquisition cannot be excluded, they most likely acquired their infection at the hotel. The infection at the hotel is most likely to be from contact with a surface that was contaminated by virus shed by case 1 or 2.

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28/01/2021

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28/01/2021

Recommendations

1. **Compliance monitoring**
   a. Install CCTV in all government-run mandatory quarantine hotel venues to capture all movements in and out of guest rooms. The system should include continual monitoring and movement-detection or similar. This recommendation may not apply where there is a physical, continuing security presence on each hotel floor.
2. **Cleaning**
   a. Review the deep clean initiation process following a quarantined person testing positive to COVID-19 and adopt a whole of government procedure that is consistent across the entire hotel quarantine program. As a minimum, this procedure should include processes for:
      (i) Securing the room immediately when a quarantined person is moved out of a hotel.
      (ii) Ensuring the room is not entered or returned to service until the agreed cleaning process has been concluded.
      (iii) Ensuring all stakeholders are engaged and informed throughout the procedure and addresses situations where there are multiple guests in a room but not all are transported away from the hotel.
      (iv) Assurance checks that the cleaning process has been completed.
   b. Implement a process of environmental surveillance post deep clean including supervision, monitoring, auditing and environmental sampling (including swabbing of walls, high touch surfaces, under door seals be considered post deep clean).
3. **Infection prevention and control systems, policies and procedures**
   a. Iterative revisions of infection prevention and control policies and procedures for quarantine hotels are to include:
      (i) Minimising guest room door openings (for example, linen collection at the same time as meal delivery so doors need only be opened once instead of twice).
      (ii) Minimise traffic through corridors outside the rooms of quarantined guests.
      (iii) Additional measures to reduce the potential for spread of infection into common areas:
         - When entry to a room is required, give notice to guests and request they put on a mask, and allow a period of time for air (droplets) to settle prior to staff entering the room.
         - Ensure door seals are in good condition to minimise under-door airflows.
      (iv) A requirement for access to alcohol-based hand sanitiser to hotel staff (personal) and in common areas to provide additional opportunities for hand hygiene (eg. after glove changes).
      (v) System for identifying room status and workflow management (for example, a notice on the door of the room re: type of clean required/date completed)
      (vi) Management of hotel staff uniforms.
      (vii) Mandatory completion of infection prevention and control training for staff involved in the hotel quarantine program.
      (viii) Description of minimum infection prevention and control training requirements for staff involved in the hotel quarantine program including competency assessments (handwashing, donning and doffing of PPE).
      (ix) Description of roles and accountabilities of hotel staff (supervisors and management) and other agencies involved in site-level quarantine systems monitoring and operational performance, to enable a high level of adherence with cleaning protocols and PPE utilisation.

b. Establish onsite quarantine hotel support from a registered nurse with infection prevention and control knowledge, with on-call access to an infection control practitioner, to provide operational infection prevention and control advice to hotel and other staff. This role would assist in mitigating transmission risk by providing PPE training, monitoring compliance with infection control procedures, conducting regular infection prevention and control audits and engaging with all onsite agencies around infection prevention and control protocols.
c. Implement an end-to-end risk-based quality assurance system to ensure early detection of practice variations, build confidence that performance standards are being met continuously and to restore performance when deviations are noted.
d. Implement an infection prevention and control 'buddy' system across the hotel quarantine program for hotel staff (eg. a pair of cleaning staff would watch out for the other and prompt when their 'buddy' has not adhered to correct infection control practices).

4. Infection prevention and control workplace culture

a. Adopt a 'Speaking up for Safety' culture across the hotel quarantine program. This would include training to support increasing skills in respectfully raising concerns using graded assertiveness communication skills. A culture of all involved (guests and staff) looking out for each other is critical to this approach, as is the alignment with just culture principles. Strategies such as team briefings at shift commencement, debriefings at shift completion and walkthroughs by supervising staff could be included in this approach. An appreciative understanding of the challenges in frontline service delivery is vital to team-based continuous quality improvement. These measures will help create greater convergence between actual practice (work-as-done) and desired performance standards.

5. Infection prevention and control training materials

a. Iterative and user-centred revisions of infection prevention and control training materials for quarantine hotels are to include training materials pitched for different target groups (senior hotel management, catering staff and cleaning staff) that details the scope of duties expected of them.

6. Hotel guest pack and infection prevention and control information

a. Iterative revisions of the hotel guest pack are to adopt an 'easy read' succinct format to enhance clarity, using plain English with diagrams to aid understanding. Guest packs are to be available in other languages to cater for culturally and linguistically diverse guests.
b. Consider a 'Priority Advice FAQ' for travellers of 'Must Do's' between the airport and entering their quarantine to ensure clear understanding of PPE and door management processes in the first hours of quarantine.
c. Iterative revisions of important infection control information sheets for guests are to adopt an 'easy read' format and be made available in multiple languages.

7. Airflow management

a. Whilst there are no specific findings of airborne transmission, airflow has been considered and forms part of good practice worldwide in minimising risk of transmission. For this reason, the review team also recommends ensuring air extraction and ventilation of corridors.

Introduction

From 28 January 2020 to 28 January 2021, 365 days of hotel quarantine operations have been successfully delivered in Queensland. Notably, since the commencement of the mandatory hotel quarantine program in Queensland, 74 quarantine hotels have been engaged as part of the program with 20 quarantine hotels remaining in use at the time of this review.

Quarantine of international arrivals into Queensland continues to be a challenge with a current average daily rate of 83 arrivals. This is lower than the previous average of around 142 per day, as experienced prior to a National Cabinet announcement on 8 January 2021 which adopted measures to manage the flow of returning Australians and other travellers who may have been exposed to new variants of COVID-19[4].

The data emphasises the effectiveness of the program that has been instituted in Queensland, the resilience of its support systems and the strength of partnerships created to meet community expectations against a backdrop of a rapidly evolving context of operations and an evolving body of knowledge about the virus.

The primary response to the COVID-19 public health emergency in Queensland has been a public health and safety response led by Queensland Health. Recent events in Queensland highlight the risks to the community, heightened levels of anxiety within the broader community and the need for vigilance and rapid action to control the spread of the virus.

Noting that infection control can never be risk free, nor is it possible to eliminate all risks associated with the mandatory hotel quarantine program, the existing efforts including early detection and management have been the hallmark of Queensland's success to date.

It is evident through decisive actions of authorities and the community, that community transmission of the virus has been either contained or resolved with minimal long-term impacts to date. Regrettably, challenges remain and will likely continue for a considerable time into the future with global examples continuing to highlight the risk of community transmission. This review has highlighted the benefits of multi-faceted and collective efforts across government. Key challenges to maintaining an effective response have been highlighted. The complexity of the response and compliance of individuals within the community and in hotel quarantine will continue to be a risk.

The review was undertaken jointly between Queensland Health and the Queensland Police Service (QPS) at the direction of the Premier of Queensland, formally commencing by 13 January 2021. The Terms of Reference (Attachment 1) required a rapid and thorough investigation focussed on the circumstances of this particular cluster, conclusions related to its causal links and provision of recommendations acknowledging some of these may have application to the entire hotel quarantine program.

This review reported to the Commissioner, QPS and the Director General, Queensland Health.

The review team recognises and acknowledges the contributions and cooperation of HGC management, guests and staff, and the Queensland Health, QPS and Maritime Safety Queensland

[4] https://www.pm.gov.au/media/statement-national-cabinet

(MSQ) departments and individuals who have given their time voluntarily to assist the review team.

Methodology

The joint-agency team included members of both agencies with expertise relevant to the review. Where required, these members were responsible for coordinating inquiries and support within their own agencies. Further, the QPS members were responsible for inquiries within the Disaster Management system. The agreed separation of responsibilities was as follows, noting this was a general guide with a focus on collaboration:

- QPS used an appreciative enquiry methodology. The focus was on people and processes and traditional information sources (i.e. CCTV) through interviews of all persons identified as relevant, review of documents held by QPS and State Disaster Coordination Centre and CCTV;
- Queensland Health used mixed methodology including after action review processes and human factors analysis. The focus was on scientific and technical issues and within Queensland Health for infection prevention and control processes and procedures; and
- Joint – sharing of information was possible through a Microsoft Teams folder, invitation of Queensland Health to all interviews (subject to consent of interviewees) and joint reporting.

Findings and observations of the review will inform the work of current broader system-based quarantine hotel reviews. It is recommended that the review report is provided to the Statewide Director Quarantine Services.

Review activities and key observations

Interviews

A collection plan was developed and persons for interview prioritised. Interviews were in-depth and conducted by QPS investigators. Queensland Health team members participated in the interviews as determined relevant by Queensland Health and when consented to by the interviewed person. The Queensland Health team provided suggested questions to complement QPS questions. Where clarification was required, some persons were involved in secondary interviews.

As at 28 January 2021, the following interviews had been conducted:

Infected persons	5 of 6 – 1 declined for health reasons
Hotel management	2 (general manager and cleaning supervisor)
Hotel cleaners	8 (*including the infected cleaner)
Other hotel staff	3
Other guests from floor 7	17
Other guests from HGC	154 identified but some contact details incorrect. As at 19/01/21, 116 have been emailed, 14 have responded, some provided email information, nil interviewed as yet

QPS personnel	70 identified, contact being coordinated with union representatives
ADF personnel	26 identified, method of contact being coordinated with JTG command
Queensland Health personnel	1 Infection Control CNC

From the interviews, gaps were found in components of quality management systems at the hotel and individual lapses, specifically related to infection prevention and control (IPC) practices but these are not consistent with any culpable actions. No matters were identified that support a conclusion that offences were committed by any persons or that further investigation in relation to offences is warranted. QPS investigations did identify opportunities potentially available to persons to breach security (noting no evidence of this was discovered) and processes that may have improved the information available to the review team to support post infection review.

It is recognised that many stakeholders have detailed knowledge of the hotel quarantine program and could have potentially contributed to the review. It is anticipated that these stakeholders will have an opportunity to contribute through the current broader system-based reviews of the hotel quarantine program (refer also to outstanding enquiries).

Information obtained through the QPS interviews also directly supported the Queensland Health review activities including considerations of possible transmission methods and recommendations related to issues that can be excluded.

Timelines and sequence of cases

QPS produced a timeline 'living document' (Attachment 2). A summarised version is attached along with the HGC level 7 floor plan (Attachment 3).

Queensland Health produced an incubation timeline (Appendix 1) for the infected persons and mapped possible chains of transmission (Appendix 2). The timeline supports the most likely transmission scenario but cannot exclude other scenarios.

Based on those timelines, the infections can be viewed as three pairs:

Pair 1

Cases 1 and 2 are returned travellers who left Doha on 29/12/2020 at 22:14 UTC (08:14 30/12/21 Brisbane time), arrived at Brisbane Airport at 23:45 on 30/12/20 and were checked into the hotel on floor 7 at 00:20 on 31/12/21 and into a hotel room on floor 7 at 01:08 on 31/12/21.

Case 1 tested positive first and was transported to hospital 03/01/21 while Case 2 remained in room 702 until they were transferred to hospital with symptoms 06/01/21.

Pair 2

Cases 3 and 4 are a part-time hotel cleaner and their domestic partner. Case 3 tested positive on the 06/01/21 after working on the 02/01/21 including cleaning unoccupied rooms on floor 7. Case 3 had no direct contact with Cases 1,2,5 or 6 and did not enter their rooms on floor 7 at any time.

Pair 3

Cases 5 and 6 are returned travellers who left Doha on 31/12/2020 at 22:08 UTC (08:08 01/01/21 Brisbane time), arrived at Brisbane airport at 23:15 on 01/01/21 and were checked into a hotel

room on floor 7 at 02:01 on 02/01/21. Cases 5 and 6 (Pair 3) arrived after cases 1 and 2 (Pair 1) but before Case 3 worked at the hotel.

Case 1 and 2 and Case 5 and 6 travelled to Australia from different countries although both transited through Doha International Airport on different dates.

In relation to flights, while both groups of travellers transited Doha and flew with the same airline, QPS has confirmed that they were on different aircraft. Further, the departure times from Doha are approximately 48 hours apart. Given the timeframe for investigations and other logistical difficulties, no inquiries were made in Qatar to examine commonalities in aircrew or airport personnel related to the transiting of Cases 1 and 2 and 5 and 6.

Genomic analysis

Genetic sequencing of isolates revealed that the virus responsible for the infection of Case 1 and 2 and Case 3 and 4 are genetically identical. This particular strain of SARS-CoV-2 has not been widely reported in Australia to date. This, along with the epidemiologic analysis strongly suggests transmission to Case 3 in the HGC.

The genetic sequence of the virus isolated from Case 5 and 6 is genetically identical, and very similar (but not identical) to the strain isolated from the other four cases. This could be consistent with indirect acquisition from Cases 1-3. However, this is not able to be assumed as the only (or even the most likely) possibility from genomics data alone.

Therefore, two likely transmission possibilities would be:

1. A common strain (from Doha) and 2 independent importations, with point mutation between infections (i.e. Cluster 1 and Cluster 3 were both internationally acquired) or
2. Indirect acquisition from within hotel quarantine or quarantine process (locally acquired).

Policies and procedures review

QPS has collated documents relevant to the hotel quarantine program including communications between QPS, HGC and SDCC, and QPS operational logs. The review of these documents did not raise additional issues to those noted in the findings and recommendations.

Queensland Health collated documents relevant to the Metro South Hospital and Health Service (MSHHS) health support role for the HGC. These documents include a Queensland Health quarantine hotel induction PowerPoint presentation pack, Queensland Health guides for COVID-19 cleaning, disinfection and waste management and a Queensland/MSHHS quarantine hotel cleaning COVID-19 guidelines PowerPoint presentation. These documents were reviewed specifically to understand existing infection prevention and control (IPC) standards that are relevant for quarantine hotels.

Closed Circuit Television (CCTV)

The HGC has a system of CCTV cameras. The only CCTV cameras on the floors are on floor 8 installed by MSQ as part of the mariner quarantine program. There were significant technical issues with obtaining all the CCTV holdings due both to their design and the infection risk remaining at the hotel. These issues were overcome, and all CCTV holdings are now in the possession of the QPS. To date, only one camera has been identified as potentially capturing Case 3's movements (basement level). This video has been reviewed and is not clear and does

not offer any information of value. Other CCTV has provided some information relevant to other events at the hotel and has been viewed (i.e. the departure of Case 1 to hospital via the foyer).

The value of additional CCTV for security compliance and its links to monitoring of infection control practices for subsequent review of incidents and infection control practices and to reduce the requirement for patrols of corridors and common spaces is a clear recommendation of this review and actions by QPS are already underway.

Analysis of environmental contamination

Environmental swabbing of various areas as well as on floor 7 of the hotel was carried out. While these swabs can neither definitively rule in nor rule out the role of the environment in the transmission of COVID-19, it is noteworthy that only swabs from inside the rooms occupied by the infected travellers were positive for residual viral fragments. Swabs collected from two other nearby rooms and common areas including staff-only areas on floor 7 were all negative. One of the rooms had undergone post-discharge cleaning (711) but remained positive, while the other room (702) had not yet been cleaned so positive results are not unexpected.

The positive swabs will prompt further detailed review of the room cleaning procedures. While residual viral fragments inside the rooms of known positives may suggest a need to further review room cleaning procedures, viral absence from all other areas may also indicate that the cleaning of high touch areas in the common areas is effective. Worldwide, it has been common to isolate RNA (which is not live virus, so does not pose a transmission risk) from environments where infected persons have been accommodated, but it has been much less common to isolate infectious virus. The attempt to isolate infectious virus form the swabs collected for this review continues through viral culture, but this process takes several weeks and definitive results were not available at the time of finalising the review report.

Concerns were raised by members of the public (including from outside Queensland) about the possibility of transmission via aerosol transmission or via air conditioning units or via bathroom plumbing (the latter based on reports associated with SARS-CoV-1[5]). The investigation team notes the environmental swabs collected from the ducts of the air conditioners in the rooms occupied by Case 1 and 2 and Case 5 and 6 returned a negative test result. Transmission via aerosol route would be more likely to yield positive environmental swabs across greater distances, or in other common areas, which was not supported by environmental swab results.

Further review of air conditioning to floor 7 is currently awaited and this review recommends this analysis be considered by the Statewide Director Quarantine Services.

The review team further notes the investigation into cases in a South Australian Quarantine Hotel[6] in which smoke testing found that there were circumstances in which air flowed from the hotel rooms into the corridors. Contamination of common areas via this method cannot be excluded by this review. The review team further notes that the South Australian report excluded transmission via bathroom plumbing in their investigations.

[5] McKinney KR, Goong YY & Lewis TG. *J Environ Health* 2006. May;28(9):26-30. PMID: 16696450

[6] Government of South Australia, COVID-19 Transmission in the Peppers Waymouth Hotel, Adelaide, November 2020

Review of deep cleaning procedures

Cleaning and disinfection are critical to minimising any risk of contamination. There are a number of opportunities for improvement identified to date with deep cleaning a quarantine hotel room following the confirmation of an infected person. Improvements directed at reducing the complexity of processes will decrease multiple opportunities for error, increase post cleaning confirmation and address technical issues which will further reduce overall risk and ensure the deep clean processes are effective.

QPS is leading multi-agency work to amend the deep cleaning procedure and a draft is currently in consultation.

The ongoing presence of SARS-CoV-2 RNA in environmental samples in room 711 following a deep clean of the room is an important marker that these cleaning procedures provide an opportunity to be enhanced.

Review of Infection, prevention and control

Infection control can never be risk free and it is not possible to eliminate all risk from hotel quarantine. Implementation of IPC is usually multifactorial as are the possible causal IPC breaches in any transmission event. Risk can be minimised through strong quality management systems related to infection prevention and control.

The review team notes the challenges of adapting hospital IPC practices into the hotel environment. It is considered there may be several opportunities for improvement in this area for protection of staff, for staff to protect themselves and to reduce opportunities for transmission.

The door to guest rooms is recognised as a potential high risk of opportunity for transmission of virus. Recommendations for minimisation of this risk include consideration of reducing the number of times staff attend guest rooms for delivery of meals / linen / cleaning supplies and the like, and for guests to be required to wear masks when opening the door for any reason.

The ICP training packages for hotel staff, and information provided to guests while scientifically accurate and in line with best-practice principles, were found to be complex for lay people and written in language which may not be easily understood by hotel staff, people from Culturally And Linguistically Diverse (CALD) backgrounds or with lower levels of (health) literacy. There is an opportunity for development of more clear and simple materials. There are also opportunities to consider the modes of delivery (such as incorporation of multimedia resources / an information channel in guest rooms) and confirmation that critical material has been understood sufficiently to translate into practice.

The overarching procedures for management of hotel quarantine could place a greater focus on IPC relative to other pieces of information, given its' central role in preventing harm to guests, staff and other support staff through acquisition of COVID-19 while in care/quarantine, as well as minimising the risk of disease spread to the community.

The most important element is translating theoretical infection control into practical implementation. There is a need to ensure that 'Work as Done' is in line with the infection prevention and control advice/ training delivered to guests and to staff and the procedures underlying them. This would require a program of cyclical auditing of PPE use and cleaning

procedures (adherence with standards and efficacy) during normal work and to include ongoing IPC overview of end to end processes.

Communication

A brief analysis of communication networks and channels was performed. Information relating to the operation of the quarantine hotels is held by multiple agencies including COVID-IMT, SHECC, QPS, SDCC, the hotel and the HHSs (including the Public Health Unit and HEOC). This is often unavoidable due to the internal structures and requirements of various agencies. Regardless, this complexity in communication channels creates opportunities for information degradation, errors and delays which could adversely impact system performance and quality such relating to the management of hotel guests, or of processes (eg. around deep cleaning).

Analysis of transmission

Case 1 almost certainly acquired COVID-19 overseas. It is unclear if Case 2 acquired the infection at the same time or from Case 1 as a household contact in hotel quarantine, although the second is felt to be more likely based on epidemiology. The acquisition of SARS-CoV-2 by Case 2 is not considered by the reviewers to be a failure of quarantine.

The review was not able to definitively identify a quarantine breach which led to the infection of Case 5 and Case 6. Their near-concurrent onset of illness suggests the acquisition was at the same time. The relatively long lag time between their arrival and onset of illness makes in-hotel acquisition more likely but the possibility of overseas-acquisition cannot be excluded. The infectious diseases physician on the review team sought further opinions from colleagues, concluding there is insufficient evidence to definitively support or refute the possibility the virus was acquired prior to arrival in Australia.

Case 3's acquisition of COVID-19 almost certainly occurred in the hotel with subsequent onward transmission to Case 4. No direct quarantine breach has been discovered in the course of the investigation to date. There was no identified evidence to suggest direct contact between the infected cleaner and the occupants of any of the occupied rooms. A number of factors associated with infection prevention and control systems likely contributed to the transmission of infection, including potential for indirect contact or fomite spread.

Other possible methods of transmission

Direct contact

Pathology specimen collection occurred from Case 2, 5 and 6 on 04/01/21, which could have been during Case 2's pre-symptomatic infectious period. Documentation from the Metro South Health Emergency Operations Centre (MSHEOC), Metro South Public Health Unit (MSPHU) and the private pathology provider's records indicate that Case 2's swab was the third of the three to be collected, which excludes transmission from Case 2 to the others by some mechanism during swab collection.

Airflow

Further analysis of airflow in Room 702 and of air movement between room 702 and common areas is pending. Airborne transmission via balconies is felt to be unlikely given rooms 702 and 711 are located geographically distanced. They are on opposite sides of the building and the balconies are not adjacent to each other.

Issues excluded

Security breach/quarantine non-compliance

In the absence of CCTV, investigations to determine if a breach occurred (such as a guest leaving their room) has focussed on interviews with guests themselves and quarantine workers who may have made observations. There is no evidence to indicate any of the guests from rooms 702 or 711 ever left their rooms without approval. Further, there is no evidence to suggest any person entered rooms 702 or 711 without approval. Additionally, although the cleaner was allocated to clean vacant rooms on floor 7 there is no evidence to suggest the cleaner who became infected entered rooms 702 or 711.

Air-conditioning

Pending the outstanding airflow analysis, HGC management advise that two independent systems are maintained. One has a central cooling system that pumps chilled water throughout the building where individual units in the rooms distribute cool air. The second is independent split systems in individual rooms that have a condenser on the balcony. Room 702 is on the central system, room 711 has a split system.

Accordingly, on advice from the hotel, there is no system that 'shares air' between rooms 702 and 711.

The review team notes there was no virus detected on swabs of the air-conditioning systems in rooms 702 and 711, although this does not by itself conclusively rule out transmission.

Findings

In summary, Case 1 acquired the infection overseas and likely passed it to Case 2 in a domestic hotel setting. Cases 5 and 6 likely acquired the infection at around the same time as each other and overseas acquisition is possible. No direct breach in quarantine has been identified, but infection within the hotel cannot be excluded. Case 3 acquired the infection in the hotel on the 02/01/21, with Case 1 being the indirect source. Case 4 acquired the infection from Case 3 in a domestic household setting.

If a position were taken that Cases 5 and 6 acquired their infection at the hotel, then the infections of Cases 5 and 6 are most likely to be indirect contact with a surface that was exposed indirectly to the virus by Case 1 or 2, or from a surface that contacted a surface exposed by Case 1 or 2. Further analysis of airflows on floor 7 are awaited however the information the review team has available at present contains several factors which may have facilitated indirect contact transmission.

In relation to Case 3, infection is most likely to have occurred in the hotel on the 02/01/21 through indirect contact with a surface exposed to the virus by Cases 1 or 2.

There were multiple opportunities for the virus to have passed to such surfaces. This includes meals, laundry etc. leaving and entering rooms 702 and 711; contact points external to the rooms accessed on arrival by Case 1 on the 31/12/20 and by Cases 5 and 6 on the 01/12/21 and while working by Case 3 on the 02/01/21; movement of persons into room 711 when medical support was provided and during the removal of Case 1 from room 702 and the 'fogging' (use of a cleaning device that delivers an aerosol antiseptic mist to an area) of that room.

While it appears unlikely that the exact root cause of transmission will be determined, it is apparent to the review team there are multiple infection prevention and control practices that would benefit from further review and improvement. Some of the practices require ongoing review and quality assurance and some may be considered less than optimal (PPE practices and knowledge and room cleaning procedures).

Accordingly, through a continuous improvement lens rather than delivering a scientific determination, in that the science was unable to determine a definitive cause, the cluster is most likely to be the result of multiple weaknesses in infection prevention and control. Furthermore, actions in response to this cluster should focus on strengthening and standardising quality management systems related to infection prevention and control. Although the review team have not looked at practices within other hotels, opportunities for implementation across the quarantine program in Queensland should also be considered.

Key learnings

Through the interview process and review of a range of materials including but not limited to information provided to guests in hotel quarantine and education material available to hotel staff and quarantine hotel cleaning guidelines, it is apparent there are opportunities for improvement. The improvements can be made across the following areas:

1. Consistent practice across all hotels providing guest quarantine

Some staff potentially work across multiple quarantine hotels. From interviews it has been suggested that there are different practices undertaken in different locations. This requires further clarification, however, the review team consider there is merit in ensuring systems, processes, information and guidance is consistent across the hotel quarantine program. The review team reinforces the benefit of consistent standards and practice across the hotel quarantine system. At minimum, this would mean resolving any contradictory practice recommendations and ensuring alignment with international best practice and applicable national and state guidelines.

Consistent practice is helpful in reducing opportunity for error and omission, particularly when there is fatigue, high levels of stress and cognitive overload. Whilst the review has been restricted to examination of the circumstances of a cluster in HGC in January 2021, given the increasing risk associated with new strains of the virus, there is merit of considerations of learnings from this hotel be applied across all hotels as part of a strengthened and standardised quality management system.

2. Infection prevention and control

a. Advice and education on IPC, including appropriate wearing of PPE, hand hygiene, waste disposal, cleaning practices, uniform management, management of guest luggage and deliveries is available. Inconsistent adherence to prescribed practice became evident through the interview process with hotel cleaning staff.

b. Materials available to date that support IPC were considered by the review team. There are some excellent resources, however, it is recognised that many of the resources may require additional customisation (user centred redesign) particularly for people who have low literacy levels or from CALD communities. No resources in languages other than English have been identified to date. Documents available for education and guidance are generally unclear, wordy and make no mention of supervision, validation or monitoring processes. Many resources are generic and have opportunity for specific detail for infection prevention and control quarantine processes to be included.

c. Interviews have highlighted that adherence to recommendations is challenging given how the nature of the work is currently configured. For example, access to hand sanitiser in common areas is available. However, whist cleaning guest rooms it was reported that no personal hand sanitizer was provided to support hand sanitation between glove changes. Additional process optimisations could be discovered by undertaking participatory co-design with cleaning and supervisory staff.

d. Further information and confirmation of practices through arrival at Brisbane airport and through immigration and transportation to hotel quarantine is required to provide a complete picture of the opportunities for transmission and minimisation of risks.

e. Interview information indicates that education for hotel staff on COVID-19, IPC practices and cleaning practices is available in PowerPoint form. It is of a good standard, although may be difficult for people from CALD communities. In addition, it appeared that not all hotel staff have completed the training. Although a minor recommendation, we suggest that the information delivered through this education program could be reorganised using human factors principles so that critical information is emphasised (by being delivered earlier in the session and/or allocated more time and/or supplemented with a colour scheme to focus attention on key information as needed).

f. There also appears to be gaps around supervision and monitoring of compliance to IPC strategies.

3. Method for identification of room status

a. It was recognised that information regarding room status i.e., occupied type of clean required date clean completed etc. was not always correct. An example given was that a room was considered to be vacant when in fact it was occupied. This may lead to inadvertent entry and/ or attending of rooms by cleaning or other hotel staff.

b. Communication of results to guests and hotel staff should be improved. In particular, the fact that Case 5 states they found out about their results from the news media and notified the hotel themselves. This demonstrates opportunities for enhanced communication processes and in good clinical care of quarantine guests.

c. In terms of culture, the review team recommends refocusing policies and procedures for managing hotel quarantine to maximise alignment with the primary goal of the quarantine system, that is, to keep guests and the community safe. Approaching systems

redesign (policies, procedures, accountabilities, training and quality assurance) with this lens is considered to be essential. This includes a significant strengthening of the importance of infection control in the procedures and a single consistent approach to infection prevention and control across the quarantine hotel system.

Immediate actions taken in response to learnings

1. As at 19/01/21, CCTV had been installed on all floors of 2 quarantine hotels and is underway at an additional 3. This work will continue until all quarantine hotels are completed. The installation also includes motion detection and a requirement for 24/7 monitoring by a QPS member.
2. During the review, the Queensland Health review team members identified a number of infection prevention and control recommendations for immediate actioning. These recommendations are being progressed under the direction of the newly appointed Statewide Director Quarantine Services.

Outstanding enquiries and continuous improvement actions

The below outstanding issues and recommended future actions refer to activities that were not concluded prior to the submission of the final review report. As some of these processes have commenced, these will be followed through as appropriate (i.e. collation of emails, conclusion of arranged interviews). In all cases, information and learnings from these responses and remaining outstanding actions will be referred to the Statewide Director Quarantine Services and QPS COVID-19 Command for consideration of further action.

Requests for information

While a large number of persons have been spoken to, it is recognised all persons who may have information should be offered the opportunity to provide it within a reasonable timeframe. Accordingly, in addition to the email advice to previously quarantined persons at the HGC seeking and providing methods for their input, a similar offer has been made to QPS and ADF personnel who performed duties at the HGC. It is anticipated these responses were not all received prior to the submission of the final review report. The QPS have committed to continuing to monitor and action these responses as indicated above.

Queensland Health staff will be engaged through the work of the Statewide Director Quarantine Services and the Hotel Quarantine Steering Committee.

Interviews

While interviews were prioritised and those identified as key have been interviewed, there are a number of outstanding interviews considered useful to further validate recommendations. Where considered relevant these will continue and be referred as indicated.

Cleaning practices

Further review of cleaning processes and associated education material by an ICP (infection control practitioner) is required. While many resources were received by the review team, further

consultation with relevant Queensland Health and other staff regarding the range of documents, policies, procedures, guidelines and practices is recommended.

End to end transport

The review team did not explore practice and process for passengers arriving at Brisbane International airport, transiting through immigration and transport to their quarantine hotel.

Complementary CHO direction changes

It is noted that the recommendations, if implemented, may require corresponding changes to relevant legal frameworks (including directions issued by the Chief Health Officer (CHO)) supporting the quarantine program. The CHO should be engaged during these considerations to ensure the practical requirements are supported by the legal framework.

Deliverables and timeframes

During this review, it became evident there are innumerable examples of best practices and correspondingly, opportunities for improvement. The review team appreciates that the pandemic environment is inherently unpredictable and therefore risk management must be approached dynamically. This also relates to the hotel quarantine program in Queensland, where it is incumbent on relevant agencies to continually review the program for sufficiency against current needs and to implement strategies to assure and maintain community safety and trust in government and to improve systems and processes where necessary. This will best be achieved through ongoing monitoring and reviews and quality assurance of residual risks to assure and maintain community safety and the confidence and support of the Queenslander community.

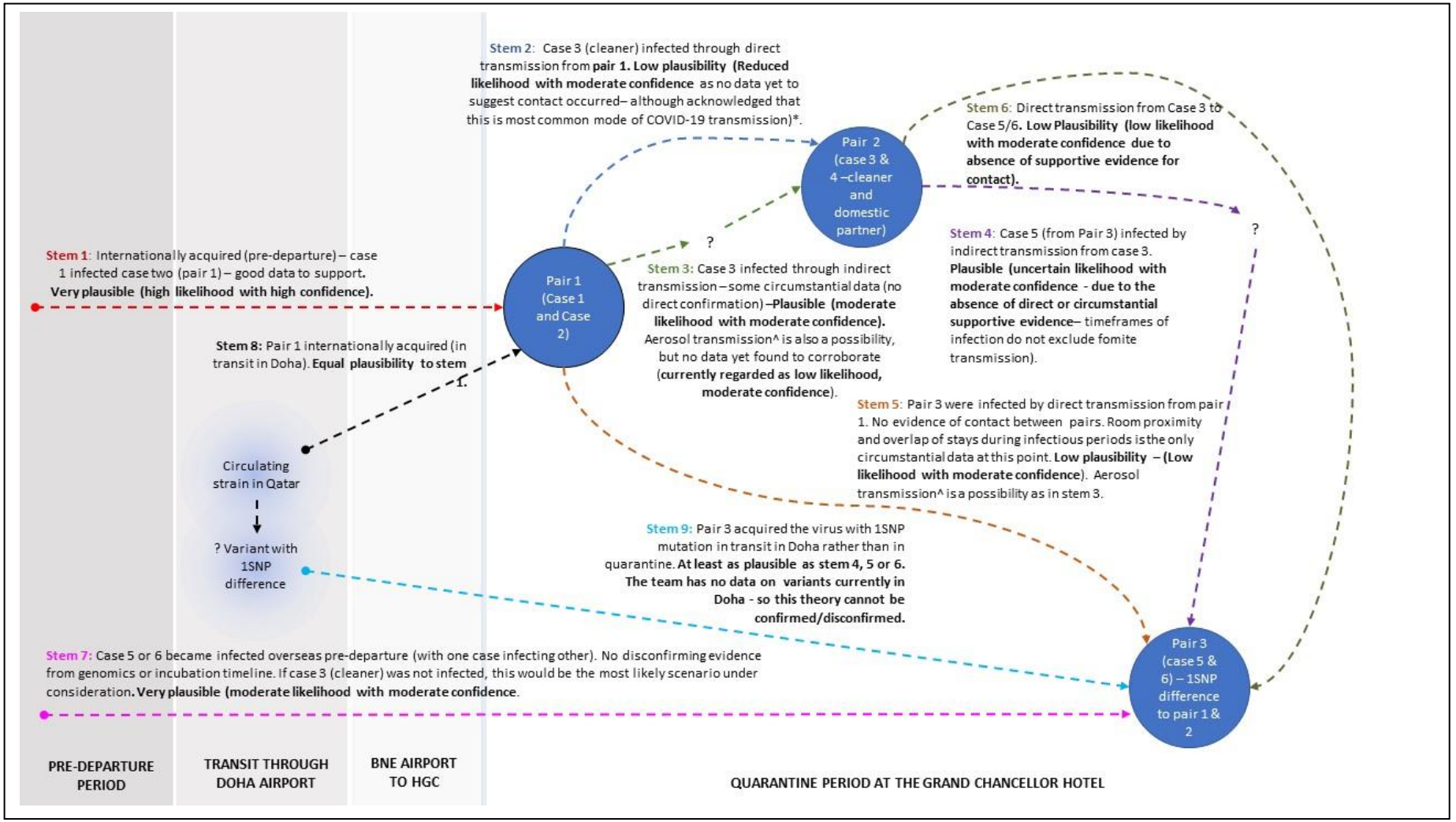
It is noted that while the Terms of Reference provided for the conduct of a joint investigation and analysis and delivery of a report complete with recommendations, which are completed through the delivery of this review report, there are some lines of inquiry the review team commenced that have not concluded. Guidance was provided by the Director-General of Queensland Health and Commissioner, QPS that recommendations and issues arising from these outstanding items, post the finalisation of this review are to be referred to the other activities underway. A Statewide Director of Quarantine Services has been appointed to focus on policy, planning and leadership. A commitment has been made for this review to be a key focus for continual improvement in the area of hotel quarantine.

Case Timeline 23/12/2020 - 12/1/2012

	23-Dec	24-Dec	25-Dec	26-Dec	27-Dec	28-Dec	29-Dec	30-Dec	31-Dec	1-Jan	2-Jan	3-Jan	4-Jan	5-Jan	6-Jan	7-Jan	8-Jan	9-Jan	10-Jan	11-Jan	12-Jan
Case 1	X						Doha	Arrived	Q		X										
Case 2							Doha	Arrived	Q		X		X		X						
Case 3							X				Work				X						
Case 4																				X	
Case 5									Doha	Arrived	Q		X							X	
Case 6									Doha	Arrived	Q		X							X	X

X	Negative test
X	Positive
	Possible incubation period
	Likely incubation period
	Infectious period
	In isolation (in hospital / home)
	Rostered shift for Case 3

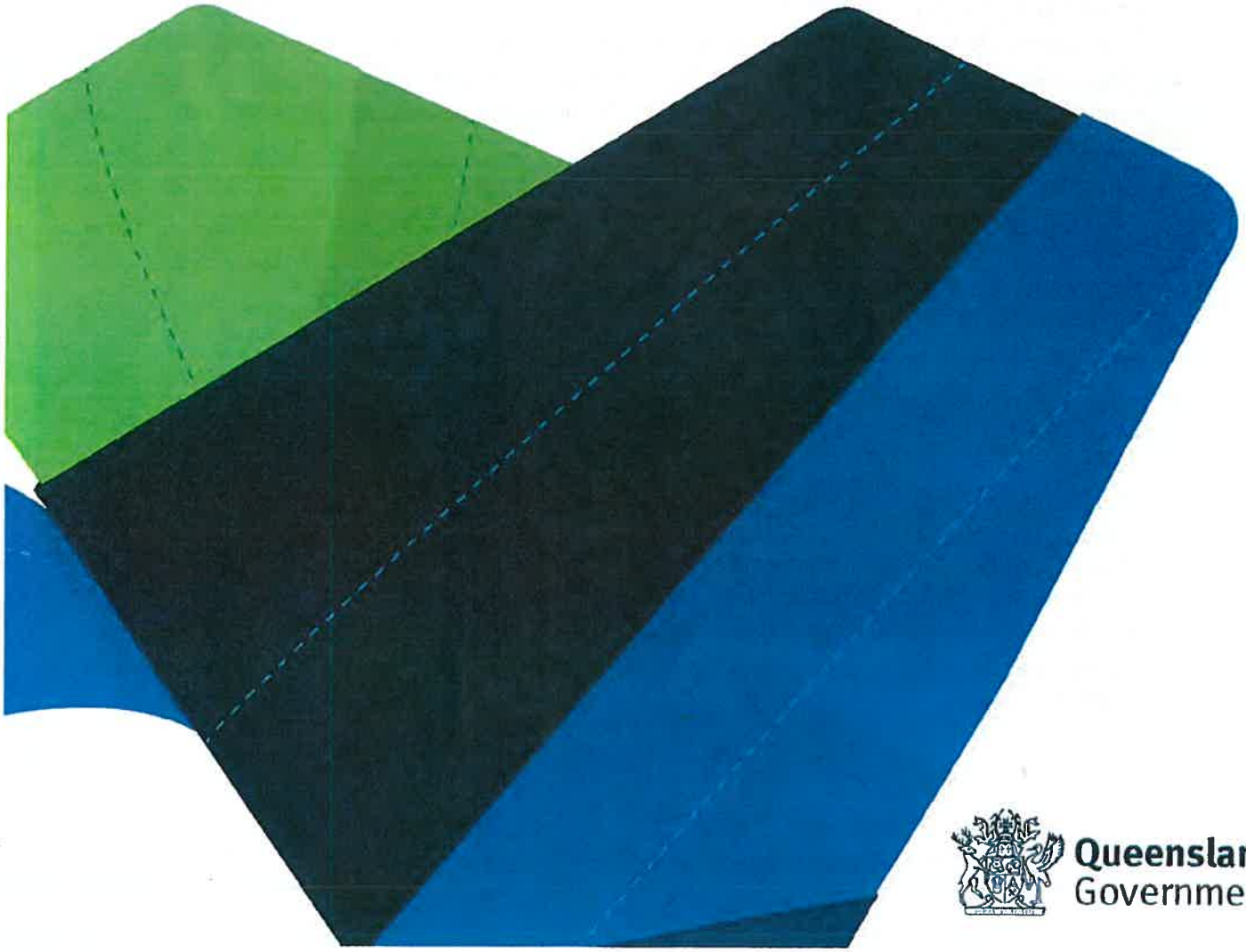
Note:
Cases 1 and 2 arrived in Australia from Doha late on 30/12/2020 and were placed in quarantine (Q) in the early hours of 31/12/2020.
Cases 5 and 6 arrived in Australia from Doha late on 1/1/2021 and were placed in quarantine in the early hours of 2/1/2021.
Case 5 was transferred to hospital on 11/1/2021. Case 6 was transferred to hospital on 12/1/2021.



Note: Pair 1 and 3 were in Doha airport within 48 hours of each other – this lends credence to a common source hypothesis in Doha Airport (Stems 8 and 9). The review team has a high level of confidence transmission occurred from pair 1 to case 3 although this could be via stem 2 or 3. ^Aerosol transmission up to 1.5 metres.

Queensland Health and Queensland Police Service joint-agency continuous improvement review of the COVID-19 infection of a hotel worker (Hotel Grand Chancellor)

Terms of Reference



Queensland Government

Purpose

- To review the circumstances leading to the COVID-19 cluster at the Hotel Grand Chancellor, Brisbane;
- To review the systems, processes and arrangements relating to infection control at the Hotel Grand Chancellor and consistency with other hotel quarantine venues;
- To identify any opportunities for improvement within those systems and processes; and
- To provide recommendations for system improvement to the Health Minister, Minister for Police, Fire and Emergency Service and Minister or Corrective Services, Director General of Health, Police Commissioner, Health and Hospital Services (HHSs), Queensland's Disaster Management arrangements and quarantine hotel venues.

Scope

- The initial scope is to undertake a specific, end-to-end review, of the cases in the cluster, in order to provide system level recommendations for improved infection control;
- The operations of all relevant Queensland Government agencies are in scope;
- The operations of other hotel quarantine partners (hotel operators and contractors, Commonwealth Government agencies etc) are in scope, however, involvement is voluntary and/or subject to their own organisational approvals;
- The review will examine documents, procedures, protocols and systems relevant to the infection control aspects of the hotel quarantine program in Queensland;
- While focussed on a specific incident at the Hotel Grand Chancellor, any issues identified are likely to have implications for the entire hotel quarantine program;
- This review is systems-based and focussed on the identification of opportunities for continuous improvement across the hotel quarantine program in Queensland; and
- This review does not apply or relate to home quarantine.
- This review will not consider broader quarantine hotel components such as hotel selection or procurement unless there is a direct association with infection control.
- This review will also inform current broader system-based quarantine hotel reviews including the "End to End Review of Qld Health Contributions to the Quarantine Hotel Program" and the Inspector-General Emergency Management Cabinet-in-Confidence Review of the status of implementation of the recommendations from the Halton Review of Quarantine Hotels.
- Consideration of lessons identified from other jurisdictions related to the scope of this review.

Method

The review will be conducted jointly by Queensland Health and the Queensland Police Service (QPS) and review team members will continue to report within their normal agency arrangements. The review will engage representatives from Metro South HHS, the affected quarantine venue hotel, Queensland Police Service (QPS), Queensland Health, Maritime Safety Queensland, the Department of Energy and Public Works and agencies performing functions at the State Disaster Coordination Centre (SDCC) relevant to the hotel quarantine program. It will develop and then undertake an analysis of a chronology of events, and a review of policies, procedures and human factors relevant to the infection of a quarantine hotel venue worker.

The review will consider best-practice examples for the purposes of gap-analysis and recommendations for improvement.

The review will not be conducted under any statutory provisions or qualified privilege, and participation of all entities is voluntary.

Review team

The review team includes:

- Wendy Fennah, Nursing Director, Patient Safety and Quality Improvement Service, Clinical Excellence Queensland
- Anne Garrahy, Assistant Director Nursing, Office of the Chief Nursing and Midwifery Officer, Clinical Excellence Queensland
- Satyan Chari, Manager, Healthcare Improvement Unit, Clinical Excellence Queensland
- Trent Yarwood, Staff Specialist Infectious Diseases, Royal Brisbane and Women's Hospital
- Janelle Andrew, Queensland Police Service
- Paul Browne, Queensland Police Service
- Kathy Dempsey, Senior Manager, Healthcare Associated Infection Program, Clinical Excellence Commission, New South Wales.

Disclosure of information

The review team are authorised to access 'confidential information' under the *Public Health Act 2005* (Qld) and the *Hospital and Health Boards Act 2011* (Qld) and 'personal information' under the *Information Privacy Act 2009*. The information is being disclosed in the public interest for the purposes of the review.

Deliverables

The review will deliver a report that provides an analysis of what happened and why, and recommendations for improvement.

During the review period (which is expected to be brief), if any *'clear and present'* risks are identified, then immediate action will be recommended to promptly address those risks, where such actions fall within the authority of Queensland Health, QPS, the State Disaster Coordinator or the HHSs.

The review report is to be completed by Friday, 22 January 2021.

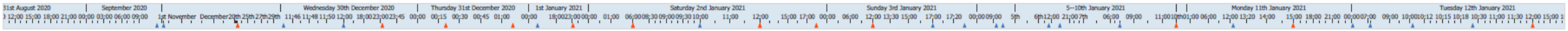
Approving authority

Dr John Wakefield PSM
Director-General
Queensland Health

Ms Katarina Carroll APM
Commissioner
Queensland Police Service

Protected

Hotel Grand Chancellor - Briefing Timeline



Level 7

Floor Plan Hotel Grand Chancellor - Level 7

ROOM 711

CASE 5 Travel to Brisbane — Arrived to Brisbane from DOHA QATAR (QR898) seats 17G & 17K. — Friday — 01/01/2021 23:15:00

CASE 5 Quarantine commenced — Escorted into room 711 by QPS. — Saturday — 02/01/2021 02:01:00

CASE 5 Medical Event — Case 5 reports pain in their back and leg. QAS provided medication. — Saturday — 02/01/2021 21:10:00

CASE 5 Medical Event — Case 5 reports stomach pain and fever. — Sunday — 10/01/2021 21:05:00

CASE 5 Medical Event — Case 5 blood pressure and blood sugar are low. — Monday — 11/01/2021 12:52:00

CASE 5 Travel to RBWH — Case 5 is transported by QAS to RBWH. — Monday — 11/01/2021 14:53:00

CASE 5 QT Direction — Case 5 issued QT Direction at RBWH. — Tuesday — 12/01/2021 12:00:00

CASE 2 COVID-19 Test — Case 2 listed as self test for COVID-19 with negative results. — Wednesday — 23/12/2020 12:00:00

CASE 2 Travel to Brisbane — Arrived from Brisbane from DOHA QATAR (QR898) seats 45J & 45K. — Wednesday — 30/12/2020 23:35:00

CASE 2 Check in HGC — Case 2 checked into HGC. — Thursday — 31/12/2020 00:20:00

CASE 2 Quarantine commenced — Case 2 escorted by QPS into Room 702 for quarantine. — Thursday — 31/12/2020 01:08:00

CASE 6 Travel to Brisbane — Arrived to Brisbane from DOHA QATAR (QR898) seats 17G & 17K. — Friday — 01/01/2021 23:15:00

CASE 6 Quarantine commenced — Escorted into room 711 by QPS. — Saturday — 02/01/2021 02:01:00

CASE 2 COVID-19 Test — Test conducted for Case 2 for COVID-19. — Saturday — 02/01/2021 12:00:00

CASE 2 COVID-19 Test — Case 2 tested for COVID-19 returned as negative. — Sunday — 03/01/2021 12:00:00

CASE 2 Medical Event — Case 2 starts to feel ill. — Monday — 04/01/2021 11:00:00

CASE 2 Travel to PA Hospital — Case 2 transported by QAS to PA Hospital — Wednesday — 06/01/2021 18:50:00

CASE 2 COVID-19 Positive — Case 2 tested positive for COVID-19. — Thursday — 07/01/2021 08:00:00

CASE 2 QT Direction — Case 2 issued QT Direction at PA. — Thursday — 07/01/2021 12:00:00

CASE 6 Travel to RBWH — Case 6 is transported by QAS to RBWH. — Monday — 11/01/2021 14:53:00

CASE 6 Travel to HGC — Case 6 is transported by QAS and returned to Room 711 by QPS. — Tuesday — 12/01/2021 00:10:00

CASE 6 COVID-19 Positive — Case 6 tested positive for COVID-19. — Tuesday — 12/01/2021 10:10:00

CASE 6 Travel to RBWH — Case 6 is transported by QAS to RBWH. — Tuesday — 12/01/2021 10:20:00

CASE 6 QT Direction — Case 6 issued QT Direction at RBWH. — Tuesday — 12/01/2021 12:00:00

ROOM 702

QHEALTH protocols — HGC received second brief by QHEALTH re Hotel QT protocols. — Mid Octoberr 2020 — 15/10/2020 12:00:00

CASE 1 COVID-19 Test — Case 1 listed as self test for COVID-19 with negative results. — Wednesday — 23/12/2020 12:00:00

CASE 1 Travel to Brisbane — Arrived from Brisbane from DOHA QATAR (QR898) seats 45J & 45K. — Wednesday — 30/12/2020 23:35:00

CASE 1 Check in HGC — Case 1 checked into HGC. — Thursday — 31/12/2020 00:20:00

CASE 1 Quarantine commenced — Case 1 escorted by QPS into Room 702 for quarantine. — Thursday — 31/12/2020 01:08:00

CASE 1 COVID-19 Test — Test conducted for Case 1 for COVID-19. — Saturday — 02/01/2021 12:00:00

CASE 1 Medical Event — Case 1 starts to feel sick with fever. — Saturday — 02/01/2021 18:00:00

CASE 1 COVID-19 Positive — Case 1 tested positive for COVID-19. — Sunday — 03/01/2021 12:00:00

CASE 1 Travel to RBWH — Case 1 transported by QAS to RBWH. — Sunday — 03/01/2021 17:00:00

CASE 1 QT Direction — Case 1 issued QT Direction at RBWH. — Monday — 04/01/2021 10:30:00

Hotel Grand Chancellor (HGC)

QHEALTH protocols — HGC commenced Hotel QT first briefed by QHEALTH re protocols. — Early September 2020 — 01/09/2020 12:00:00

HGC checked rooms — Rooms 702 & 704 checked by HGC staff. — Wednesday — 30/12/2020 11:45:00

HGC checked rooms — Rooms 711 checked by HGC staff. — Wednesday — 30/12/2020 11:52:00

HGC checked rooms — Room 704A stripped by HGC staff. — Friday — 01/01/2021 12:00:00

CASE 3 Travel movements — Case 3 travelled on QR from Altandi Station to Roma Street. — Saturday — 02/01/2021 08:00:00

CASE 3 Locations at HGC — Case 3 working at HGC and cleans levels 3, 6, 7, 9; Rooms 703; 704A. — Saturday — 02/01/2021 10:00:00

HGC - Cleaning of hotel — Lifts and lobby cleaned by HGC staff. — Saturday — 02/01/2021 12:00:00

QHEALTH protocols — QPS, QHEALTH, Manager meeting conducted. — Sunday — 03/01/2021 12:00:00

HGC - Cleaning of ROOM 702 — Room 702 fogged by cleaner after Case 1 departed for RBWH. — Sunday — 03/01/2021 17:30:00

CASE 3 COVID-19 Positive — Case 3 tested positive for COVID-19. — Wednesday — 06/01/2021 10:00:00

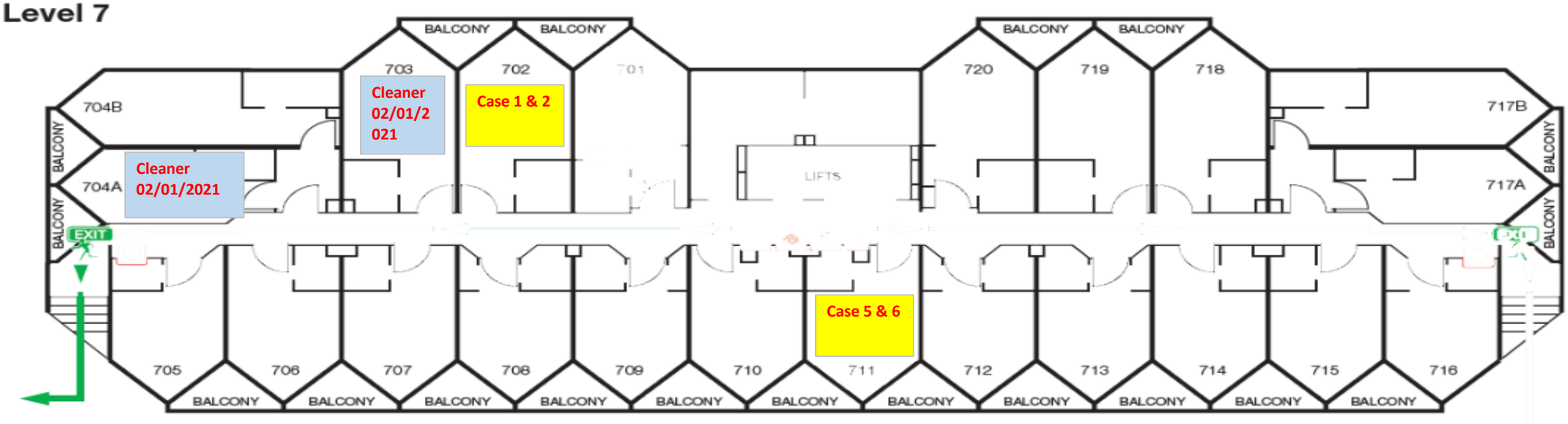
De facto relationship

CASE 4 COVID-19 Positive — Case 4 tested positive for COVID-19. (Cleaner's partner). — Wednesday — 12/01/2021 08:00:00

Hotel Grand Chancellor - Briefing Timeline
LEGEND
Hotel Grand Chancellor | CASE 1 | CASE 2 | CASE 3 | CASE 4 | CASE 5 | CASE 6 | Meetin | Person (Generic) | Flight via airplane | Hospital | Medical related | Linked to ROOM 711 | Linked to ROOM 702

Protected

Level 7


BALCONY
BALCONY
703
702
701
720
719
718
704B
Cleaner 02/01/2021
Case 1 & 2
717B
BALCONY
704A
Cleaner 02/01/2021
LIFTS
717A
BALCONY
EXIT
EXIT
Case 5 & 6
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COVID-19 QUARANTINE VICTORIA

Safer Care Victoria recommendations

March 2021

Developing and implementing minimum ventilation and engineering standards

- Six recommendations, including three which were underway or completed prior to the review, focused on undertaking ventilation reviews, developing and implementing minimum ventilation and engineering standards, training staff in those standards, undertaking required building upgrade works and reducing room capacity for family groups.

- There were a further four site-specific recommendations for the Park Royal on ventilation requiring the replacement or cleaning of filters and on-site record keeping of these works.

CQV key actions:

- **Independent ventilation assessments:** assessments at all quarantine hotels were already underway (please see Ventilation Assessments document for further detail)

- **Ventilation standards and training:** Until February 2021, there were no state or national guidelines for ventilation in a hotel sitting. In collaboration with DH, there is now a standard provided, and the CQV assessments and rectification are well underway. Prior reference points included standards for health care – however, hotels are not designed for this standard nor are these standards achievable. The Department of Health (DH) will lead discussions for a national ventilation standard for hotels. A comprehensive training and assurance program will be developed to deliver against any finalised policies.

- **Room capacity:** CQV has existing policies on the number of occupants per room, including providing adjoining rooms where possible, and CQV had already introduced buffer rooms between larger family groups and other residents. CQV is also exploring mitigation strategies for larger groups (including air-scrubbers and portable air cleaners) and has asked the independent ventilation assessor to map maximum occupancy for family rooms.

- **Park Royal:** these recommendations will be actioned in consultation with the hotel and also against the outcomes of the independent ventilation assessment.

Infection prevention and control uplift, including increased use of N95 masks

- Six recommendations, including two which were underway or completed prior to the review, focused on improving cleaning audit practices and compliance with residents wearing masks before opening their door, commencing N95 fit testing, increasing PPE Tier 3 use and reconsideration of the frequency of soft furnishing cleaning.

CQV key actions:

- **N95 fit testing and increasing PPE Tier 3 use:** N95 fit testing and increased PPE Tier 3 use was already occurring across all CQV sites prior to the review. More than 2200 staff members have undergone N95 mask fit testing and refresher training, to support the requirement for anyone working in, or entering, a Red Zone to wear a properly fitted N95 mask. CQV now has 20 of its own

accredited fit testers and works closely with the DH Respiratory Protection Program to ensure proper training for any new staff.

- **Cleaning:** Existing cleaning audit practices have been improved through the use of UV markers, while CQV will engage DH's Infection Prevention Control Advice and Response team to inform evidence-based advice on frequency of soft furnishing cleaning.

- **Residents wearing masks:** Prior to the SCV report, CQV increased its communication to residents about the requirement to wear their mask before opening their door (for food deliveries or testing). Residents are provided with written instructions and visual aids, while staff are also instructed to remind residents of the requirements where necessary.

- **Rejected recommendation:** A recommendation that staff should wear gloves if they're required to assist residents with their luggage was rejected. Advice from CQV Infection Prevention and Control (IPC) leads and the program's healthcare providers is that these measures would increase IPC and staff safety risks.

  Hand hygiene is best practice for CQV staff who are trained in proper hand hygiene techniques and who must frequently sanitise throughout their shifts. Sanitiser kills the virus and reduces its spread to other surfaces.

  By comparison, using gloves reduces hand sanitising, which can increase the spread of the virus to other surfaces through touch.

  Clinical staff, such as doctors and nurses, use gloves to reduce the risk of coming into contact with bodily fluids such as blood and saliva. Cleaning staff use gloves for the same reason when cleaning rooms, and also to protect their hands from cleaning chemicals.

Adjustments to operations to further minimise resident-staff contact

- Five recommendations, including three which were completed prior to the review, including staggering resident mealtimes, introducing room buffers, increasing resident testing and screening residents for prohibited medical devices.

CQV key actions:

- **Staggered meal deliveries and room buffers:** these measures were introduced in February prior to the review, with room buffers to be reconsidered against the independent ventilation assessment findings.

- **Increase resident testing:** In consultation with the Chief Health Officer, resident testing has been doubled with tests to now be conducted on days zero, four, 12 and 14. Once returned travellers have left quarantine, the Department of Health will also contact them on day 16 for a symptom check and recommend they get further tests on day 17 and 21

- **Medical devices:** prior to the SCV review, additional screening measures were introduced for medical devices, including clear signage at the airport and nurse spotters working with Australian Border Force to identify any aerosol generating devices. The returned travellers form, which residents complete prior to arriving in Melbourne, also specifically asks about the use of nebulisers and CPaP/BiPap use.

- **Rejected recommendation:** SCV recommended COVID-19 testing of residents should occur inside residents' rooms with their door closed, rather than the current practice of at the doorway with the door open. CQV discussed the recommendation with Alfred Health and Healthcare Australia, whose staff conduct the test, and both rejected the proposal due to the unacceptable risks posed to staff.

Optimising process mapping and staff roles and responsibilities

- Five recommendations, including one which was underway prior to the review, focused on updating process and role mapping to whole of operations, further limiting hotel reception and quarantine staff's direct contact with residents and tracking staff movement through a QR app.

CQV key actions:

- **Process and role mapping:** CQV's original process mapping was undertaken ahead of the program being reset in December 2020. This mapping will be updated to reflect changes since it began, including incorporating any site-specific arrangements. Role mapping will be considered once the process mapping has been updated.

- **Further limiting direct contact:** CQV is already considering alternative solutions to minimise contact and will further consider the additional IPC and resourcing requirements of both recommendations.

- **New QR app:** CQV had already developed a new Safe Workplace App to provide a digital check-in process for all quarantine accommodation staff.

  The app allows staff and contractors to use a unique code to check in and out of quarantine sites and register completion of daily staff testing requirements.

  Unlike standard QR codes, the system enables immediate updates and processing of large staff groups - which provides CQV with more efficient and faster contact mapping in the event of a transmission. The system also records daily testing of staff and pre-emptive contract mapping.

Continuous improvement

- Five recommendations, including three which were underway prior to the review, focused on increasing channels for staff and resident feedback, prioritising the creation of a fatigue risk assessment, introduction of ad hoc peer reviews and unannounced IPC audits, consideration of recommendations and factors of incidents in other jurisdictions and ensuring actions for continuous improvement are recorded.

CQV key actions:

- **Feedback:** Residents are already encouraged to provide feedback through a dedicated phone line, an online feedback portal and resident exit surveys. This feedback is considered across CQV operations and executives and addressed at a local level. In addition to existing workplace practices for staff to raise issues and complaints, CQV's IPC team will introduce a dedicated platform for anonymous feedback and monthly prompts for feedback on specific topics.

- **Fatigue:** CQV, in collaboration with WorkSafe Victoria and the CPSU, has developed and issued a Fatigue Management Police and Procedure, including risk assessment and mitigation strategies. This was in place prior to the SCV review.

- **IPC audits**: CQV's existing IPC audit processes weren't examined as part of this review, however CQV's IPC team will incorporate ad hoc peer reviews and seek DH support for spot/unannounced audits.

- **Incidents in other jurisdictions:** CQV distributes and considers key findings and recommendations from other jurisdictions, in collaboration with relevant interagency working groups.

- **Continuous improvement:** CQV has always focused on continuous improvement and will continue to look for opportunities across all elements of the program. Recommendations and actions from incidents, including those in other jurisdictions, are now a standing agenda item for IPC Steering Committee meetings.

Incident response methodology

- Five recommendations focused on standardising and adjusting incident action plans for transmission events to align with DH approaches and formally reviewing the nebuliser incident.

CQV key actions:

- **Incident management and templates**: CQV will undertake further consultation with DH on CQV incident response templates, which were originally based off DH materials and tailored to hotel settings and operations. CQV will assess the portability against its current process – which is more of an emergency management approach.

- **Nebuliser review:** CQV and our healthcare providers conducted an immediate investigation and audit of all records once CQV became aware, on Friday 5 February, that a resident had used a nebuliser. This included reviewing medical records and CCTV of staff interactions.

  This audit shows the use of the nebuliser only emerged during a formal case interview on Friday 5 February, once the man had tested positive and has been moved to the health hotel.

  Each resident undergoes an initial health screening at the airport prior to entering quarantine and a more comprehensive review within 12 hours of arrival.

  Since the case emerged, we have taken further steps to ensure residents coming into mandatory quarantine identify nebulisers as medical devices, including introducing clear signage at the airport and nurse spotters working with Australian Border Force to identify any aerosol generating devices.

Review of Management of Variants of Concern of COVID-19 in Hotel Quarantine Settings

VICTORIA State Government | Department of Health

Review of Management of Variants of Concern of COVID-19 in Hotel Quarantine Settings

The Review was chaired by **Professor Allen Cheng** (Deputy Chief Health Officer at Victorian Department of Health and Professor of Infectious Diseases Epidemiology at Monash University and Director of the Infection Prevention and Healthcare Epidemiology Unit at Alfred Health) alongside an independent expert panel comprised of:

A/Professor Deb Friedman – Deputy Public Health Commander and Medical Director at Victorian Department of Health, Infectious Diseases Specialist at Barwon Health and Associate Professor at Deakin University,

A/Professor Philip Russo– Director of Nursing Research, Cabrini Health and Associate Professor, Faculty of Medicine, Nursing and Health Sciences, Monash University, President of the Australasian College for Infection Prevention and Control (ACIPC).

Professor Malcolm Sim AM – Professor, Head of the Centre for Occupational & Environmental Health in the School of Public Health & Preventive Medicine at Monash University, President of the Australasian Faculty of Occupational and Environmental Medicine, Royal Australasian College of Physicians.

Table of Contents

Abbreviations

AHPPC	Australian Health Protection Principal Committee
CALD	Culturally and linguistically diverse
CBD	Central business district
CCTV	Closed-circuit television
COVID-19	Coronavirus disease 2019
CQI	Continuous Quality Improvement
CQV	COVID-19 Quarantine Victoria
DH	Department of Health, previously Department of Health and Human Services (DHHS)
DJCS	Department of Justice and Community Services
DPC	Department of Premier and Cabinet
EMD	Electronic monitoring device
HCA	Healthcare Australia
HEPA	High efficiency particulate absorbing
HVAC	Heating, ventilation and air conditioning
IPC	Infection prevention and control
MoU	Memorandum of Understanding
PAPR	Powered air purifying respirator
PPE	Personal Protective Equipment
QR code	Quick Response code
SCV	Safer Care Victoria
UV	Ultraviolet
VHHSBA	Victorian Health and Human Services Building Authority
VoC	Variant of Concern
VUI	Variants under investigation

Executive Summary

Context

1. This confidential Review of Management of Variants of Concern of COVID-19 in Hotel Quarantine Settings (the Review) was commissioned by the State Controller of Health.
2. This Review takes into account the epidemiology and characteristics of variants of concern (VoC) and draws upon recent reports, best practice models and interviews with experts to consider their implications on current quarantine arrangements.
3. Safer Care Victoria (SCV) has provided additional analysis on quarantine arrangements in Victoria based on recent COVID-19 transmission events, as has a Department of Premier and Cabinet review into alternative models of quarantine.
4. The Review provides recommendations on the management of hotel quarantine and the key features of quarantine models that minimise the risk of COVID-19 VoC transmission both in hotels and out to the community.

Aims and methods

1. This review aimed to answer the following questions:
    - Given the epidemiology of COVID-19 and VoCs, to what extent will hotel quarantine be able to reduce the risk of transmission in-hotels and out to the community?
    - What would be the features of the most effective model of quarantine for VoC in Victoria?
2. To consider the principles and desired outcomes of a high-quality quarantine system, methods included both interviews with key informants and reviews of literature and previous reports on the standards and operations of current quarantine models, alternative models and enhancements.

Main messages

1. The hotel quarantine system has reduced the risk of importation of SARS-CoV-2 into the Australian community with continuous improvements and refinements implemented over time. As a result, the escape of a highly transmissible respiratory pathogen from hotel quarantine is a low-probability (but high-consequence) event.
2. VoCs have emerged worldwide. They appear to be more transmissible and associated with higher viral loads. Additionally, vaccines may not be as effective against VoCs as they are against wild-type strains. However, other features of these variants appear to be similar, including the incubation period and modes of transmission.
3. The impact of VoCs has changed since they were first reported in Victoria in December 2020. Since early February 2021, all COVID-19 cases reported in hotel quarantine have been due to VoCs.
4. Some form of quarantine will probably be required until COVID-19 is no longer an issue of major public health significance in Victoria (at least until the end of 2021, unless there are

major advances in treatment or prevention). The required capacity and future quarantine policies after that time are difficult to predict at this stage.

The rollout of vaccination to hotel quarantine workers, followed by international arrivals and the broader community, is likely to reduce the need for an ongoing quarantine program and the risk to the community.

It is not possible to eliminate risk completely from any quarantine system, but the hierarchy of controls is an established framework to consider hazard controls. Additional controls, including vaccination, engineering (particularly ventilation) and administrative controls as recommended in the review undertaken by SCV should reduce the risk of transmission of SARS-CoV-2 within hotel quarantine and from hotel quarantine to the community.

As effective controls have largely reduced transmission by other pathways, recent interest has focused on the controls required to mitigate aerosol transmission.

Organisational factors, including governance, accountability, a culture prioritising safety, continuous quality improvement, monitoring, evaluation and reporting are vital to ensuring safety.

If properly designed, alternative quarantine arrangements could improve several aspects of quarantine, including resident and staff health and wellbeing, infection prevention and control, clinical care, and security. However, these arrangements will take some time to implement.

Findings

- Many reports and guidelines have reviewed hotel quarantine arrangements in Australia and Victoria. Themes across most reports, reinforced by interviews with key informants, have included the:
    - importance of strong governance, leadership and management
    - need to employ the full hierarchy of controls, particularly engineering controls, to reduce the potential for aerosol transmission
    - importance of systems that facilitate continuous improvement, including monitoring, evaluation and reporting in reviewing and refining hazard controls
    - need to address health needs of residents and enhance their experience more broadly, such as their mental health and wellbeing.
- Many aspects of the hotel environment are not ideal for accommodating residents, particularly infection prevention and control, and resident wellbeing.
- Vaccination of staff and the higher tiers of the hierarchy of controls are likely to be the most effective measures to prevent the incursion of COVID-19 into the community.
- Hazard controls need to be supported by organizational factors that promote their implementation, including strong governance, a safety culture, continuous quality improvement and robust monitoring and evaluation.
- While a detailed examination of the management and culture of COVID-19 Quarantine Victoria (CQV) was not within the scope of this review, informants noted that, as a new agency, CQV needs time to establish all the appropriate systems and processes and develop a culture focused on health and safety. CQV drawing upon existing guidance and policy documentation, and utilising expertise from acute health services and public health units will facilitate this.

- A range of alternatives to the current hotels may be feasible for selected cohorts, including home quarantine, other existing facility types (such as serviced apartments) and purpose-built quarantine facilities.
- Alternative quarantine arrangements could improve aspects of quarantine, including resident and staff health and wellbeing, infection prevention and control, clinical care and security if properly designed.
- The Howard Springs Quarantine Facility might be regarded as a reference standard model; although the infrastructure and environment presents many advantages for resident wellbeing and the prevention of transmission, some limitations have been identified that should be considered in future purpose-built facilities.
- Differing models of quarantine based on different levels of risk would introduce over time.

Recommendations

1. That hotel quarantine can resume safely once the following key priority areas have been addressed:
    a. At least the first dose of vaccine is provided to resident-facing hotel quarantine workers
    b. CQV have responded to each engineering and operational recommendation of the SCV report, where necessary with advice from appropriate experts
    c. CQV have advised on a phased timetable allowing for the completion of the above actions and operational considerations.
2. That CQV:
    - Develop responses to the other recommendations of the interim SCV report focused on governance and culture with monitoring of progress against implementation
    - Ensure that the occupational health service comprehensively supports worker health and safety
    - Ensure clarity in delineating the roles and responsibilities of CQV and the Department of Health in the Memorandum of Understanding, and clearly identify designated decision makers and that where the appropriate expertise exists, the Department of Health will provide timely and appropriate advice.
    - Perform a review of the governance of CQV, specifically accountability mechanisms that facilitate consideration of strategy, risks, monitoring and evaluation and strengthen a culture of safety.
3. That the Victorian Government consider the three options for future quarantine arrangements:
    - Option 1: Strengthen existing hotel model
    - Option 2: Hybrid model of hotel and other types of accommodation
    - Option 3: Quarantine in purpose-built facilities or other identified fit-for-purpose facilities. These should be based on the following principles in formulating the design specifications of purpose-built facilities:

- Protection of the community from the spread of infectious diseases from infectious persons coming to Australia from overseas, taking into account VoCs that appear to be more infectious.
- Ensuring the health and well-being, and mitigating the impacts of quarantine on residents.
- Ensuring resident and worker safety from infections and other hazards.
- Meeting the requirements of Victorian Charter of Human Rights

4. That a permanent system be put in place to ensure that safe, effective quarantine can be provided into the future, even if the need to quarantine for COVID-19 ceases. This functional capacity could be managed by CQV in its current form or by another governmental agency or department with health and logistical expertise.

Introduction

Since the first reports of a new respiratory infection emerged in late 2019, the COVID-19 pandemic has spread quickly throughout the world. Victoria has experienced two major waves of COVID-19; the first was mainly due to returning Australians who had acquired infection overseas and their close contacts; the second occurred after a failure of hotel quarantine resulted in widespread community transmission. In recent months, community transmission has been largely absent throughout Australia with quarantine systems in all jurisdictions mostly successful in preventing incursion of SARS-CoV-2 into the community. However, several failures have occurred in hotel quarantine in jurisdictions across Australia resulting in small community outbreaks.

Increasingly, international arrivals to Victoria are testing positive with variants of SARS-CoV-2, which have genetic changes in the viral sequence of virological, immunological, clinical or epidemiological significance. While the evidence base is still emerging on the epidemiological characteristics of these variants of concern (VoC), overseas evidence suggests that they are more infectious and therefore are likely to spread more rapidly in an outbreak.

Within Australia, there have been several instances where the COVID-19 virus has been transferred to workers and to other travellers in hotel quarantine and triggered outbreak management arrangements, including a recent case in Victoria requiring a five day statewide lockdown.

Context of this review

Following the emergence of VoC and the recent outbreak in Victoria stemming from hotel quarantine, the State Controller of Health, Professor Euan Wallace, commissioned this confidential rapid review that commenced on 22 February 2021 and was completed on 12 March 2021. It provides additional information to complement two concurrent reviews conducted by Safer Care Victoria (SCV) and the Department of Premier and Cabinet (DPC).

Safer Care Victoria have undertaken a rapid review[1] to:

- Understand what has been learned from recent transmission events in COVID-19 Quarantine Victoria (CQV)
- Identify strengths (as opportunities for further promulgation/scaling) and improvement opportunities (requiring immediate action) in infection prevention and control for CQV
- Identify and prioritise aspects of CQV systems and processes that require more in-depth review and analysis.

At the time of writing, interim recommendations had been submitted, but there were ongoing discussions with CQV regarding their feasibility and relevance.

DPC are investigating alternative models of mandatory quarantine, including a purpose-built accommodation hub outside of the Central Business District (CBD), to address the changing threat of new infectious, fast-moving strains of coronavirus. The project will:

1. Identify and assess suitable sites to locate and construct alternative quarantine accommodation.
2. Develop specifications, cost estimates and delivery timelines.

3. Consider whether alternative quarantine accommodation should be used in conjunction with hotel quarantine locations in the CBD, or as a stand-alone facility.
4. Consider options to scale down and/or repurpose the alternative quarantine accommodation in the long term.
5. Provide advice about the feasibility, benefits and value for money of alternative quarantine accommodation.

Terms of Reference

The Review addresses two questions:

- Given the epidemiology of COVID-19 and VoCs, to what extent will hotel quarantine be able to reduce the risk of transmission in-hotel and out to the community?
- What would be the features of the most effective model of quarantine for VoC in Victoria?

Key issues to be considered:

- What lessons can be drawn from best practice examples of quarantine?
- What are the infrastructure, staffing, process, environmental, infection prevention and control or other measures that mitigate the risks of an escape of COVID-19 from quarantine?
- What do the epidemiological characteristics of the variant strains of COVID-19 mean for the quarantine model?
- How will vaccination, initially of those working in the quarantine system, and later of international arrivals, likely impact on quarantine arrangements in the medium term, and longer should quarantine continue to be required for COVID-19 or other respiratory infectious diseases?
- What would ‘best practice’ quarantine provision look like in Victoria?

Approach

The review was guided by a panel of experts and conducted through analysis of available evidence and interviews with key informants. It draws on best practice examples from interstate and overseas as well as considering existing quarantine reviews and guidelines.

The full Terms of Reference and an outline of the Methods are provided in Appendix B and Appendix C respectively.

Limitations

Apart from a field visit by a Panel member to Howard Springs, this was primarily a desktop exercise supplemented by interviews with key informants. In the limited time available to perform this review, several important aspects could not be considered. Apart from one informant who had spent time in quarantine, the Panel was not able to speak to former or current residents of hotel quarantine. The Panel was not able to interview staff or explore the governance, culture or other organisational aspects of CQV in depth. As SCV has performed a rapid review of infection prevention and control measures, specific practices and incident reviews were not explored in this review. Quarantine, as a public health intervention, should also consider the cost-effectiveness of the hotel model and its alternatives, and this was not considered in this review.

Background

Current hotel quarantine arrangements in Victoria

In Victoria, following the Coate Inquiry[2] a single agency was established to oversee the mandatory hotel quarantine program. This agency, CQV, is accountable to the Minister for Police, and is supported by several departments and agencies, including the Department of Health, Department of Justice and Community Safety (DJCS), Victoria Police and Alfred Health. The establishment of CQV has allowed for a single governance structure including an infection prevention committee (with membership of all agencies), a single set of guidelines for staff of all agencies and a contact tracing team (New Case and Contact Team, NCCT).

Arriving passengers are transported to hotel accommodation. Cases, people with symptoms compatible with COVID-19 and people with complex medical needs are accommodated in 'health hotels' operated by Alfred Health. Passengers who are well are accommodated in quarantine hotels where a post-arrival testing schedule has been implemented to identify asymptomatic cases in addition to active surveillance for clinical illness. While all hotels are the responsibility of CQV, there is a distinction between the 'health hotels' primarily staffed and operated by Alfred Health with the support of other agencies, and the quarantine hotels directly operated by CQV. Governance structures allow for the exchange of infection control recommendations, policies and audits across all hotels and agencies.

There is a focus on staff protection, with standardised training for all staff on commencement, and regular refreshers. Regular audits of hand hygiene, cleaning/disinfection, environment (such as the placement of personal protective equipment and hand rub) have been implemented. A zoning system is used to define personal protective equipment (PPE) requirements. In the 'health hotels', engineering reviews of the air handling system was performed by Alfred Health engineers3; changes were made to increase fresh air intake, the rate of airflow and to separate the intake from the outlet ducts.

There is a risk that staff working in hotel quarantine may become infected through contact with returned travellers. To reduce the risk of spread from hotel workers to the community staff are not permitted to work in other places, and on completion of contracts or secondments, staff cannot return to employment in sensitive settings (such as hospitals) for two weeks. Staff are tested frequently (weekly nose-throat swabs and daily saliva testing) to identify infection early to limit community exposure. Proactive contact mapping of staff has been implemented to identify household contacts who may attend high risk sites.

Local transmission in Victoria

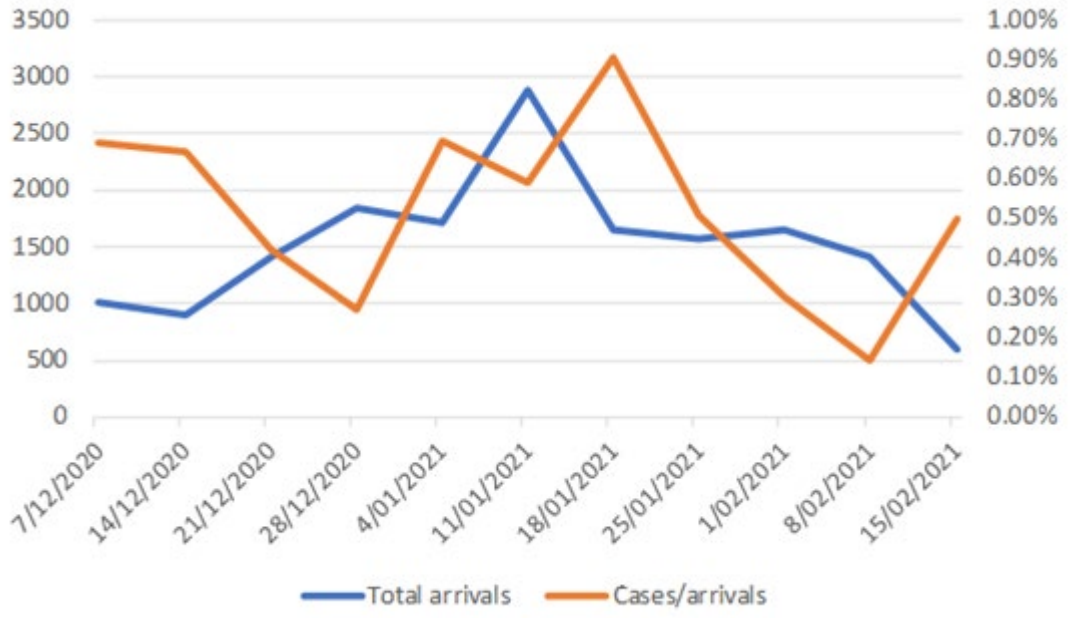
From hotel quarantine to the community

Grout et al[4] (unpublished data) reviewed the epidemiology of hotel quarantine failure in Australia and New Zealand (NZ) to 11 January 2021. He reported that New Zealand had identified seven cases in from 514 active cases in 96,510 travellers, a failure rate of 13.6 per 1,000 cases in quarantine. Australia had reported six failures from 3,024 active cases in 194,791 returned travellers, a failure rate of 2.0 per 1,000 positive cases in quarantine In Victoria, 17,032 people entered hotel quarantine between 7 December 2020 and 21 February 2021. This includes returned international travellers, voluntary support people, airline crew, arrivals related to the Australian Open and interstate travellers entering Victoria from red zones, but excludes those who entered

community accommodation, emergency accommodation and frontline worker accommodation. Of these, 2,001 (11.7 per cent) were children (under 18 years of age) and 122 (less than 1 per cent) were more than 75 years of age. The weekly number of arrivals has varied from a high of 2,957 (week of 11 January 2021) to a low of 606 (15 February 2021) following a pause in international arrivals (Figure 1). During this time, 91 cases of COVID-19 have been reported in hotel quarantine, which represents 0.53 per cent of residents. The incidence of new cases has decreased since the implementation of pre-flight testing. During this time, Queensland (n=1), New South Wales (NSW) (n=3), South Australia (n=1) and Victoria (n=1) had reported failures, where Western Australia (WA), Tasmania, Australian Capital Territory (ACT) and Northern Territory (NT) had not reported any cases. Since that time, WA and Victoria have reported further quarantine failures.

It is noted that the risk profile of arriving passengers and potential incursion is likely to change following vaccination of hotel quarantine staff, arriving passengers and community.

Figure 1: Number of arrivals and proportion with COVID-19, by week since 7 December, 2020



Within hotel quarantine

Since the resumption of hotel quarantine in December 2020, three transmission events have been reported from residents to other residents and from residents to staff. All three have been managed as outbreaks. All three outbreaks involved cases identified to belong to the B 1.1.7 VoC.

At the Park Royal Hotel, genomic analyses suggest a transmission event from a family with five cases (index family) to a resident staying in the room opposite. CCTV (closed-circuit television) footage identified that there was a significant period when the door to the family's room was open while staff located in the corridor swabbed all family members. The resident in the room opposite was seen in the CCTV footage to open and close their door during this time. Doors may also have been opened simultaneously to collect meals. No further transmission events to the community were identified.

At the Grand Hyatt Hotel, genomic analyses suggest a transmission event between a resident and a staff member. The resident was accommodated in a room adjacent to the staff member's central

'station' on the floor. It was reported that the resident may have exited the room to empty a bin at the central station. No further transmission events to the community were identified.

At the Holiday Inn Hotel, a total of 24 cases (including three index cases who were residents) resulted in transmission from residents to staff and other residents in the hotel setting. It was hypothesised that one staff member acquired infection in the foyer of the hotel during the process of transfer of known cases to the health hotel. An incident with a nebuliser was investigated as a likely source of infection for six other cases associated with this outbreak in the hotel setting.

Variants of concern

Global epidemiology

SARS-CoV-2, the virus that causes COVID-19, is constantly changing by mutation over time. Genetic variants may become more common because they spread in a population where transmission is more efficient or because they have characteristics that provide a selective advantage.

There are currently 3 main SARS-CoV-2 VoCs circulating worldwide[5]:

- 501Y.V1, or lineage B.1.1.7, first detected in the UK and now reported in 86 countries
- 501Y.V2, or lineage B.1.351, first detected in South Africa, now reported in 44 countries
- P.1, or lineage B.1.1.28.1, first detected in travellers from Brazil and reported in 15 countries

Public Health England[6] has recently noted an additional VoC within the B.1.1.7 lineage (VoC 202102/02 defined by E484K), first detected in South West England. There are also several variants under investigation (VUIs).

VoCs have several epidemiological characteristics that are of concern. They appear[7] to be more transmissible, based on the finding that secondary attack rate are higher where index cases have infection with VoCs compared to those with wild-type infection. This may be due to both higher viral loads and a prolonged duration of infection. Early data also suggests that variants may be associated with more severe infection although this has not been found in other studies.

As a result of the greater infectivity and possibly severity of disease, the consequences of outbreaks with these variants are increased. They first came to attention in the United Kingdom (UK) where outbreaks continued to spread, despite moderately strong public health controls that would have been sufficient to contain the spread of the wild-type virus. Modelling has suggested that variants are associated with an effective reproductive number (R_{eff}) of up to 56 percent - higher than wild type[8], implying that a greater proportion of transmissions need to be prevented to control outbreaks.

Immunological studies and early data from clinical trials suggest that vaccines may not be as effective in preventing infection due to two variants, B1.351 and P.1. Serum from people who were immunised appeared to have a lower neutralising activity against variants compared to wild-type virus[9], although the overall response is considered to be protective. Clinical trials of the AstraZeneca/Oxford[10] and Novavax[11] vaccines in South Africa found impaired protection against the B.1.351 variant, although the estimates were associated with considerable uncertainty. The AstraZeneca/Oxford vaccine appears to be effective against the B.1.1.7 variant in clinical trials[12].

Other epidemiological characteristics of infection from the new variants appear to be similar to wild-type infection. There are no data to suggest that the incubation periods are different. The shorter

serial interval seen in the recent Victorian outbreak is likely to reflect a strong public health response with early case identification and isolation. It is likely that the mode of transmission is similar and therefore the measures required to prevent infection will be similar. While early reports in the UK suggested that the B.1.1.7 variant may be more infectious for children, further studies suggest that this may not be the case.

Incidence in Australia

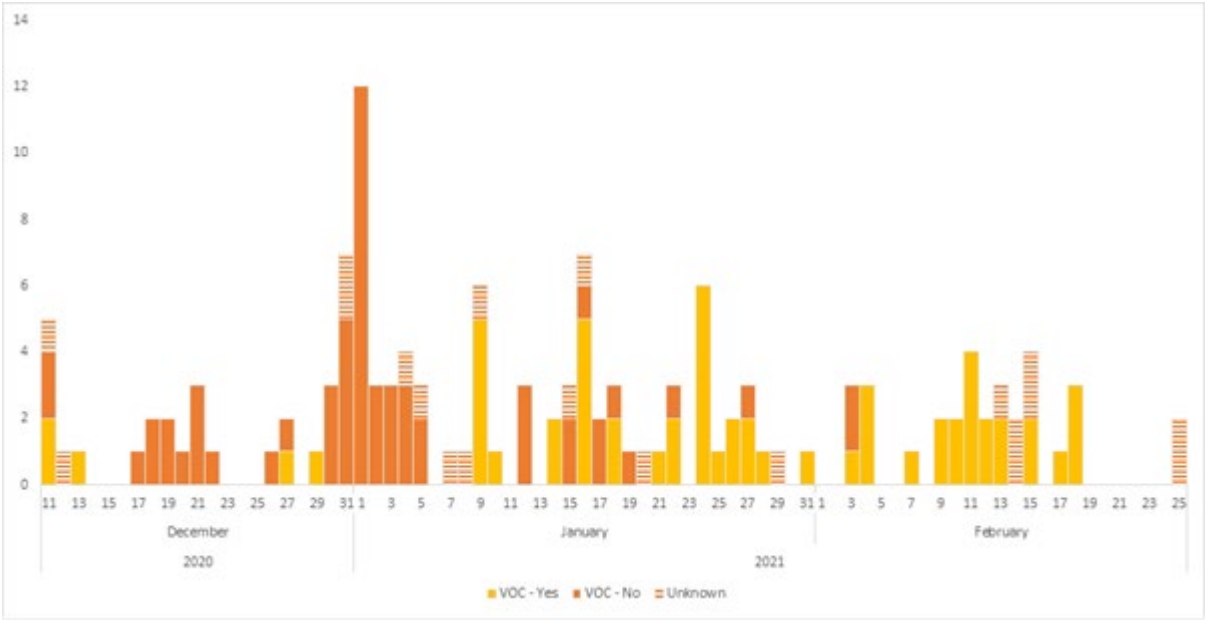
In Australia, 93 cases due to B.1.1.7 and 18 cases due to B.1.351 were reported[13] between 30 November 2020 and 14 February 2021. No cases of the P.1 variant have been reported in Australia.

On 11 December 2020, the first case found to belong to a variant of concern was diagnosed in Victoria in hotel quarantine. Since then, a total of 59 notifiable cases of COVID-19 with a VoC have been reported to the Department of Health. These cases have been identified as overseas acquired infections, due to transmission within hotel quarantine and as a result of community acquisition. Of these 59 VoC cases, 58 were due to B.1.1.7 and one due to B.1.351.

Between 11 December 2020 and 26 February 2021, 138 cases of COVID-19 have been notified in Victoria (Figure 2). Of these, 91 cases were international travellers in hotel quarantine, 44 of which were due to a VoC. Concerningly, five of the 44 cases due to VoCs are believed to have acquired their infection whilst in quarantine. Since 3 February 2021, all cases in hotel quarantine have been associated with a VoC.[14]

Of the 47 cases were identified in the Victorian community outside of hotel quarantine, 15 cases were due to a VoC and were associated with hotel quarantine outbreaks (Holiday Inn and Grand Hyatt), 29 cases were closely related to publicly available sequences from NSW cases (including those associated with the Black Rock outbreak). The remaining three cases are either pending sequencing or had a sample that failed sequencing.

Figure 2: Variant of Concern status for all cases of COVID-19 notified in Victoria since 11 December 2020 by diagnosis date (Source: MDU COVID-19 genomics report)



Future quarantine requirements

Major determinants of the risk of community incursion are factors external to the hotel quarantine system. This includes the number of arriving passengers and the epidemiology of COVID-19 in their countries of origin. The global epidemiology is changing rapidly, reflecting improved public health control (such as population-level restrictions on movement), the rollout of vaccines in some countries, and possibly seasonal factors in the northern hemisphere.

Several key unknowns remain, particularly the impact of vaccines on transmission and the spread of the variants of concern. It is likely that vaccination coverage will vary between countries, and that vaccines will be found to reduce but not eliminate transmission. Vaccines may also vary in effectiveness depending on the type, and the epidemiology of VoC.

Several scenarios are possible that may affect the ongoing requirement for quarantine. It is possible that quarantine or other public health measures may not be required if widespread vaccination in the Australian population reduces the morbidity and mortality of COVID-19 to a low level. This would be unlikely before the end of 2021, barring a major advance in treatment or prevention. Conversely, if vaccine protection against new variants of concern is limited and these variants become the dominant strain, ongoing quarantine for all arrivals may continue to be required to prevent the importation of these variants.

It is likely that some quarantine will be required for as long as COVID-19 remains a significant threat to public health. However, the stratification of arriving populations based on risk or other factors may be possible, and that different models of quarantine may be deemed appropriate for different levels of risk or the type of population. It is noted that this may be difficult to implement and adapt in rapidly changing circumstances.

For example, stratification to home quarantine (or even no quarantine) may be possible for those who are vaccinated (and which can be demonstrated by ‘vaccine passports’). Although concerns have been expressed about the effectiveness of vaccines against transmission, emerging evidence suggests that there is an overall reduction in the risk of infection, and breakthrough infections are associated with a lower viral load and therefore reduced infectivity. However, this would require the co-operation of international governments, require a mechanism to verify vaccination type and status and be free from external manipulation.

The current ‘green' and ‘red’ zoned countries may be stratified into high, medium and low risk countries. Such alternative arrangements have been proposed for seasonal agricultural workers from Pacific Island countries and territories (except Papua New Guinea), where the risk of COVID-19 in most countries is felt to be low. For example, ‘on-farm' quarantine has been implemented for seasonal agricultural workers in some jurisdictions.[15] More recently, 'in country' quarantine (in hotels in the country of origin, with monitoring by Australian officials) has been proposed but not supported. However, concerns remain about the potential for undetected changes in epidemiology as surveillance capacity is weak in this region.

Stratification may be based on other cohort definitions. Sportspeople and their support staff participating in the Australian Open were accommodated in hotel quarantine with some limited modifications to permit training and was funded by Tennis Australia. Special arrangements were proposed in June 2020 for international students to quarantine in Canberra hotels funded by two ACT universities[16], but this trial was cancelled following the resurgence of cases in Victoria.

Stratification to different models of quarantine may also be based on special needs. These could include families with small children (who may require more space, self-contained facilities with kitchen/laundry and outdoor space), people with complex health needs and/or disabilities (currently

accommodated in a ‘health hotel’), people with mental health issues and people with other vulnerabilities (such as potential domestic violence and food allergies).

A discussion about the challenges of maintaining different models of quarantine is outlined below.

Table 1: Potential cohorts

Cohort	Definition	Comments
Vaccination	'Vaccine passports’	Currently uncertain if vaccines prevent transmission
Country of origin	High, medium or low risk countries reflecting current epidemiology in country of origin or transit	NZ (except Auckland) currently green, not requiring quarantine. Most Pacific Island nations probably low/medium risk but epidemiology may change rapidly
Worker/student type	Seasonal agricultural workers International students Professional sportspeople or artists Flight crew	Potential for Charter challenge if no public health basis for different measures for different cohorts Existing exemption for Victorian resident flight crew to quarantine at home
Special requirements	Families Medical or mental health issues Disabilities Other vulnerable populations	Existing Victorian model includes ‘health hotel' for those with complex needs. NSW has special arrangements for families and people with mental health issues

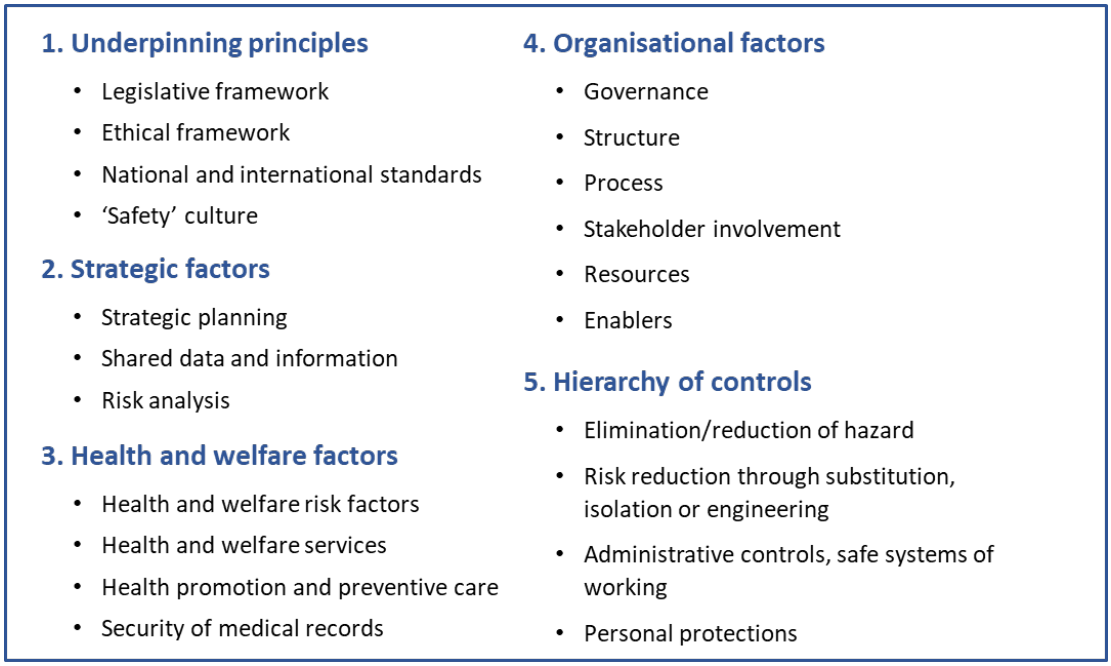
Best practice in quarantine programs

Several systematic reviews capturing research on quarantine in the context of COVID-19 were published at the end of 2020[17,18,19,20,21] and a number of studies are currently underway or ready for publication[22], however none consider the effectiveness of factors intrinsic to quarantine programs that facilitate or hinder successful reduction of viral transmission. While quarantine was found to be ‘important in reducing incidence and mortality during the COVID-19 pandemic’ and ‘early implementation of quarantine and combining quarantine with other public health measures is important to ensure effectiveness’ we were unable to find any published research to inform design of quarantine facilities or delivery of quarantine programs.

In the absence of evidence from research, the recommendations from existing reviews of quarantine have been collated and integrated with findings from interviews conducted for this review with key informants who have knowledge and understanding of current quarantine practices across Australia to establish a set of criteria for best practice in quarantine programs.

A preliminary framework has been developed to present the findings in a structured way and to identify where there may be gaps in evidence or understanding of best practice in some aspects of quarantine programs (Figure 3).

Figure 3. Considerations for design and delivery of 'best practice' in a quarantine program



The components are drawn from frameworks in other health settings. The ethical framework and generic organisational factors have been adapted from an evidence-based framework for decision-making,[23] the health and wellbeing factors have been taken from the Operation Soteria Plan,[24] and the hierarchy of controls are from a recent COVID-19 context in Australia. As more is learnt about the factors contributing to effectiveness of quarantine programs this framework could be revised for future use.

1. Underpinning principles

Legislative framework

Quarantine is addressed in both Commonwealth and State legislation. All decisions and actions related to quarantine must be conducted within this framework. A summary of the legal basis for quarantine and exemptions in Australian is provided in the Halton Review Appendix H.

Ethical framework

The ethical principles within the evidence-based framework for decision-making relevant to quarantine include justice, fairness, equity, access, legality, honesty and privacy. These are detailed in Appendix D.

Human rights

It is fundamental that all persons in mandatory quarantine should be treated with dignity and respect.

Policies and practices guiding decisions made about people in mandatory quarantine in Victoria must consider the Victorian Charter of Human Rights and Responsibilities[25] as summarised in Appendix P.

The Victorian *Charter of Human Rights and Responsibilities Act 2006* (the Charter) contains twenty basic rights that promote and protect the values of freedom, respect, equality and dignity.[25] The Charter requires the Victorian Government (state and local) to consider human rights when they make decisions about people.

While some of these rights may be restricted for quarantined people, consideration of these rights must underlie all decisions in relation to people in mandatory detention.

The Charter rights likely to be engaged include:

1. equality before the law
2. right to life
3. protection from cruel, inhuman or degrading treatment
4. freedom of movement
5. privacy
6. freedom of thought, conscience, religion and belief
7. peaceful assembly and freedom of association
8. protection of families and children
9. cultural rights
10. right to liberty and security of person
11. humane treatment when deprived of liberty

Section 19(2) outlines the distinct cultural rights of Aboriginal persons.

Diversity

Consideration should be given to the special needs of Aboriginal and Torres Strait Islander peoples, people from culturally and linguistically diverse (CALD) backgrounds; lesbian, gay, bisexual, trans, gender diverse and intersex people; people with disabilities, and others.

Further details of screening for, and meeting the needs of, people with disability, language or cultural differences, and Aboriginal or Torres Strait Islander heritage are provided in the Operation Soteria Plan.

National and international standards

The need for auditing and quality improvement are raised in reports and interviews as high priorities for improving current quarantine programs. However, the lack of agreed definitions, a national minimum dataset and national standards are barriers to using monitoring and evaluation for benchmarking, research and learning from other jurisdictions.

‘Safety’ culture

The importance of a culture of safety is one of the strongest messages from the reviews and interviews. This is described as a culture that prioritises safety and safe practices, and facilitates feedback on potential improvements from all staff within the organisation.

The Coate Inquiry and Grand Chancellor Report[26] both recommended creating cultures of safety and ‘speaking up’ in quarantine hotels. This should include open discussion around mistakes, training to speak up assertively, and team-based quality improvement. By creating a culture where people feel comfortable to raise concerns, the safety of staff and the community could be improved.

Several informants noted that safety cultures existed within the "health hotels” in NSW and Victoria and that no transmissions had occurred from these facilities despite the high-risk nature of the residents. ‘Health hotels' are overseen and operated by acute health services where considerations of safety, and awareness of infection and other health risks, underpin all activities. These factors may not be as familiar to quarantine staff who have not worked in healthcare facilities.

2. Strategic factors

Strategic planning

Current quarantine infrastructure, systems and processes have been developed in response to the urgency of a global pandemic. Due to necessity, decisions have been reactive to needs and problems as they emerged. While understandable in this context, high operational demands may not have allowed for strategic thinking and forward planning.

Commissioning of the three current reviews by the Victorian government is a first step in developing a proactive, strategic approach. As the quarantine structures and processes mature, problems are resolved and best practice is embedded, strategic planning activities should be integrated into the decision-making systems.

Shared data and information

In a situation where there is no evidence to guide and direct strategic decision-making, being able to learn from others is vital. Sharing information with the national and international community by publishing assessments, decisions, project initiatives and research activities would facilitate learning and avoid duplication of effort and repetition of mistakes. The Australian Health Protection Principal Committee (AHPPC) guidelines has recommended a ‘community of practice' to facilitate sharing of lessons learned.[27] This can be found summarised in Appendix E.

Risk analysis

Risk assessment is being carried out regularly at an operational level in current quarantine programs. However, as priorities change and more proactive decisions can be made about the nature and delivery of quarantine, risk analysis can be factored into strategic planning.

The standard four-step approach is to identify hazards that could cause harm; assess risk to understand the nature, seriousness, and likelihood of it happening; control risk by implementing effective control measures; and review hazards and control measures to ensure they are working as planned. These steps could be undertaken as part of strategic deliberations to determine risk in the quarantine program as a whole and inform future policy decisions.

3. Health and welfare factors

Looking after the health, mental health and wellbeing of returned travellers was a recurring theme from the reports and inquiries. The Operation Soteria Plan contains a full set of standards for health and welfare including screening and follow up of risk factors, provision of health and welfare services, health promotion and preventive care and security of medical records.

All care provided during hotel quarantine should be accessible, culturally sensitive, timely and regular. All information provided to individuals should ensure understanding, be easy to access, be easy to read and should be available in other languages to cater for linguistically diverse guests.

Regarding general health, all quarantine hotels should have plans and protocols in place for providing care to individuals with complex medical needs. Regarding mental health, all quarantine hotels should have psychosocial supports available and should conduct wellbeing checks regularly in a proactive manner.

In regard to general wellbeing, hotel quarantine facilities should facilitate safe entertainment activities (such as social interactions, games, music, trivia), exercise for visitors and fresh air breaks. One study recommended that exercise and smoking areas be individual and not shared between different users, to eliminate mixing of cohorts.

4. Organisational factors

Governance

The evidence-based framework for decision-making includes transparency, accountability, authority, enforcement/compliance, sound management and quality improvement. Application of these principles are outlined in Appendix D.

Transparency, accountability and authority

The AHPPC, SCV CQV Report, Coate Inquiry, and Halton Report all recommend that hotel quarantine be conducted in a manner where accountability and lines of authority are well-defined and there is clear delineation of roles and responsibilities. These can be found in Appendices E, F, G and H respectively. The Coate Inquiry recommended that in Victoria, hotel quarantine be operated by a single government department, which would take ultimate responsibility for the task, with other departments being used for support as necessary.

Compliance

In the quarantine context, this can be related to compliance of people in quarantine to the restrictions imposed upon them or to staff working in quarantine facilities. Compliance of people in mandatory quarantine is addressed in the relevant legislation (above) usually in the Public Health Directions. Many strong messages regarding compliance of staff are reported, all related to infection and control practices which are discussed in detail below. Training is a key component influencing staff compliance and is discussed in the Hierarchy of Controls below.

Continuous quality improvement

Continuous quality improvement (CQI) had been identified from multiple sources as crucial to the success of quarantine. There is a need to learn from current practice, emerging evidence and the experience of others to improve programs and services. Ongoing review of safety systems in light of new and emerging evidence is one particular example noted.

CQI is closely linked to several other topics of recommendations discussed herein – monitoring and evaluation, reporting, data and information sharing, access and utilisation of evidence, benchmarking, training, etc.

Quality assurance has also been highlighted and recommendations include the need for end-to-end assurance mechanisms embedded into hotel quarantine practices.

Structure

The elements of structure are a systematic approach, integration and alignment, monitoring and evaluation, and reporting. Application of these principles are outlined in Appendix D.

Integration and alignment

The Halton review notes that a lack of integrated data within many jurisdictions is an issue. The absence of a single view of people in quarantine can result in preventable errors, particularly in follow up and testing, but also with resident's experiences in the quarantine journey.

Monitoring, evaluation and reporting

Along with governance and CQI, the need for ongoing monitoring, evaluation and reporting is highlighted as a key requirement for effective quarantine. A robust auditing process is proposed to underpin this. Most auditing has been focused on some aspects of infection prevention and control measures, but respondents note the need for auditing of all aspects of quarantine, preferably based on national standards.

Process

The elements of process from the framework for decision-making are explicit criteria, use of intelligence, consistency, appeals and complaints, and communication. Application of these principles are outlined in Appendix D.

Use of intelligence

Rigorous, trustworthy and accessible processes for use of local data, public health data, research and other publications, resident and staff feedback, etc are necessary to enable evidence-informed decisions and continuous quality improvement.

Quarantine decision-makers need clear lines of communication with sources of epidemiological and genomic data such as public health units, public health labs, researchers, other government departments, etc. Emerging evidence, such as the strengthening evidence supporting aerosol transmission and its controls, needs to be incorporated into guidelines.

Consistency

Victorian respondents have highlighted problems with inconsistent advice from multiple sources and lack of clarity around the appropriate authorising authority on certain matters. It is important that policies, procedures and guidelines are clearly documented, readily accessible and internally and externally consistent.

Appeals and complaints

Mechanisms need to be in place for people in quarantine to appeal decisions made regarding their detention, exemptions, etc and to address infringements of their rights.

Processes for assessing satisfaction and receiving and addressing complaints should also be established. A feedback and complaints process can provide unique information about the needs of quarantined persons and the quality of care provided. Openly discussing feedback and concerns helps staff to understand strengths in their service, potential problems, and how to make improvements.

Timely decision-making, review processes and complaints mechanisms should also be made available for staff for the purpose of escalating concerns and issues.

These factors also inform continuous quality improvement.

Stakeholder involvement, Resources and Enablers

Stakeholder involvement includes engagement with staff, residents, experts and others who can inform all aspects of the quarantine process. Additionally, support from relevant agencies and departments is required and may need to be formalised by contracts or memoranda of understanding.

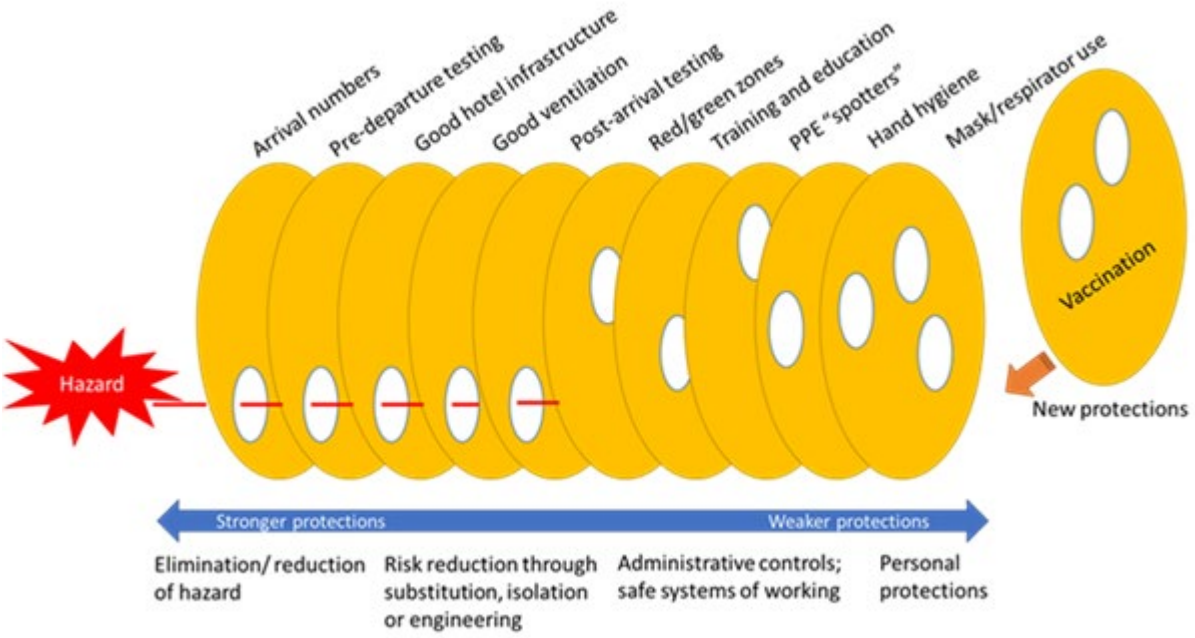
Resources required for a successful and sustainable program are funding, time, expertise, information, methods and tools.

Enablers noted in the evidence-based framework for decision-making are leadership, commitment, influence, support, readiness for change and a favourable environment. The need for strong leadership has been stressed by informants, as well as support from other departments and agencies.

5. Hierarchy of controls

Short of completely sealing the international borders, no human system can completely eliminate the risk of SARS-CoV- 2 escaping from quarantine. All humans make errors. However, risks can be mitigated by putting in place layers of protections, which reduce risks by ensuring that if one layer of protection fails through a weak point, further layers of protection will stop an adverse event, unless weak points in all layers of protection line up. This is the so-called ‘Swiss cheese’ model of risk mitigation first proposed by psychologist James Reason[28] and which has been adapted for health systems including the context of COVID-19 (Figure 4).[29]

Figure 4: Illustration of the "swiss cheese" model of protections and the hierarchy of controls



A commonly cited model which adopts this approach for reducing risks is the hierarchy of hazard controls, where risks can be controlled by a combination of measures that eliminate or reduce the hazard at the source; reduce the risk through substitution, isolation or engineering; using administrative controls such as safe systems of work; and using appropriate personal protective equipment. Employing multiple layers of control, even if each is imperfect, results in an overall safer system.

Protections higher in the hierarchy of controls are more likely to be effective, and recent reports have focused on ventilation and airflow. It is imperative that there is an ongoing process of review of these protections in light of new evidence, and monitoring and evaluation of current protections.

A list of other potential controls is detailed below.

Table 2: Existing and potential controls to prevent transmission of SARS-CoV-2 in hotel quarantine

Level	Existing controls	Potential future enhancements or models
Elimination	Pre-flight testing Limits on arrival numbers Frequent testing of staff Frequent testing of residents	Further limits on arrival numbers Vaccine passports (if effective)
Substitution		Home quarantine with apps to ensure compliance Biomonitors to reduce staff contact

Engineering	Ventilation and airflow	Air filtration devices
	Separation of cases into separate hotel	Purpose built facilities
	Separation of staff zones from resident zones	
	'Buffers' around cases	
Administrative	Workflows to limit contact with other staff and residents	Additional auditing and feedback
	Workplace bubbles	Staffing number and skill mix
	Training and education	
	Auditing and quality improvement	
Personal protection	Personal protective equipment	Vaccination
	Fit-testing and fit-checking	

Elimination

Examples of controls for elimination of hazards include limiting arrival numbers and pre-departure testing and/or vaccinations. Further discussion of these factors is beyond the scope of this review.

Testing strategy for staff and residents

Several of the reports and inquiries discussed testing strategy, including the types of tests used, testing timing and testing frequency.

The general consensus was that pre-departure (or pre-arrival) testing could reduce the risk of COVID-19 importation but not fully eliminate it. While national directions mandate testing no more than 72 hours before departure, there is still a window of time in which an individual could begin shedding the virus, without testing positive.

In regard to post-arrival testing, it was identified that the timing of testing has an impact on the risk of COVID-19 going undetected. The Burnet Institute Report[30] recommends optimising the testing regime with an enhanced testing strategy to minimise this risk. A summary of this report can be found in Appendix L. This enhanced strategy should include two tests near the end of quarantine regardless of the duration of quarantine. Similar to the Burnet Institute recommendations, Safer Care Victoria recommends increasing the frequency of testing on arrival, as well as further testing on days 3, 7, 11 and 14.

In regard to staff testing, the Coate Inquiry and Estimating Failure Risk study[31] (summarised in Appendix I) recommended that all on-site staff and personnel undergo daily saliva testing and weekly nasal swab testing. The Coate Inquiry also recommended that family and household members of these personnel be given support to access voluntary testing on a weekly basis.

Substitution

Home quarantine, where interactions with other staff are minimised, might be regarded as a form of control by substitution. This model of quarantine has been recommended by a number of reports,

including the Halton report and the Coate Inquiry. However, this may also require technological enhancements to ensure compliance, and may not eliminate risk.

Biomonitors and trackers

Biomonitors allow for remote monitoring, substituting for face-to-face contact to measure observations. One type, “Bioformas” is used in the Howard Springs Quarantine Facility with high uptake.

SCV and others recommended reviewing QR code and Bluetooth technology to track staff movement which could then be mapped and analysed to reduce infection risk. One study suggested that Bluetooth tracking be mandated for all staff members and that the government should review the use of these applications for travelers (to be used in evacuations from facilities). Technologies already exist for use of staff movement in health care facilities to monitor hand hygiene and other biomonitoring projects are in development.

Engineering

A number of recommendations were made in regard to the design and engineering of hotel quarantine facilities, most of these focused on ventilation. A large number of recommendations on ventilation and airflow stemmed from the hotel case inquiries. These include the Peppers Waymouth Report summarised in Appendix K[32], Grand Chancellor Report summarised in Appendix J, and the SCV CQV Report summarised in Appendix F.

These recommendations included:

1. Developing and implementing a minimum engineering and ventilation standard for all hotels, supported by necessary building upgrades and facilities management training.
2. Changing the Building Management System setting to run the outside air supply 24/7.
3. Improving air flow from the corridor room into the hotel room and ensuring all guest rooms have adequate seals and building exhaust fans are set to high.
4. Undertaking regular maintenance of hotel heating, ventilation and air conditioning (HVAC) systems.
5. Recommending hotel rooms do not use fans or blow heaters.
6. Leaving rooms vacant as ‘buffers’ around hotel rooms housing more than three residents.
7. Use carbon dioxide (CO_2) sensors for simple assessments of air exchange in hotel rooms. Readings over 1,000ppm (parts per million) indicate insufficient air movement and should trigger an immediate review of the ventilation in that room.

Informants identified that hotel selection and assessment processes would be valuable. An airflow engineer felt that in room air filtration could reduce the risk of aerosol transmission significantly, based on work on mitigation strategies in hospitals. Ventilation systems at a building level was important, but localised scenarios that disrupt airflow may be more amenable to localized in-room filtration strategies. Several factors needed consideration, including the size of the room, and the number, type and placement of air purifiers in each room, as well as position of the air intake in the unit. Other practical issues to consider include noise, the potential for residents to interfere with their operation, and requirements for filter changes and cleaning of units. These are being actively considered in several jurisdictions with hotel quarantine programs, including in Victoria.

Informants also noted that limitations of the hotel environment related to space. Large families could not always be separated (e.g. single parent families) and children required additional space

to play. Alfred Health has found it challenging to implement recommendations in response to the variants of concern to reduce the density of residents. Additionally, several areas were required for staff activities, including handover, agency meetings, entry point screening, fit testing and vaccination. There would be some value in being able to observe guests without having to enter the room (e.g. to check on sleeping unaccompanied children or elderly residents with dementia).

Factors with implications across levels of control

Infection prevention and control

There were several recurring themes in relation to infection prevention and control (IPC) in hotel quarantine. These included IPC management, process level changes, compliance and workforce management, training and culture (which is discussed separately below).

IPC management

The AHPPC guidelines and Coate Inquiry both recommend establishing dedicated IPC units within each hotel, that understand the hotels themselves as well as IPC best practice.

IPC Process

Process level recommendations arising from outbreaks in SA, Queensland, and Victoria include:

- Increasing cleaning of surfaces and high-touch points outside of guests' rooms (such as elevator buttons and guest door handles).
- Improving the use of clean trolleys when delivering/collecting food, and reducing the mix of dirty and clean items.
- Reviewing cleaning procedures (including deep-cleaning initiation) and adopting consistent procedures across all quarantine hotels.
- Implementing environmental surveillance post deep-clean, including supervision, monitoring, auditing and environmental sampling.
- Commencement of N95 respiratory fit-testing.

Compliance

Compliance with IPC measures by staff and travellers was also a recurring theme for reports into hotel outbreaks.

- PPE be distributed with clear and accessible directions, and that adherence be monitored strictly.
- For resident-facing staff, fit-testing should be undertaken to ensure that PPE is safe and appropriate to use.
- CCTV be installed in hotel quarantine facilities to track movements on guest floors and in other critical areas.
- CCTV be used as a measure to minimise staff presence on quarantine floors.
- Information and signage for guests should be clear, and the requirement for guests to wear masks when opening their doors should be enforced.
- Unannounced audits of activities be undertaken to ensure compliance with IPC processes and process level changes.

Technology

Technology is a broad theme arising from the reviews. Biomonitors are discussed in the Substitution section, building/facility technologies (such as HVAC) are in the Engineering section, and infection control technologies (such as PPE) are in the Infection prevention and control (IPC) section.

In addition to engineering controls discussed above, informants also noted the use of CCTV both in monitoring compliance, as well as in reviewing incidents.

Staff issues

Staffing issues were also common themes across the reviews and interview responses. These themes also relate to a 'safety culture' and the ability to comply with requirements, particularly IPC practices.

Training

Staff training was identified as being crucial to safe hotel quarantine. Large numbers of new staff are employed with no experience in infection control. Many of the recommendations focused on staff training in regard to IPC, in particular mandatory training, creating staff bubbles (staff cohorts that limit the number of close contacts), and using individuals with IPC qualifications to train their peers.

Recruitment, retention and workforce fatigue

Several informants noted limitations related to staffing. As a new organisation, challenges have been experienced in resident-facing staffing as well as 'back office' functions, but the recent pause in arrivals has allowed for some stability.

There are considerable challenges to recruitment as large numbers of new staff are required, often to perform technical skills that they may not have, within a potentially dangerous environment where infection is possible. Ongoing adverse publicity about quarantine staff activities is also likely to create stress. A high turnover of staff has also been noted.

Fatigue was identified as a risk to safe hotel quarantine. SCV recommended conducting fatigue risk assessments and taking actions to formally reduce risk. The Estimating Failure Risk study recommended improving working conditions to minimise the risk of overwork and fatigue, which may increase the risk of PPE failures and infection control breaches. Suitable shift work schedules have also been proposed. Having an adequate and well-trained workforce to minimise fatigue will improve the safety of hotel quarantine for staff, travellers and the community.

Staff health, safety and wellbeing could be optimised by enhancing occupational health services for these staff.

Question 1: Given the epidemiology of COVID-19 and variants of concern, to what extent will hotel quarantine be able to reduce the risk of transmission in-hotel and out to the community?

Analyses, considerations and risks of current hotel quarantine practices

Governance and other organizational issues

An in-depth exploration of the organisational aspects of the quarantine system was not possible in the brief time available for this report, but the importance of governance was highlighted in several reports and by many informants. These include:

- Clear lines of accountability and delineation of roles and responsibilities
- A culture that prioritises safety and safe practices, and facilitates feedback on potential improvements from all staff within the organisation
- Monitoring and evaluation of existing protections to inform continuous quality improvement
- Ongoing review of safety systems in light of new and emerging evidence

The lack of quarantine escape from the 'health hotels' in Victoria and NSW, where the risk is presumably the highest, is striking and suggests that the reduction of risk to a low level is possible. There are likely to be several reasons for this, including training and experience in infection control practices and personal protective equipment. Health hotels accommodating the smaller subset of cases and residents with complex medical needs allows for focussing of resources and staff. It is also likely that a strong organisational focus on safety and mature systems of governance and continuous quality improvement are crucial factors in preventing transmission.

Additional protections

The recent SCV report highlights several recommendations relating to ventilation and operations as critical, requiring immediate attention (Box 1).

Box 1: SCV recommendations regarding ventilation and operations

- Develop and implement a minimum engineering and ventilation standard for all Program sites, supported by necessary building upgrades and facilities management staff training.
- Develop and implement HVAC system settings, resident density, and monitoring and maintenance regimes, that are optimised for infection prevention and control at all Program sites.
- Operational recommendations

  4.13 Screen residents in Program sites operated by CQV for prohibited medical devices known to create aerosolisation.

4.4 Leave rooms vacant as 'buffers' around hotel rooms housing more than three residents. This has already been actioned at the Park Royal Hotel we have been advised it has been implemented at other Program sites operated by CQV.

4.5 Stagger meal deliveries and other operational activities to further reduce the risk of residents opening their room doors simultaneously. This has already been actioned at the Park Royal Hotel site and should be promulgated at all Program sites operated by CQV.

4.15 IPC Steering Committee to reconsider the IPC risks associated with the current process for COVID-19 testing residents in the open doorway of their room. We recommend this be done inside the resident's room with the door closed.

4.6 Explore options to optimise compliance with the policy of residents wearing masks before opening their door.

4.8 Reconsider the resident check-in process by exploring lessons learned at Program sites operated by Alfred Health on behalf of CQV with view to preventing or further limiting hotel reception staff from having direct contact with residents.

4.1 Extend the existing staff cohorting approach used for staff break rooms and offices to include allocation of the same staff cohorts to the same residential hotel floor. This will further limit staff to staff contact and simplify contact tracing when required.

4.2 IPC Steering Committee to reconsider implementing additional evidence-based measures in the cleaning process for onsite staff, for example use of UV markers to audit effectiveness of cleaning. This should be undertaken uniformly across all Program sites.

4.14 Hotel reception staff must wear Tier 3 PPE when in the proximity of arriving residents.

Protections higher in the hierarchy of protections are more likely to be effective, and recent reports have focused on ventilation and airflow. It is imperative that there is an ongoing process of review of these protections in light of new evidence, and monitoring and evaluation of current protections. A list of other potential controls is detailed below.

Table 3: Selected existing and potential controls to prevent transmission of SARS-CoV-2 in hotel quarantine

Level	Existing controls	Potential future enhancements or models
Elimination	Pre-flight testing	Further limits on arrival numbers
	Limits on arrival numbers	Vaccine passports (if effective)
	Frequent testing of staff	
	Frequent testing of residents	
Substitution		Home quarantine with apps to ensure compliance

		Biomonitors to reduce staff contact
Engineering	Ventilation and airflow	Air filtration devices
	Separation of cases into separate hotel	Purpose built facilities
	Separation of staff zones from resident zones	
	"Buffers" around cases	
Administrative	Workflows to limit contact with other staff and residents	Additional auditing and feedback
	Workplace bubbles	Staffing number and skill mix
	Training and education	
	Auditing and quality improvement	
Personal protection	Personal protective equipment	Vaccination
	Fit-testing and fit-checking	

Examples of recent changes to best practice controls

Two examples are provided below of recent changes to protections in health services and in health hotels. Both focus on ventilation and other engineering controls in response to strengthening evidence on the role of aerosol transmission of SARS-CoV-2, particularly that other modes of transmission appear to have been well mitigated by other measures.

Ventilation Standards

While the infrastructure and environment of hospitals and hotels are clearly different, two draft Victorian reports provide some guidance and could be adapted to assess ventilation standards in hotels.

The Victorian Health and Human Services Building Authority (VHHSBA) has drafted assessment criteria based on key HVAC design considerations for pandemic patient wards, including the provision of outside air, the rate of air change, air filtration, consideration of air pathways and the air balance on the ward (Box 2).

Box 2: VHHSBA assessment criteria for patient wards

- Air change rates
- Outside air supply
- Duty/standby system (single point of failure)
- Dedicated exhaust to the ward
- HEPA filtered exhaust or minimum 10m/s discharge velocity
- Dedicated spill system for the ward

- Fully ducted spill system from patient areas to the risers
- Fully enclosed rooms for 1-bed and 2-bed wards.

The Department of Health's Coronavirus (COVID-19) Policy: Infection control measures to optimise ventilation and reduce transmission of COVID-19 in acute healthcare settings provides guidance to healthcare facilities in Victoria on HVAC systems in hospitals to optimise air flow to assist in reducing the risk of transmission of COVID-19.[33] It notes that ventilation cannot be considered as a sole infection control measure but should be used in conjunction with other infection control strategies.

Alfred Hospital recommendations

In response to reports of VOCs, Alfred Health reviewed infection control procedures and implemented changes at the Health Hotels (Box 3).

Box 3: Alfred Health recommendations for infection control in response to variants of concern

- Review current location of floor monitors and confirm location is favourable from air handling perspective
- Increase frequency of testing to Day 0, Day 3, Day 7, and Day 11 among COVID-19 negative residents to reduce duration of undiagnosed asymptomatic residents.
- When a newly diagnosed confirmed COVID-19 resident is transferred from a Quarantine Hotel to Health Hotel, people who they share the room will not accompany them. Exceptions considered in scenarios involving dependents.
- Where a confirmed COVID-19 resident exits a room prior to medical clearance (e.g. transfer to hospital, to a different hotel, or a different room), leave room to rest for 2 hours prior to entry by cleaners or any other staff
- Request that residents wear a mask for 30 minutes prior to times that the door to their room will be opened
- Reinforce principle of limiting the number of occasions of door opening
- Limit number of people entering room to minimum required. Additional staff can consider standing at threshold as an alternative to entering the room.
- Aim for one positive resident per room; Two positives could be accepted where one is caring for the other
- If one resident in a multi-resident room tests positive for COVID-19, the strong recommendation is that they separate from the COVID-19 negative residents. Discordant residents can remain together only by exception.
- Review hotel evacuation process to ensure that emergency resident exit is controlled

Conclusions and Recommendations

The hotel quarantine system has reduced the risk of importation of SARS-CoV-2 into the Australian community with continuous improvements and refinements implemented over time. As a result,

the escape of a highly transmissible respiratory pathogen from hotel quarantine is a low-probability but high-consequence event.

VoCs have emerged worldwide. They appear to be more transmissible and associated with higher viral loads. Additionally, vaccines may not be as effective against variants of concern as against wild-type strains. However, other features of these variants appear to be similar, including the incubation period and modes of transmission. The epidemiology of the variants of concern is changing since infection associated with VoCs was first reported in Victoria in December 2020. Since early February 2021, VoCs have become universal among COVID-19 cases in hotel quarantine.

The rollout of vaccination to hotel quarantine workers followed by international arrivals and the broader community is likely to reduce the impact on the need for an ongoing quarantine program and the risk to the community. It is not possible to eliminate risk completely from any quarantine system, but additional controls, including vaccination, engineering (particularly ventilation) and administrative controls as recommended in the review undertaken by SCV should reduce the risk of transmission of SARS-CoV-2 from hotel quarantine to the community.

Organisational factors, including governance, a culture that prioritises safety, continuous quality improvement, monitoring, evaluation and reporting are vital to ensuring safety. Apart from vaccination, the most effective measures to prevent the incursion of COVID-19 into the community are the higher tiers of the hierarchy of controls. While a detailed examination of the management and culture of CQV was not possible in the limited time available, as a newly established agency, it would be expected that systems and processes will need time to be refined.

That hotel quarantine can resume safely once the following key priority areas have been addressed:

a. At least the first dose of vaccine is provided to resident-facing hotel quarantine workers

Vaccination of hotel quarantine workers is likely to provide strong protection from infection, particularly when used in combination with other controls. It is essential that at least the first vaccine dose is delivered to all workers at risk of exposure prior to commencement or resumption of quarantine, with the second dose delivered at the appropriate interval to maximise protection. The immunity generated by vaccination commences around 10-12 days after the first dose, and a second dose (for the Pfizer vaccine, administered between three and six weeks) is required for maximum effectiveness. Further protection against community incursion will be provided by vaccination of household contacts of hotel quarantine workers.

The recommendation to vaccinate resident facing roles recognises that not all staff are at risk of exposure. Resident facing role means those staff who may come into direct contact with residents, and would include those who enter red zones (including those who may enter unexpectedly or in emergencies) and require tier 3 PPE. Additionally, given the incidence of infection in cleaners elsewhere in Australia, this group should also be vaccinated.

However, there are several key unknowns. Whether individuals who are vaccinated can still be infective is not yet known. The epidemiology of the variants of concern, and vaccine protection against different variants will be important to monitor. Additionally, the duration of protection and any subgroups in whom protection may be attenuated (e.g immunocompromised workers) are not yet defined.

b. CQV have responded to each engineering and operational recommendation of the SCV report, where necessary with advice from appropriate experts

Hotel quarantine should not resume until CQV have considered and responded to key priority areas, particularly engineering controls in hotels (Table 2). Several of the recommendations made by SCV are critical and require immediate action. At the time of writing, engineering assessments were being performed at hotels based on Department of Health guidelines ("Coronavirus (COVID-19) Policy: Infection control measures to optimise ventilation and reduce transmission of COVID-19 in acute healthcare settings (February 2021)").

It is acknowledged that ventilation standards in hospitals cannot be easily applied to the hotel setting. However, we are recommending that the SCV draft recommendations are responded to, not necessarily implemented – if recommendations 3.7 and 3.9 are not felt to be appropriate or feasible in non-hospital settings, the reasons for this should be documented.

In subsequent discussions with CQV, a process was outlined where assessments and, where required, a rectification plan was brought to a Ventilation Reference Group with the relevant expertise. This would seem to be an appropriate process and highlights the need for systems and processes to respond to emerging issues, evidence and guidelines.

If engineering and ventilation assessments have not been performed on all program hotels, a staged return could be considered using hotels where these assessments have been completed. If some recommendations are not felt feasible or necessary following further consultation, this should be made clear. Consideration should be given to a trial of in-room air filters in consultation with relevant experts.

c. CQV have advised on a phased timetable allowing for the completion of the above actions and operational considerations

In addition to the delivery of vaccine to workers and engineering assessments, staffing and other operational constraints may also impact on the capacity of CQV to safely accommodate residents.

That CQV:

a. Develop responses to the other recommendations of the interim SCV report, with monitoring of progress against implementation.

Many of the recommendations made by SCV relate to governance and processes and include:

- Embed systems-based continuous improvement practices into day-to-day operations.
- Optimise process planning, role and responsibility allocation and staff movement management at all Program sites to minimise the risk of transmission through coincident activity and environmental exposure.
- Develop a fit-for-purpose, standardised, systems-based approach to incident action plans and transmission event reviews and align this with the Department of Health IPC Advice and Response site visit report structure.
- Consider opportunities to learn from reviews in other jurisdictions.

A plan to address these issues and a mechanism to ensure accountability for their completion is required.

b. Ensure that the occupational health service comprehensively supports worker health and safety

Quarantine is a hazardous environment, not only from the point of view of risk of infection, but also as a high stress environment. A large workforce with a high turnover would benefit from an occupational health service, noting there is a current vacancy for the Director of Workplace Safety. This service could perform pre-employment assessments, provide input to training, advise on

suitable shift work arrangements, deal with occupational health issues which arise, such as injuries, near misses, mental health problems in staff and assist with compensation claims and return to work issues. Occupational health input should also be included in the infection prevention and control committee.

An OH&S Service, including occupational and environmental physician input, should perform pre-employment assessments, worksite and environmental assessments, provide input to training, advise on suitable shift work arrangements, deal with occupational health issues which arise, such as injuries, near misses, fatigue and mental health problems in staff and assist with compensation claims and return to work issues. Occupational health input should also be included in the infection prevention and control committee.

c. Ensure clarity in delineating the roles and responsibilities of CQV and the Department of Health in the Memorandum of Understanding, and clearly identify designated decision makers and that where the appropriate expertise exists, the Department of Health will provide timely and appropriate advice.

Governance issues are highlighted in the area of infection prevention and control, where systems and processes to formulate policy are not clear. While a broad range of expertise is available to CQV and should be drawn upon, clarity is required in defining the authority for making decisions, with transparency and consistency in the decision making process, from whom advice is sought, and who is ultimately accountable for the policy. There needs to be a clear line of demarcation in formulating IPC and other related policies, such as mental health and well-being, and the systems that operationalise the policy.

While in NSW there is a clear separation between the health hotels (run by the Sydney Local Health District) and the police hotels, the police hotels have drawn on expertise from the NSW Clinical Excellence Commission as a ‘single source of truth' for health-related issues.

Accountabilities for decisions and provision of advice should be clarified in the Memorandum of Understanding (MoU) to ensure decision makers can most effectively draw upon multidisciplinary capability in other agencies. A closer working relationship between Alfred Health, which has operational experience and expertise in the health hotels and in managing infectious patients in health services, and those formulating policy and practice in the quarantine hotels is needed to exchange information and policies to avoid duplication and inconsistency.

A possible governance framework that supports this might have three tiers:

- An advisory board or corporate board that oversights strategic decisions, analyses risks and their controls, including those relating to infection prevention
- The IPC committee (with a broad representation of skills and expertise) that oversights policies, performance, and incident reports
- Working groups and an informal ‘community of practice' with site managers across all hotels (CQV and Alfred IPC) to exchange ideas, policies and approaches to IPC issues that arise, and help formulate policies for endorsement by the IPC committee

As an example, a current issue relates to the safety of exercise equipment in hotels. This may potentially pose risks due to aerosolization, but also may improve the health and wellbeing of residents. In this governance framework, the issue might be first identified from residents and staff at hotels, who could raise this at a community of practice. The Director of Infection Prevention and Control at CQV could explore whether existing policies have been developed at Alfred Health or in other jurisdictions, and if required seek expert advice from the Department of Health, external consultants (such as airflow engineers and independent infection prevention consultants) or Alfred

Health. A decision would then be made by Deputy State Controller of Health Management on the basis of expert advice, resident well-being and other considerations, and endorsed by the IPC committee. The role of a strategic advisory board might be to consider other measures that might be required to improve resident health and wellbeing, and to ensure controls are in place to mitigate potential risks.

d. Perform a review of the governance of CQV, and specifically accountability mechanisms that facilitate consideration of strategy, risks, monitoring and evaluation and strengthen a culture of safety.

While preserving the principle that there should be a single line of accountability to the CEO of CQV and the Minister for Police, a mechanism is required to ensure the recommendations of previous reports are implemented, or to consider why they may no longer be relevant, necessary or feasible. Additionally, as the risk environment changes, a high-level group is needed to consider strategic changes in quarantine arrangements as well as the nature of risk mitigation measures.

Currently, governance and accountability should ideally reflect the complex nature of the quarantine program, and therefore include oversight of its logistics, compliance and health dimensions. In the short term, formalisation of the MoU between CQV and the Department of Health is required to clearly delineate the roles and responsibilities of each partner. In the longer term, a formal strategic committee could be in the form of a Board that includes the Secretary of Health, the Chief Health Officer, the Secretary for DJCS; however, other governance arrangements may also be possible that achieve the same governance objectives, such as an advisory board or independent/external expert members. Consideration might also be given to the inclusion of a representative from another jurisdictional quarantine program.

Elements that should be considered in such a review should include:

- Strategic planning and implementation
- Sharing of information within agencies and with other jurisdictional quarantine programs (through the “communities of practice” proposed by AHPPC). This should include the development of national standards, definitions and reporting, and where possible, similar policies.
- Risk analysis and controls
- Governance, including transparency, accountability, authority, program performance
- Management processes and policies, including monitoring and evaluation, reporting, quality assurance, staff performance
- Systems and processes including the development and review of policies and procedures, data and intelligence

Question 2: What would be the features of the most effective model of quarantine for variants of concern in Victoria?

Different models of quarantine being used

Hotel accommodation is used in the majority of jurisdictions in Australia and in other countries. Alternative models have been recommended in several previous reports. These fell largely into two categories: home quarantine, and purpose-built quarantine facilities.

Mining camps

In addition to the Howard Springs Quarantine Facility, Queensland is currently examining the use of mining camps in regional towns as quarantine facilities. A more detailed description of the Howard Springs Quarantine Facility is outlined below.

Caravan Parks

In February 2020, quarantine facilities were established at the Whangaparāoa Military Base for around 160 New Zealanders repatriated from Wuhan.[34] They were housed in campervans and collected food from a central location at designated times. It was reported that the location was chosen due to its size, location and access to medical facilities. Food was provided by commercial contractors and communications infrastructure was installed. The New Zealand government later established several quarantine facilities in Auckland, Wellington and Christchurch using campervans. The capacity of these was small (a total of around 600 campervans across the three sites) and they were ultimately not used.[35]

Home quarantine

Previous reports have suggested that home quarantine may be a viable option for travellers returning from very low- to moderate-risk countries. As mentioned in the Testing strategy section of this briefing, testing should be a mandatory aspect of any agreement to quarantine at home. The Halton Report recommended any new models of quarantine (such as home quarantine) should be developed for consideration by National Cabinet, with a thorough risk assessment of these options and an analysis of traveller suitability.

Home quarantine has not been used recently for international arrivals in Australia (with some exceptions), but has been used extensively for close contacts in community settings. Of 101 close household contacts (in community-based outbreaks) since December 2020, 50 subsequently tested positive, of which six were in hotel quarantine and 44 were in home quarantine. However in the context of international travellers, home quarantine would only be suitable for those with suitable domestic accommodation where they are able to isolate from other household members.

Singapore has used home quarantine for selected arriving passengers from low-risk countries. Compliance is enhanced by technological enhancements such as electronic tracking wristbands. It has been reported that to 25 January 2021, there have been 367 breaches in 308,442 stay-at-home orders.

Other facilities

As noted above, ‘on-farm’ quarantine has been implemented for seasonal agricultural workers in some jurisidictions. Additionally, ‘in country’ quarantine (in hotels in the country of origin, with monitoring by Australian officials) has recently been proposed.

NSW reports using serviced apartments (in the ‘health hotel' model) for large families, those with mental health issues and other needs that cannot easily be accommodated in standard hotel accommodation. Victoria has previously used serviced apartments but had experienced issues with availability.

Other purpose-built facilities

Purpose-built quarantine facilities such as rural military bases or camps with discrete units were suggested by some reports. These noted the success of the Howard Springs facility and benefits of purpose-built facilities. Benefits included natural ventilation and the lack of shared spaces. Some have suggested that high-risk travellers be quarantined in regional cities or rural areas to reduce the risk of transmission into a heavily populated city.

It is worth noting that the Halton Report recommended that the Australian Government consider the establishment of a permanent national facility for quarantine, to be used for emergency situations and emergency evacuations. Although the Howard Springs Quarantine Facility is administered by the Commonwealth, it has limited capacity compared to the hotel quarantine facilities in other jurisdictions. More information on Howards Springs Quarantine Facility is below and in Appendix O.

Hong Kong began development of the Penny’s Bay Quarantine Centre in February 2020. It is a purpose-built quarantine facility with a capacity of 3,500 individuals. As of 25 February 2021, there were reported to be 423 individuals at the facility.

Singapore developed specialised ‘Community Care Facilities’ to house low-risk COVID-19 cases. These were developed in hotels, convention centres, university dormitories and shopping centres.

As highlighted above (‘Future quarantine requirements'), stratification on the basis of different criteria is possible. Issues relating to the challenges associated with multiple quarantine models are discussed below (‘Option 2: hybrid model of hotel and other types of accommodation')

Technological enhancements

Several technological applications have been used elsewhere in quarantine settings that may reduce the risk of transmission. In particular, electronic monitoring devices and mobile apps that allow for virtual quarantine checks may help ensure compliance for residents in home quarantine.

Table 4: Technological enhancements used elsewhere to reduce risk

Application	Description
Digital contact tracing applications	Contact tracing that relies on digital tracking systems, most often through applications on mobile devices. COVIDSafe (Australia), NZ COVID Tracer (NZ), Immuni (Italy), others
Compliance applications	Compliance and enforcement initiatives developed by the Western Australia Police Force. G2G Pass (digital border pass for entry);

	G2G Now (virtual quarantine checks for individuals in hotel or self-quarantine)
Electronic monitoring devices	Bracelets to detect if travellers have left their home quarantine location. Forms include GPS devices that connect to a cellular network; Bluetooth devices that connect to a 'gateway' device in the home. Used in Hong Kong, Singapore, South Korea home quarantine
Physiological monitoring devices	These are devices that measure physiological parameters such as temperature, heart rate and oxygen saturation. One type ('Bioformas') is used at the Howard Springs Quarantine Facility. They allow remote monitoring, reducing staff-resident contact. However, as most cases of SARS-CoV-2 infection in this setting is asymptomatic, they have limited capacity to detect COVID-19.
Powered Air Purifying Respirators (PAPRs)	Respirators that purify air by using a powered blower to force air through filter cartridges or canisters. Require extensive training and probably only feasible in closely supervised staff in hospital settings.

Other considerations to be taken into account

Previous reports have noted considerations relevant to quarantine arrangements other than those related to reduction of the risk of transmission.

Health, mental health and wellbeing

Looking after the health, mental health and wellbeing of returned travellers was a recurring theme from the reports and inquiries.

All care provided during hotel quarantine should be accessible, culturally sensitive, timely and regular. All information provided to individuals should ensure understanding, be easy to access, be easy to read and should be available in other languages to cater for linguistically diverse guests.

Regarding general health, all quarantine hotels should have plans and protocols in place for providing care to individuals with complex medical needs. Regarding mental health, all quarantine hotels should have psychosocial supports available and should conduct wellbeing checks regularly in a proactive manner.

In regard to general wellbeing, hotel quarantine facilities should facilitate safe entertainment activities (such as social interactions, games, music, trivia), exercise for visitors and fresh air breaks. The quality of food has been mentioned as a focus by some informants. One study recommended that exercise and smoking areas be individual and not shared between different users, to eliminate mixing of cohorts.

Exemptions and temporary leave

The Halton Report recommends that exemptions to mandatory quarantine be considered for low-risk cohorts, such as travellers from New Zealand. Note that this recommendation subsequently led to the development of a New Zealand safe travel zone.

The Burnet Institute Report identified 14-day quarantine as more effective than shorter-duration quarantine. However, it also identified that a shorter duration of quarantine was possible where the probability of infection on arrival was very low, low or moderate.

The Coate Inquiry addressed the processes for exemptions and temporary leave from hotel quarantine. It recommended that a clear request process should be made available to all returned travellers, with clear criteria upon which requests are assessed. Any assessments stemming from these requests should be made in a timely manner and communicated clearly to the requestor. Individuals with exemptions should be educated on how to manage the risk of transmission of COVID-19 and should be monitored for compliance.

The Howard Springs Quarantine Facility

The Howard Springs Quarantine facilities is a disused workers camp that is divided into an international and a domestic quarantine facility which are currently independently operated by the Commonwealth and NT Governments respectively.

The international side has a capacity of around 850 people divided into five discrete blocks. Each block is used for a separate flight, with one block allocated to positive cases, close contacts and suspected cases from all other blocks. One unit within each block has been converted into a medical clinic. The Commonwealth has recently announced plans to expand its capacity to 2,000 residents.

Each unit houses four residents in rooms designed for a single adult occupant. The units are all hard surfaced and considered easy to clean. Each room has a single bed, small desk, bar fridge, reverse cycle air conditioner and has a covered veranda area. The climate is conducive to residents remaining inside or on the veranda.

Although there is no purpose-built staff area for operations, some residential units have been converted to staff areas for meal breaks and administrative areas. Staff areas are clearly segregated from residential areas. There is a large commercial kitchen for food preparation and a significant capacity for food storage areas (including cool stores and freezers).

The international facility is staffed by Australian Medical Assistance Teams, who have extensive experience in logistics with an emergency management and health focus. There is a high degree of central control and oversight. Features of this organisation include a high degree of central oversight, multidisciplinary involvement, and a deeply ingrained safety culture.

The workforce is solely employed at the facility, but most do not live on site. Staff ‘bubble’ arrangements are in place separating staff from different blocks, and there are no formal staff breakout areas. Staff take meal breaks by themselves in the converted rooms mentioned above. A staff laundry is located on site and staff are discouraged from wearing their uniforms outside of the facility.

Prior to arrival, a significant amount of personal, demographic and health data are collected on each individual. This informs logistics and preparedness for arrival such as appropriate placement within the facility and health and dietary needs. There is an established workflow for arriving passengers. Testing is performed at the airport, and then they are transported in cohorts to the facility. Residents are provided with an arrival pack, an iPad and a mobile SIM card if required.

Infection control procedures are standardised and specified in operational documents. The precautionary principle underlies all IPC practices. Workflows have been designed around minimising interactions between the staff and residents, and where required, as much as possible performed outside. Staff do not enter residential units at all during 14 day quarantine period.

Residents are not permitted to leave their rooms/verandas at all except to visit the laundry. All residents are permitted to visit the laundry once a day, one at a time, and only under escort. A separate laundry is provided for residents in isolation.

Auditing of PPE is supported by technology (photo of staff member sent for review, and day to day activities are documented by photos). There are regular audits of PPE and cleaning. Video auditing is undertaken of PPE donning procedure for staff working in the isolation zone. Videos are reviewed and audited for compliance. Cleaning audits are undertaken via visual inspection only.

Security is maintained by foot patrols, complemented by limited CCTV. Police are encouraged to take a 'community' rather than 'enforcement' approach. It was noted that visibility is good in outside areas but limited within units.

Significant effort has been put into maintaining resident morale and wellbeing. This includes:

- High quality food, including catering for dietary requirements (e.g. vegetarian, vegan, Halal, etc) where possible
- Daily telehealth calls to check wellbeing and identify any issues including maintenance issues.
- Provision of an iPad for telehealth appointments that are pre-loaded with entertainment activities.
- Special packs provided for birthdays, public holidays and other special occasions
- Age-appropriate education packs provided for children
- Social media to encourages a sense of community
- Verandas considered a critical contributor to mental wellbeing. Residents can observe wildlife/weather, get fresh air and interact with neighbours (with appropriate distancing)

A medical monitoring device is used in up to 80 per cent of residents to identify changes in physiological parameters and to reduce the need for staff-resident interactions. This was originally implemented to detect early onset of COVID-19 however it is reported the device has failed to predict residents who subsequently test positive for COVID-19.

There is a psychiatrist on site and a counselling service available. Patients requiring specialist care are sent to an acute health service, or require specialists visiting the facility from the hospital.

Features that facilitate effective infection control

No staff enter resident rooms; catering staff leave food parcels on the veranda, resident swabbing takes place on veranda (in good weather) and cleaning of rooms is only performed when resident moves out.

Uniformity in PPE use. All staff are required to wear full PPE, with the exception of catering and cleaning staff not required to wear eye protection. Whilst the use of this level of PPE use cannot be justified on a risk basis, it allows for streamlining of education and auditing activities, and eliminates confusion amongst staff on PPE requirements.

Strong planning and streamlining of processes, somewhat assisted by low traffic (~approximately 4 flights/week). This provides time between flights to prepare. An example is that if families with young children were on the flight, prior to arrival it was arranged that they would be accommodated in separate areas to prevent incidental contact between children.

The facilities and environment means that residents spend a lot of time on their verandas with natural outdoor ventilation, (however this does increase the frequency of residents in adjacent rooms being in close proximity with each other. There is no shared ventilation between units. Simple hard surfaces facilitate effective cleaning

Features that meet other aims of quarantine

It appears that the resident experience is very positive. The catering facilities have been reported by residents as remarkable. A large onsite kitchen with very engaged staff caters for a variety of cultural needs. Where requirements cannot be met it is not unusual for a staff member to visit a local supermarket. There is a resident Facebook site that is used to enhance a sense of community, and here a large amount of commentary is made complimenting the catering.

The verandas are clearly another major factor. Whilst it is possible that residents could come in to contact with each other, the general sense was that most are very compliant. The ability to socialise with nearby residents from your own veranda was thought to be a significant factor in resident satisfaction, good mental health and therefore compliance. Whilst this works well in warm climates, there may be challenges in cooler climate of Melbourne, but also opportunities to provide some closed in verandas that would also prevent direct contact with a neighbour.

Whilst residents responded positively to being able to wash their own laundry, this is also seen as a potential weak point where transmission could occur.

The single level construction facilitates good line of vision for security and compliance checking. This results in fewer staffing numbers reducing staff and resident interactions.

Limitations

Issues that have been identified include:

- Lack of undercover walkways to protect staff in PPE during inclement weather. This resulted in concerns about staff health and often led to delays in testing processes.
- Potential for close contact between residents on the verandas and environmental contamination in the common laundry facilities
- Although the auditing process seemed comprehensive, the use of WhatsApp to share images of attire, and the delayed viewing of videos for auditing seems inadequate. Whilst it was commented that spotters are always around, there appeared to be no formal program in place for spotting.
- The facilities are unable to suitably accommodate couples or families, they are one person dwellings. This meant families and couples would walk out and around to see each other, or the barriers between the dwellings on the verandas were removed.
- Cannot accommodate people with significant disabilities
- Frequent relocation of residents. Resident are located in zones according to their status (I.e. presence of signs and symptoms, or positive test results). For example if a resident returns a positive swab, they are relocated to the isolation zone. This is required due to the close proximity of each resident's unit (I.e 4 in one block). If units were physically separated frequent relocation would not be necessary.
- Another limitation is the inability to provide routine procedural care. While set up for a resuscitation or acute emergencies, residents requiring routine procedures, prenatal care

and other appointments were all taken to an acute facility. Staff expressed a desire for a short stay unit or like where these residents could receive care.

- Only visible inspections of cleaning are conducted. This was justified by the fact that all surfaces are hard and therefore it is easy to see if they are clean.
- Access to specialist care (e.g. obstetrics, complex medical conditions) is limited
- Infrastructure may not be suitable for residents with challenging behaviours
- Bioformas (biomonitor) allows remote monitoring of physiological observations without direct contact, but most cases of COVID-19 are asymptomatic

Conclusions and Recommendations

A range of alternatives to the current hotels may be feasible for selected cohorts, including home quarantine, other existing facility types (such as serviced apartments) and purpose-built quarantine facilities. Alternative quarantine arrangements could improve aspects of quarantine, including resident and staff health and wellbeing, infection prevention and control, clinical care and security if properly designed. While differing models of quarantine based on different levels of risk would introduce considerable logistical complexity, a hybrid model of hotel and other types of quarantine accommodation could be considered if this could be implemented by CQV over time.

The Howard Springs Quarantine Facility might be regarded as a reference standard model; although the infrastructure and environment presents many advantages for resident wellbeing and the prevention of transmission, some limitations have been identified that should be considered in future purpose-built facilities.

Informants felt that the ideal requirements for a quarantine facility from a clinical perspective would include consideration of the staffing requirements (e.g. in a hotel, more rooms per floor requires fewer police than fewer rooms and more floors); separate resident and staff access points, the feasibility to separate green and red zones, adequate areas for staff activities, infrastructure that satisfies security and IPC requirements (e.g. good ventilation, cleanable surfaces, no carpet), good information technology and wireless access, a loading dock for equipment, and an on-site kitchen. Common issues for guests include access to fresh air and exercise facilities, and the provision of food (e.g. cooking facilities for parents of young children). Informants also noted the importance of a range of accommodation options, such as serviced apartments for those with special health needs and large families.

That in the medium to longer term, the Victorian Government consider the three options for quarantine arrangements:

a. **Option 1: Strengthen existing hotel model**
b. **Option 2: Hybrid model of hotel and other types of accommodation**
c. **Option 3: Quarantine in purpose-built facilities or other identified fit-for-purpose facilities**

These should be based on the following principles in formulating the design specifications of purpose-built facilities:

- **Protection of the community from the spread of infectious diseases from potentially infectious persons.**

- **The health and well-being and mitigation of the impacts of quarantine on residents.**
- **Ensuring resident and worker safety from infections and other hazards**
- **Meeting the requirements of Victorian Charter of Human Rights**

Option 1: Strengthen existing hotel model

This model would continue to use hotels for accommodation, but to strengthen protections by closing the gaps identified by SCV, from key informants and from other reports in the measures taken to prevent transmission as well as the organisational factors that support their implementation, monitoring and evaluation.

Addressing the identified issues in ventilation and operations should provide additional layers of protection. However, a consistent theme from the SCV rapid review and other reports is the importance of governance and culture, continuous improvement of operations to reduce risk and embed safe practices. While this review was not able to explore governance issues in depth, several SCV recommendations reinforce the importance of systems-level continuous improvement practices that learn from transmission events and incident reports. A system level view of the preventative measures that monitors, evaluates and refines existing protections, and considers where additional protections might be added is required.

In the short term, vaccination of staff is likely to be an additional effective mitigation against the escape of COVID-19 from quarantine facilities, although data on the impact of vaccination on the reduction of spread of SARS-Cov-2 are not yet available and there is concern that current vaccines may not be as effective against VoCs. Given these uncertainties, rigorous primary prevention measures will still be required, but vaccination of hotel staff may instill a false sense of security which could lead to complacency in IPC measures. Additionally, as the global situation improves with better public health controls such as social distancing and mask wearing, and the rollout of effective vaccines to populations (including international travelers), this risk should further decrease. Depending on future quarantine policies, ‘vaccine passports' may mean that a lower capacity of quarantine accommodation for unvaccinated arrivals may be required.

While there are clearly measures that can be taken to increase protections in a hotel environment, there are also limitations on what is feasible in established buildings that were not designed to prevent transmission of infectious diseases. Preventing transmission during interactions between workers and guests relies on the lower levels of the hierarchy of controls, particularly administrative controls and personal protective equipment. These levels of mitigation are susceptible to human factors; in an environment where engineering controls (such as ventilation and physical separation) are optimised, minor breaches in process or technique in administrative controls and personal protective equipment are less likely to result in quarantine failure.

Additionally, the hotel environment is not optimised for the delivery of clinical care, effective infection prevention and control of a highly transmissible respiratory virus, or for the wellbeing of residents. Depending on the required capacity, the ongoing supply of hotels with suitable infrastructure is not assured.

Option 2: Hybrid model of hotel and other types of accommodation

A hybrid model could use a mix of models of quarantine, including hotel, home and purpose-built accommodation. Other types of accommodation could be used for specific cohorts, either defined by levels of risk or by type (e.g. international students, seasonal agricultural workers). Serviced apartments may be more suitable for some cohorts, such as large families. Home quarantine, with

compliance strengthened by technological enhancements, could be suitable for selected low-risk international arrivals (e.g. Victorian residents who were vaccinated prior to arrival in Victoria).

However, this option with multiple models of quarantine may introduce considerable complexity in staffing, training and operations. Risks introduced by multiple quarantine models may be mitigated by introducing a more limited number of accommodation options gradually. For example, the simplest type of alternative accommodation would be to introduce suitable serviced apartments for arriving residents with special requirements. Another hybrid model could be a combination of purpose-built facilities with hotels as surge capacity and/or health hotels.

Prolonged transportation to multiple sites could be logistically difficult and lead to an increased risk of transmission. It would require considerable planning, as the provision of services and the need for protections may vary considerably between settings. Each would require their own standards and operating procedures, and specific workforce training. Each new model would need review and approval by public health, but not necessarily each individual facility.

The numbers of staff required to support multiple quarantine settings may need to be considerably larger (and thereby increasing risk of incursion into the community). The necessary risk assessment process to determine which cohorts would be best accommodated in each model could be complex and difficult to implement depending on the number of different settings. This would require pre-departure assessment and planning not only to assess the potential infectious risk, but also for other factors that may impact on the appropriateness of different quarantine models (e.g. behaviour). These factors would also have to be reviewed during the quarantine period, and the obligations of the resident defined (e.g. regular reporting, compliance checks)

Option 3: Quarantine in purpose-built facilities

A purpose-built quarantine facility (‘quarantine station’) would facilitate engineered controls that are higher in the hierarchy of controls, that in theory should provide the best protection of staff and guests. This would reduce (although not completely eliminate) the risk of incursion into the community. This would be especially true for variants of concern which are somewhat more transmissible. However, this is not a substitute for organisational factors that support preventative measures, as highlighted above.

Although any attenuation in vaccine protection by variants of concern are not yet known, early data suggest that at least some strains (e.g. P.1 from Brazil) may be more difficult to control with vaccines. A large quarantine station would require considerable maintenance but will be useful for future pandemics, such as those due to novel subtypes of influenza if deemed appropriate by public health authorities. An optimal design may reduce the number of staff required for some functions such as security.

This option would have a long lead time to design and construct and would be expensive to establish and maintain. The location of such a facility would require careful consideration of staffing and support services (e.g. local hospital capacity). A long term ‘quarantine station' may be useful for future people at risk of COVID-19 or for future pandemics. A quarantine station may have other uses that could be deployed quickly, such as emergency bushfire accommodation or as a unique accommodation setting for tourists.

Table 5: Three options for future quarantine arrangements

	Option 1: Hotel quarantine	Option 2: Hybrid model of hotel and other types of accommodation	Option 3: Purpose-built quarantine facilities
Description	Retain existing hotel model Strengthen protections and quality improvement	Mix of hotel and other types of accommodation incl. self-contained apartments, caravans/cabins, student accommodation, farm accommodation, etc	Purpose built quarantine facilities (i.e. quarantine station)
Pros	the risk of community incursion may be reduced by vaccination of staff and as the global situation improves Previous reports have identified potential gaps that can be addressed; additional protections can be introduced Lack of escape from 'health hotels' trained staff supported by strong governance is effective	Non-hotel accommodation could be used for specific cohorts (defined by risk or by type e.g. international students) Simplest option: home quarantine for vaccinated; serviced apartments for large families. Alternative would be to combine hotel and purpose-built facilities	Purpose-built facilities allow for engineered protections that are more effective than administrative and personal protection esp. for VOCs. If supported by strong organisational governance, this would provide the best protection of staff and guests, and reduce the risk of community incursion Long term 'quarantine station' may be useful for future pandemics Purpose-built facilities would be associated with improved mental health and resident wellbeing.
Cons	Relies on lower levels of the hierarchy of protections (particularly administrative controls and personal protective equipment) VoC appear somewhat more infective, so existing model may be associated with higher risk of escape Hotels vary in their potential for airborne transmission, suitability for the provision of clinical care, IPC, security or wellbeing of residents	Difficult to define which cohorts would be best accommodated in each model Introduces complexity to staffing, training and operations in multiple sites and settings Potential for multiple uses that could be deployed quickly e.g emergency bushfire accommodation Prolonged transportation from airports may increase risk of transmission	Will take considerable time to establish Long term need for quarantine not clear Requires consideration of staffing and supports (e.g. local hospital capacity) Need to consider environmental health factors, such as noise and air quality from adjacent airport Prolonged transportation from airports may increase risk of transmission

	Ongoing access to hotel facilities with suitable infrastructure may not be assured	

That a permanent system be put in place to ensure that safe, effective quarantine can be provided into the future, even if the need to quarantine for COVID-19 ceases. This functional capacity could be managed by CQV in its current form or by another governmental agency or department with health and logistical expertise.

Since the formation of Operation Soteria, the first iteration of hotel quarantine, a tension has been evident between the logistics and compliance functions and the public health functions. This issue, which was reflected in difficulties in defining roles and responsibilities, was highlighted in the Coate Board of Inquiry. The formation of a single agency in CQV, with the Commissioner directly reporting to the Minister for Police, was the response to those findings.

This is not to say that CQV has not been without its difficulties. At the time it was created, there were several immediate operational demands concurrent with the need to establish systems and processes. Several back-office functions including human resources, procurement and finance were established quickly. From this standing start to a fully functioning complex quarantine program with thousands of staff and up to a 3,000-bed capacity, managing a resident population with complex health and other needs, is a remarkable achievement.

What is needed now is for CQV to be allowed to mature its governance, management and culture, and for Victoria to benefit from this capacity. Whether there is a long term need for quarantine for COVID-19, or even if quarantine is no longer required at some point in the future, an established organisation with the capacity to quickly pivot to an emergency management footing should be maintained. This might be similar to operations centres in other jurisdictions, including:

- The Australian Medical Assistance Teams which run the Commonwealth Howards Springs Quarantine Facility
- The State Health Incident Command Centre which operate the WA hotel quarantine program
- The State Health Emergency Operations Centre, which are closely involved in the hotel quarantine program run by NSW Police
- The State Health Emergency Co-ordination Centre (Queensland Health) which operate the hotel quarantine program in Queensland

It is noted that early arrangements for hotel quarantine in late March 2020 (Operation Soteria) were within the State Control Centre, and then an Emergency Operations Centre within DHHS. Future considerations for CQV may be for it to continue as an ongoing agency, or to be incorporated into another agency or department which can maintain its capacity to provide logistical support with a health focus. This might be considered in a future review of the State Health Emergency Response Plan and the broader State Emergency Response Plan. It should have a clearly defined role in responding to class 2 health emergencies but ideally would have established governance, structures and processes that would not need to be re-established in future health emergencies.

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Glossary of Terms

COVID-19	Coronavirus disease 2019. The disease caused by SARS-CoV-2.
Isolation	Separating people who are ill (cases) from those who are healthy to help stop the spread of an infectious/communicable disease.
Quarantine	The limitation of freedom of movement for a period of time of well persons who are likely to have been exposed to the virus (contacts) to prevent their contact with people who have not been exposed.
SARS-CoV-2	Severe acute respiratory syndrome coronavirus 2. The coronavirus that causes COVID-19.
Self-Isolation	A direction for an individual who has tested positive to COVID-19 or who has symptoms and has undergone a COVID-19 test and are waiting on results. This individual must stay in their home, hotel or other accommodation until they receive their test results, or if they have tested positive, until they are cleared by a Public Health Unit.
Self-Quarantine	A direction for an individual who is at greater risk of having COVID-19 (e.g. they may have had close contact with someone who is unwell with COVID-19 or just returned from overseas) need to remain in their home, hotel room or other accommodation for 14 days.
Variants of Concern	New lineages of SARS-CoV-2 that have genetic changes in the viral sequence of virological, immunological, clinical or epidemiological significance.

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Ombudsman
New South Wales

2020 hindsight: the first 12 months of the COVID-19 pandemic

A special report under section 31 of the *Ombudsman Act 1974*

22 March 2021

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Dear Mr President and Mr Speaker

Pursuant to section 31 of the *Ombudsman Act 1974*, I am providing you with a report titled *2020 hindsight: the first 12 months of the COVID-19 pandemic*.

I draw your attention to the provisions of s 31AA of the *Ombudsman Act 1974* in relation to the tabling of this report and request that you make the report public forthwith.

Yours sincerely

Paul Miller

Acting NSW Ombudsman

22 March 2021

Contents

Foreword from the NSW Ombudsman

The year 2020 was unprecedented and challenging. The fact that such an observation now seems trite only underscores the extent of the upheaval.

In a year that began with the worst bushfire season in NSW history, followed shortly thereafter by extensive flooding, the onset of the COVID-19 pandemic completed a trifecta of crises that have had diverse and far-reaching impacts.

Everyone has been impacted in some way, but not everyone has been impacted in the same way or to the same extent. Some groups have been more vulnerable both to the disease itself and to government actions taken to contain it. Those living in aged care, residential disability accommodation or custodial settings, for example, may be more at risk of exposure given their close-quarters living environments; more susceptible to serious illness if they catch the disease; and more severely impacted by lock-downs and prohibitions on external visits.

It is also widely acknowledged that women have been disproportionately affected: proportionally more women were retrenched during the lockdown, female jobs have been slower to return, women assumed a disproportionate share of unpaid domestic work during lockdown (such as home-schooling), and sole parents (who are more often women) have been particularly affected.[1] Lower-paid workers (many of whom are, of course, also women) have also borne a different burden. They are more likely to work either in essential services where they might have contact with infected people, or in the sectors that suspended their activities, such as hotels, restaurants and tourism services.[2]

The different and particular experiences of groups and individuals are at the heart of this report. The Ombudsman is an office that bridges the space *between* individuals and communities, on the one hand, and the state, on the other. Our role is to make sure that the exercise of state power is not only lawful and reasonable at scale, but that it is individually just – we want to see that everyone receives the right services and that everyone is treated fairly.

In this report, we look back on the first 12 months of the pandemic and report on what we have seen, primarily through the lens of complaints we received from individuals about the actions taken by NSW Government agencies.

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Acknowledging the good work done in responding to the pandemic

It is widely recognised that, certainly by international standards, the public health response to the pandemic in NSW and Australia has been highly effective. As the NSW Ombudsman, we acknowledge the good work of those responsible for crisis response planning and implementation.

We especially recognise the dedication and effort of those public workers on the front-line, and those who support them. This includes those involved in dedicated COVID-19 response, treatment and containment roles. It also includes all those who continued to deliver ordinary and essential government services despite the challenges and changed delivery models necessitated by the pandemic.

The problems of fragmented complaint handling

A key message of this report is the importance of effective complaint handling in improving those front-line activities, as well as the overall crisis response.

Of course, the ability to complain is also an essential right. It is, moreover, a right that can take on even greater importance during a crisis, when extraordinary government powers are enlivened, when the speed and instability of responses limit ordinary governance mechanisms (such as parliamentary oversight of executive action), and when substantive individual rights (such as the right of free movement) are being curtailed.

NSW does not have a constitutional bill of rights or a human rights act. One of the few express statutory rights that people do have is the right to complain to the NSW Ombudsman if they believe the conduct of a public authority is unlawful, unreasonable, unjust or otherwise wrong. Those held in any form of custody or detention (including quarantine) also have a specific statutory right to be assisted to make a complaint, unopened and uncensored, to the Ombudsman.

One of the lessons of the current pandemic, however, is that the current oversight and complaint handling system will not necessarily be suited to a crisis of this nature and magnitude. The response to COVID-19 involves multiple agencies across multiple layers of government (state and federal), working sometimes in close partnership, sometimes in loose alignment, and sometimes separately, and generally by way of a variety of formal and informal coordination mechanisms.

In contrast, the oversight and complaint handling system is highly fragmented:

- by jurisdiction – for example, federal agencies are oversighted by the Commonwealth Ombudsman, NSW agencies by the NSW Ombudsman

- by agency – for example, the NSW Police Force is oversighted by the Law Enforcement Conduct Commission (**LECC**), other NSW agencies are oversighted by the Ombudsman
- by activity - breaches of privacy are oversighted by the Information and Privacy Commission, health service provision by the Health Care Complaints Commission (**HCCC**), and other unlawful or wrong conduct is oversighted by the Ombudsman.

These arrangements work well enough in ordinary times by providing a more-or-less comprehensive patchwork of oversight. However, in the context of a crisis like COVID-19 it can and has resulted in confusion about who has jurisdiction to do what; delays as complaints are bounced from agency to agency; and potential anomalies and gaps, for example in respect of complaints about the conduct of private contractors.

No single ombudsman or other integrity agency has oversight of the entire crisis response, or even of any single aspect of it. Hotel quarantine, for example, although apparently 'run' by the NSW Police Commissioner involves multiple agencies; it therefore triggers the jurisdiction of multiple oversight bodies, but with each having only limited visibility and responsibilities.

This fragmentation meant that an ad hoc special commission of inquiry needed to be established to ensure that all relevant conduct of all relevant agencies and organisations could be investigated in respect of one particular incident – the Ruby Princess outbreak.

Improving the oversight system during crisis

In early 2020, shortly after the first cases of COVID-19 presented in NSW, but before any public health orders had been made, the NSW Ombudsman wrote to the NSW Government. We urged that, in any response to the unfolding crisis – and particularly if any response might involve forced quarantining or other restrictions on liberty – consideration must be given to the importance of ensuring independent oversight and clear avenues of external complaint.

We have also suggested to government (including to the Australian Government as part of its national review of hotel quarantine last year) that consideration be given to modifying oversight and complaint handling arrangements if necessary to ensure that (whether on a state-by-state or national basis) there is at least one oversight body that has full visibility of the quarantine system, and an ability to receive complaints about all aspects of it.

Failing that, we asked that relevant NSW integrity and complaint handling agencies – including our office, LECC and the HCCC – should at the very least be proactively briefed by government on the crisis response, so that we can understand who is doing what. That way,

when a complaint is made to any of us, we will be in a better position to provide accurate information to the public and to refer those complaints where necessary to the more appropriate oversight body.

Early this year, I suggested to government that a quarantine complaint handling 'roundtable' meeting be convened to bring together those agencies involved in delivering quarantine services with those oversight bodies that can receive complaints about those services. I am pleased to report that I received, on 19 March 2021, advice from the Department of Premier and Cabinet that the relevant agencies that deliver quarantine services agree to participate in a roundtable. I am hopeful the roundtable will identify ways to enhance the access, ease and effectiveness of complaint resolution for those affected by quarantine and related arrangements.

In the meantime, we continue to provide what information and support we can to the public and complainants, and to engage with other oversight agencies to ensure that complaints that we cannot handle are redirected as quickly and efficiently as possible to an agency that can.

The importance of complaints

We understand that there may be a reticence and even a stigma associated with complaining during times of crisis, particularly when it is acknowledged that the crisis response of public officials has generally been both well-intentioned and well-executed.

However, maintaining a healthy sense of perspective and even recognising that one is in a position of relative privilege is not inconsistent with also finding oneself in a position where legitimate concerns can and should be raised about things that are not right, or not fair, and that could be improved.

In this report we highlight some of the benefits of a well-functioning complaint handling regime in the context of a crisis like this.

One of those benefits, of course, is the potential for complaints to provide on-the-ground intelligence and the early identification of risks before they escalate. In this way, far from getting in the way of public health measures, oversight and complaints offer an opportunity to reinforce and enhance them. Another benefit, of course, is that complaints give agencies the opportunity to improve the experience and wellbeing of those who, voluntarily or otherwise, become their customers.

The impact of COVID-19 on the NSW Ombudsman's service

Like all agencies, the NSW Ombudsman's office itself has been impacted by the pandemic, and particularly in early to mid-2020 our work was seriously disrupted. Our office was grossly unprepared for a rapid wide-spread shift to home-based work, especially given a long term underinvestment in outdated legacy IT systems. Our paramount consideration throughout has been to ensure the health and safety of our staff and the community.

I am immensely proud of the commitment and agility of our staff, who responded to the many challenges the last 12 months has presented and am very pleased that we were able to maintain our front-line complaint handling capability throughout 2020. I would also like to thank all our stakeholders, including agencies, communities and the public, for their patience and support when our services were impacted.

Paul Miller
Acting NSW Ombudsman

1.
2020: A year like no other

1.1. The trajectory of the pandemic

Coronavirus disease 2019 (**COVID-19**) is a contagious disease that can result in serious illness and death. It is caused by a virus: severe acute respiratory syndrome coronavirus 2 (**SARS-CoV-2**). The first case of COVID-19 was identified in Wuhan, China in December 2019. Shortly after, on 25 January 2020, the first case was confirmed in Australia. By mid-February the virus had spread to many countries across the world. On 11 March 2020 the World Health Organization (**WHO**) declared a global pandemic.

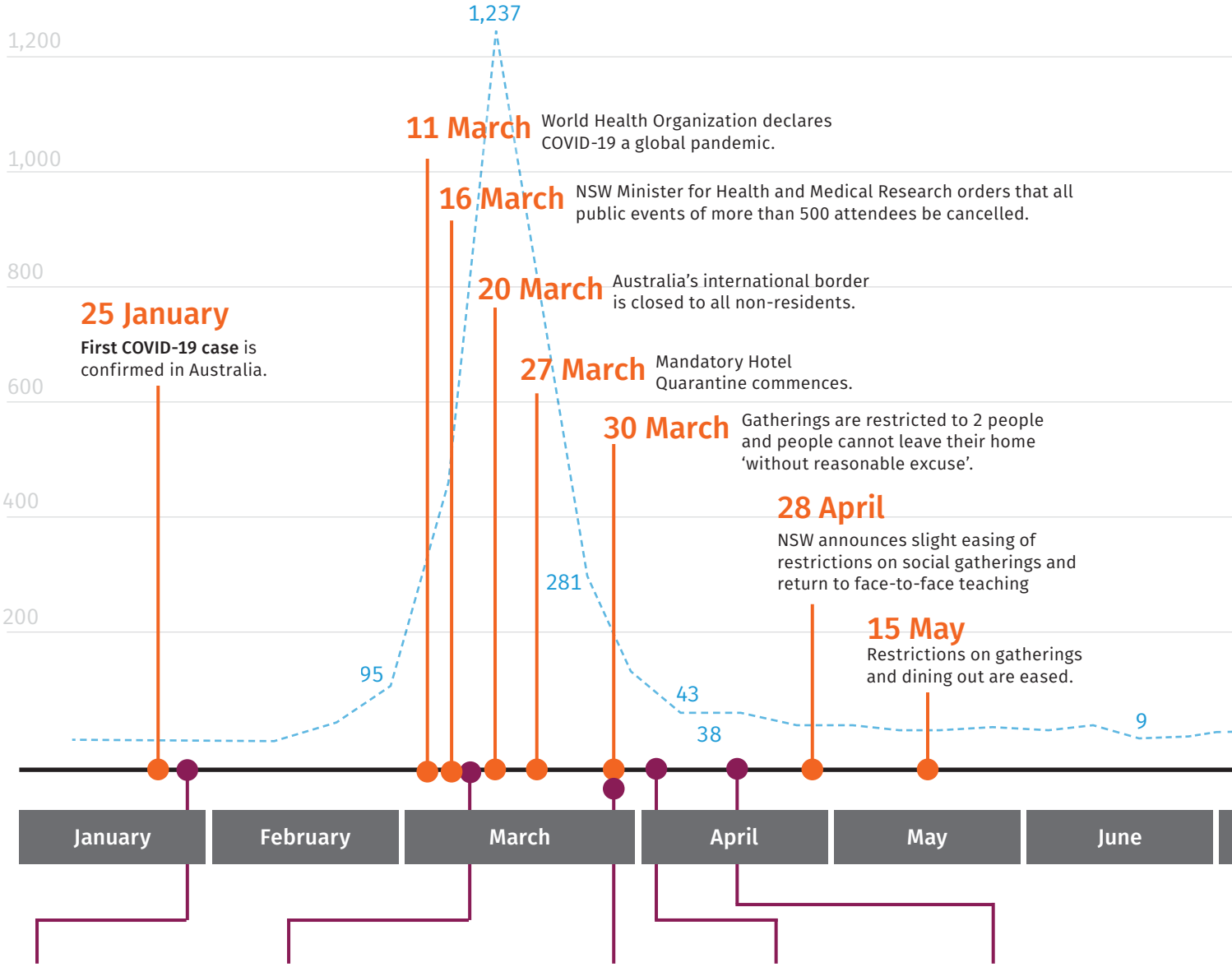
In late March, the Australian Government began to impose restrictions on international travel. The Australian border was closed to all non-residents, and Australian residents returning from overseas were required to self-isolate for 14-days upon arrival.

State and territory governments also began to impose restrictions on the public at large. In NSW, large scale gatherings were forbidden, non-essential movement outside the home was prohibited and many services and workplaces not considered 'essential'[3] were closed. See **Key events** and responses below, and **Annexure A** for more detail.

3. Initially, there was some confusion about what was and was not 'essential' www.abc.net.au/news/2020-03-31/how-australian-states-are-enforcing-coronavirus-measures/12106774

Key events and responses in 2020

See **Annexure A** for more detail.



31 January

First COVID-19 related contact is received. Concern is expressed about the importance of mainstream media educating Australians about wearing masks.

17 March

Contacting government: we write to the NSW Government and our parliamentary oversight committee, highlighting the importance of independent oversight – particularly if quarantine arrangements are to be imposed.

30 March

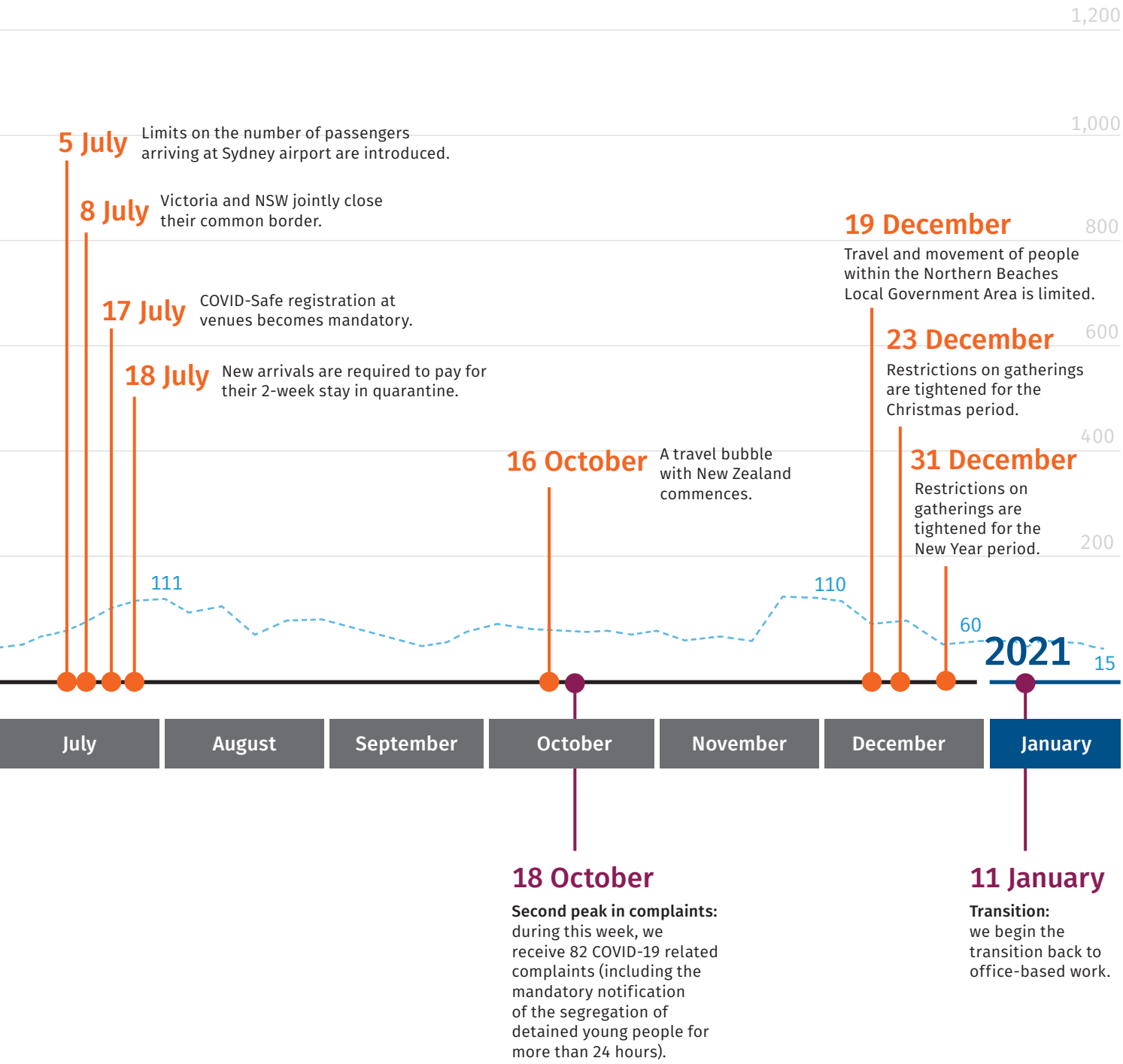
Contacting government: we write to the NSW Government seeking clarity on the quarantine arrangements, and are referred to the NSW Health and the NSW Police Force.

3 April

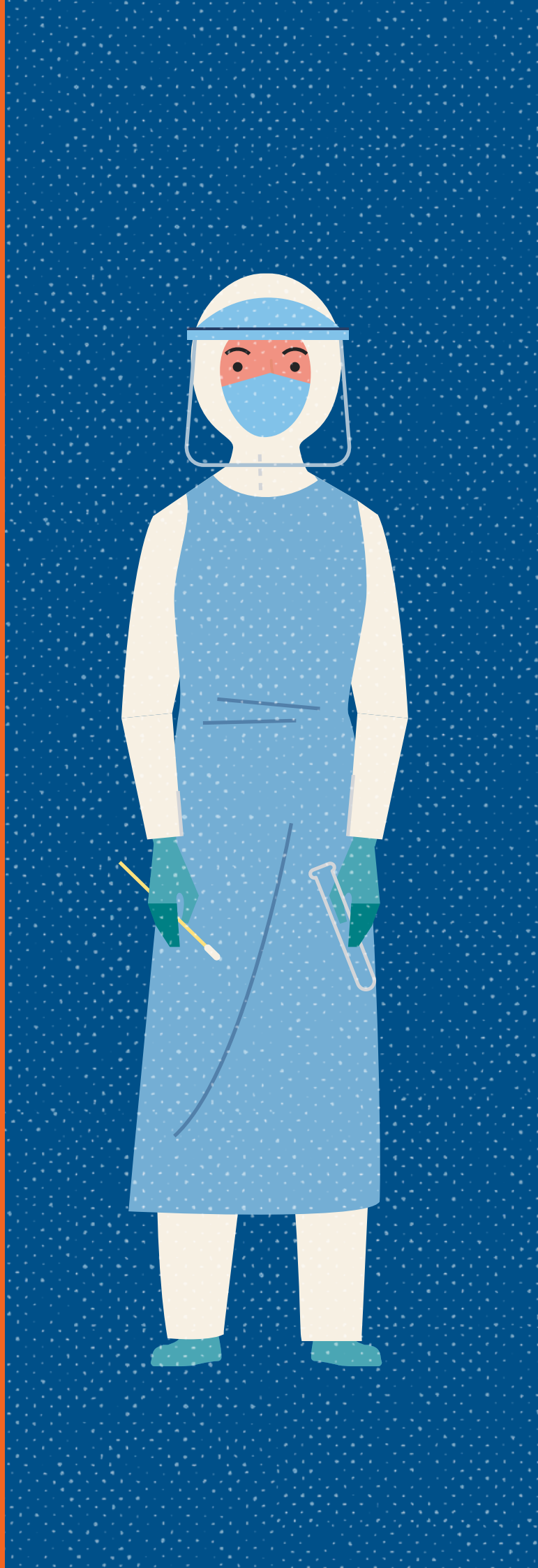
Contacting departments and agencies: we make contact with NSW Health and the NSW Police Force seeking information and assistance in ensuring that those subject to quarantine orders are made aware of relevant complaint avenues.

19 April

First peak in complaints: during this week, we receive 70 COVID-19 related contacts (including the mandatory notification of the segregation of detained young people for more than 24 hours).


1,200
1,000
800
600
400
200
5 July
Limits on the number of passengers arriving at Sydney airport are introduced.
8 July
Victoria and NSW jointly close their common border.
17 July
COVID-Safe registration at venues becomes mandatory.
18 July
New arrivals are required to pay for their 2-week stay in quarantine.
16 October
A travel bubble with New Zealand commences.
19 December
Travel and movement of people within the Northern Beaches Local Government Area is limited.
23 December
Restrictions on gatherings are tightened for the Christmas period.
31 December
Restrictions on gatherings are tightened for the New Year period.
111
110
60
15
2021
July
August
September
October
November
December
January
18 October
Second peak in complaints: during this week, we receive 82 COVID-19 related complaints (including the mandatory notification of the segregation of detained young people for more than 24 hours).
11 January
Transition: we begin the transition back to office-based work.
Weekly COVID-19 cases in NSW from 1 January 2020 to 31 January 2021

2. COVID-19 related complaints to the Ombudsman



Unsurprisingly, some people who contacted us in the last 12 months did so to complain or seek information about the actions being taken by the government, and various government agencies, in response to the COVID-19 pandemic.

However, as we explain in more detail in the next section, we were unable to deal with many of these complaints.

Where we could not deal with a complaint, we still sought to provide complainants with what information and support we could. In some cases, we referred them to other relevant oversight bodies who could provide more help.

2.1. The NSW Ombudsman's jurisdiction

The *Ombudsman Act 1974*, together with other legislation that confers functions on our office, such as the *Community Services (Complaints, Reviews and Monitoring) Act 1993* and the *Public Interest Disclosures Act 1994*, defines what it is we can and must do. The NSW Ombudsman is independent of the government of the day, impartial, and accountable to the people of NSW through a parliamentary committee.

A core function – indeed arguably the core function – of the NSW Ombudsman is to listen and respond to complaints about NSW public authorities and certain publicly-funded community service providers.

Specifically, our purpose is to:

- protect citizens from abuse of power and unfair treatment by helping them to voice and resolve complaints, and by investigating serious maladministration
- foster enduring reforms that will prevent future failings and improve public administration and service delivery, including by:
  - helping government and service providers to learn from complaints and reviews
  - promoting public sector whistleblowing
  - providing advice, suggestions and recommendations that are evidence-based, realistic and effective
  - providing education and training to government agencies and service providers to encourage good administrative practice and build capability
- provide a trusted source of independent advice to the parliament, providing assurance of executive compliance with the rule of law and supporting the parliament's functions of scrutinising the executive and implementing legislative reform.

We generally aim to resolve complaints by facilitating communication between the person complaining and the agency in question, and by undertaking inquiries and making suggestions to resolve the complaint

and improve future practice. However, where it appears to us that there may be evidence of unlawful or otherwise wrong conduct, we can investigate a matter using our statutory powers and make formal findings and recommendations. To date, we have not commenced any formal investigation into any conduct relating directly to COVID-19.

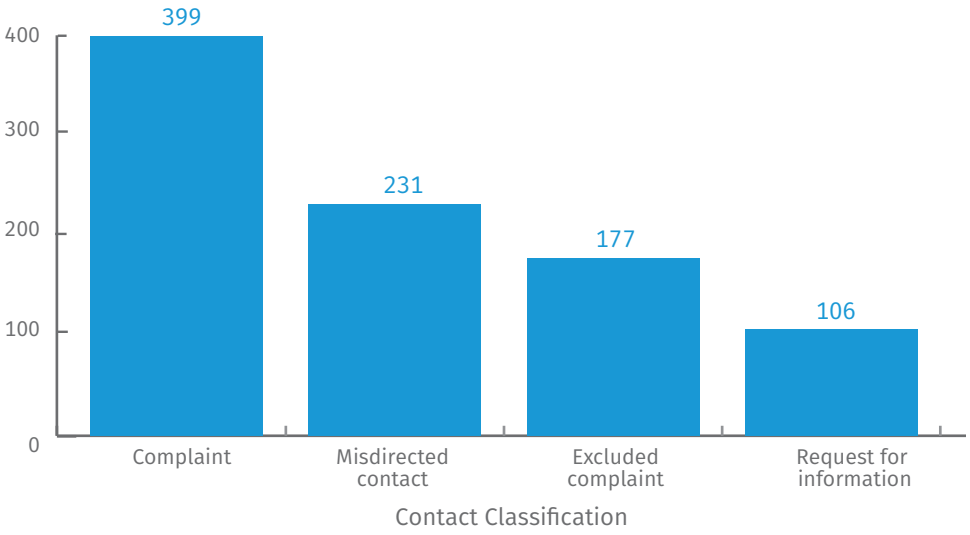
2.2. Complaints at a glance

We received a total of 26,146[4] complaints and inquiries from 1 January 2020 to 31 January 2021, of which 913 (3.5%) specifically related to the NSW Government's response to the pandemic. Of these 913 complaints and inquiries about COVID-19:

- 399 (44%) were actionable complaints, which are complaints that we have jurisdiction to receive
- 231 (25%) were misdirected contacts, which are complaints about bodies that are generally outside of our jurisdiction (such as federal government bodies or private companies)
- 177 (19%) were 'excluded complaints', which are complaints about 'excluded conduct' of NSW public authorities that our legislation prevents us from investigating (such as the conduct of the NSW Police Force)
- 106 (12%) were requests for information.

These are presented in Figure 1 below.

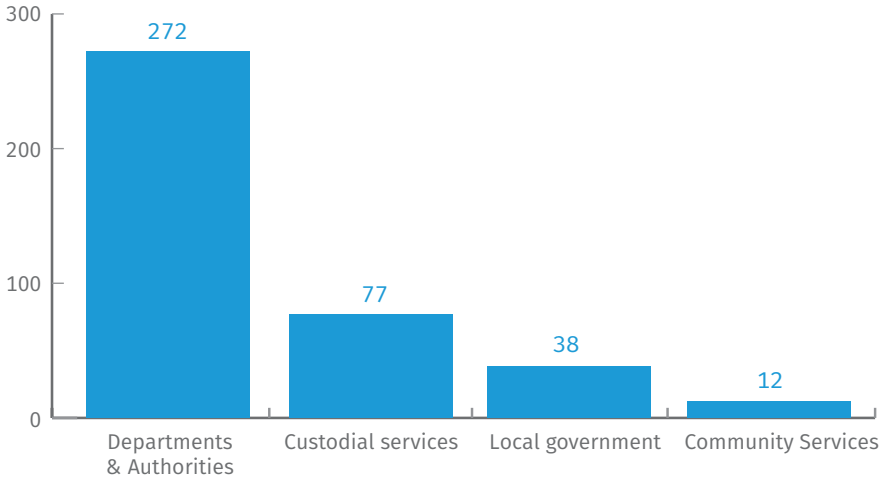
Figure 1. Contacts received from 1 January 2020 to 31 January 2021 by contact classifications



4. This number includes actionable complaints, excluded complaints, misdirected contacts, request for information, notifications, child and disability death registrations, feedback assist contacts and employment related child protection contacts.

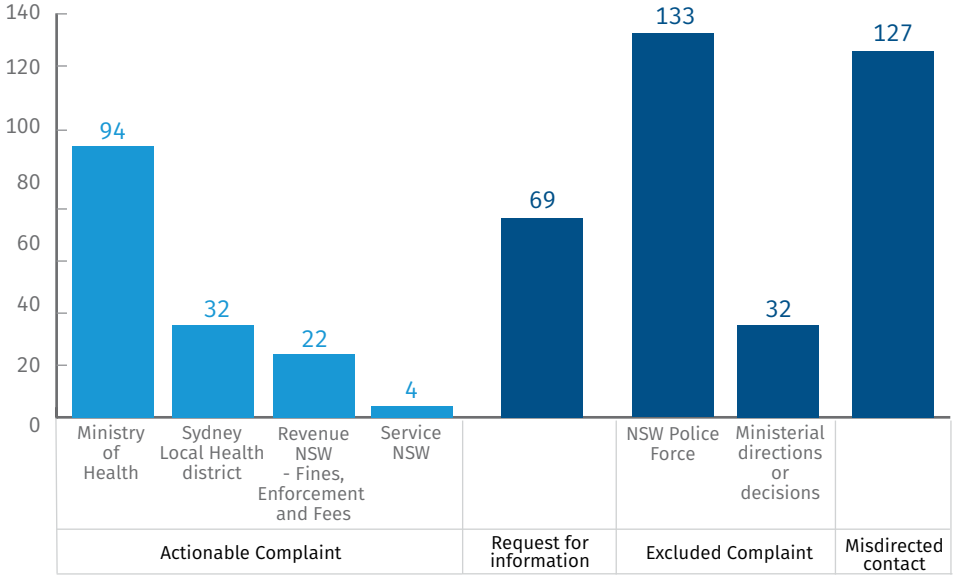
Figure 2 shows how the 399 actionable complaints were distributed across departments, agencies and services.

Figure 2. Actionable complaints received from 1 January 2020 to January 2021 by case type



We received 513 contacts about hotel quarantine. 152 of these contacts were complaints that we could respond to, and 69 were requests for information. A total of 292 contacts were outside of our jurisdiction (including 165 excluded complaints and 127 misdirected complaints). **Figure 3** below sets out the contacts we received about hotel quarantine and the agencies they relate to.

Figure 3. Contacts about hotel quarantine by agency and jurisdiction



Note: Complaints about the NSW Police Force and ministerial directions or decisions are excluded from our jurisdiction.

2.3. Complaints about the NSW mandatory hotel quarantine system

Quarantine has been used effectively to reduce the spread of COVID-19 in the community, and the system has been refined over time. Since 29 March 2020, all travellers who arrived in Australia by air and sea have been required to quarantine at a 'designated quarantine facility' where they are tested twice for COVID-19.[5] To date, hotels that have been assessed as meeting certain criteria have been used as 'designated quarantine facilities.' Unless granted an exemption to isolate at home, arrivals must spend a minimum of 14 days (and up to 24 days) in this government-arranged accommodation.

In NSW, hotel quarantine is a joint operation led by the NSW Police Force and NSW Health. The terms of quarantine are governed by the *Public Health (COVID-19 Air Transportation Quarantine) Order* and the *Public Health (COVID-19 Maritime Quarantine) Order* in place at the relevant time.

Under the current orders, international travellers are required to undergo a COVID-19 symptom and temperature check upon arrival in NSW. If travellers display symptoms indicative of COVID-19, those individuals are transferred to a hotel managed by NSW Health to await their results. These hotels are known as 'Special Health Accommodation' (**SHA**s). Ordinarily, SHAs are used to accommodate people who are medically fragile or require closer supervision (regarding physical or mental health), unaccompanied minors, others who are sick (not from COVID-19) and people who have other special needs.

Travellers who do not display symptoms of COVID-19 are transferred to a NSW Police Force managed hotel or other designated quarantine facility.

The NSW Chief Health Officer (or her delegate) may release a person from quarantine after 14 full days if satisfied that, having regard to any testing, the person does not pose a risk of infecting others with COVID-19, or otherwise after 24 full days have passed if no symptoms are apparent.

Failing to follow quarantine rules is a criminal offence and attracts heavy penalties. For individuals, the maximum penalty is $11,000, 6 months in prison, or both, with a further $5,500 fine for each day the offence continues.[6]

5. www.health.nsw.gov.au/news/Pages/20200702_00.aspx
6. www.health.nsw.gov.au/Infectious/factsheets/Pages/hotel-quarantine.aspx#:~:text=Quarantine%20is%20used%20to%20reduce,transiting%20air%20or%20sea%20passengers.&text=People%20who%20refuse%20to%20be,quarantine%20for%20a%20longer%20period

Since 18 July 2020, travellers (rather than taxpayers) are charged for their mandatory stay in quarantine. As at March 2021, the following rates apply in NSW:

- $3,000 for 1 adult
- $1,000 for each additional adult
- $500 for each child aged 3 and over.

Operation of the SHAs and police-managed quarantine facilities can involve multiple entities, including the NSW Police Force, NSW Health, NSW Treasury, the Department of Communities and Justice (**DCJ**), private security firms, and the hotels themselves.

The SHA facilities are managed by Sydney Local Health District (**SLHD**), which has its own contracts with accommodation and food providers. In contrast, food and services for individuals quarantined in police-managed hotels are provided by the hotels, and other providers who have contracted with the NSW Treasury.

The various entities involved have taken steps to ensure individuals are provided with certain essential items and services while in quarantine, including:

- **catering:** although if guests choose, they can order takeaway meals once a day from outside the hotel at their own expense
- **health and wellbeing services:** for example, a health care team will phone individuals in quarantine each day to check on their health and wellbeing, and a 24/7 health and wellbeing hotline has also been made available. Chaplaincy services are available by referral from the Red Cross.[7] Some hotels have provided additional services – for example, free access to online fitness classes.

2.3.1. Receiving complaints about hotel quarantine

Many of those who complained to us from within hotel quarantine are likely to have been further frustrated by our jurisdictional constraints. In particular, we have been legally unable to deal with complaints about:

- the minister who made the public health orders that require people to be quarantined and the terms of those orders
- the NSW Commissioner of Police, or individual police officers (under whose general direction and control those in quarantine are placed).

As already noted, the conduct of both the Minister for Health and the NSW Police Force are excluded from our jurisdiction. However, we do have jurisdiction to receive complaints about other agencies that are involved in the quarantining system, including NSW Health, NSW Treasury and DCJ.

7. Ibid.

2.3.2. Frequent complaints about hotel quarantine

From 30 March 2020 to 31 January 2021, we received 513 contacts about police-managed and SHA hotel quarantine. These 513 comprised a mix of complaints and inquiries about NSW agencies we have jurisdiction over, others we do not have jurisdiction over, and complaints and inquiries that were misdirected. The issues most often raised in these complaints and inquiries were:

- the condition and cleanliness of hotel facilities (254 mentions)
- inadequate food options and quality (95 mentions)
- inadequate access to support services such as mental health support or medical assistance (78 mentions)
- a lack of access to fresh air and exercise (73 mentions)
- the processing of hotel quarantine exemption requests (68 mentions)
- quarantine fees (66 mentions)
- the length of quarantine (29 mentions).

Our experience of complaints and inquiries about hotel quarantine appear to be consistent with concerns raised in other jurisdictions.[8]

2.3.3. Complaints about inadequate access to fresh air and exercise

Daily access to fresh air and 1 hour of exercise outdoors has long been seen as a minimum standard of treatment for people in facilities where liberty has been restricted.[9] Against the background of the COVID-19 pandemic, the United Nations Subcommittee on the Prevention of Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment has reiterated advice on the need to respect minimum requirements for daily outdoor exercise (within the limits of necessary public health measures) in detention settings.[10] The European Committee for the Prevention of Torture and Inhuman or Degrading Treatment or Punishment explicitly extended this advice to 'newly-established facilities/zones where people are placed in quarantine.'[11] Interim guidance from the WHO recommends that such measures be implemented in relation to quarantine 'based on a risk assessment and consideration of local circumstances.'[12]

8. www.health.gov.au/sites/default/files/documents/2020/10/national-review-of-hotel-quarantine.pdf
9. United Nations, *Standard Minimum Rules for the Treatment of Prisoners* (30 August 1955) r 11(a); United Nations Standard Minimum Rules for the Treatment of Prisoners (the Nelson Mandela Rules), GA Res 70/175, UN Doc A/RES/70/175 (17 December 2015) rr 14(a), 23(1), 42.
10. Subcommittee on Prevention of Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, *Advice of the Subcommittee to States parties and national preventative mechanisms relating to the coronavirus disease (COVID-19) pandemic*, UN Doc CAT/OP/10 (7 April 2020), [9(i)].
11. Council of Europe, European Committee for the Prevention of Torture and Inhuman or Degrading Treatment or Punishment, *Statement of principles relating to the treatment of persons deprived of their liberty in the context of the coronavirus disease (COVID-19) pandemic* CPT/Inf(2020)13 (20 March 2020).
12. World Health Organization, *International Health Regulations* (3rd ed, 2005).

In NSW, those in quarantine are not routinely given access to fresh air and outdoor exercise. This issue of lack of fresh air was mentioned 73 times in complaints and inquiries we received about hotel quarantine.

Case study 1.

'I refer to the Queensland Human Rights Commission who have made the following recommendations: The Queensland Human Rights Commission has recommended all hotels used for mandatory quarantine during the pandemic should have balconies or windows that open.

It has ruled on a complaint by a woman in self-funded hotel quarantine in August who was refused access to fresh air for two weeks. The human rights body found the state limited her right to humane treatment while depriving her liberty.

Please consider the same regulations for hotels in Sydney. It is inhumane to expect people to sit inside for 14 days without any opportunity for fresh air or opportunity to exercise. This is exacerbated by reading about people, in the same hotel, who has [sic] access to a window that can be opened, and even a balcony (while we all have to pay the same amount for this quarantine). The feeling of frustrations and the increasing difficulties in coping with limited movement and no fresh air is also exacerbated by the fact that I left Australia on compassionate grounds and I am now back after very emotional experiences in my home country with no opportunity to be with my family once back in Australia.'

Case study 2.

'I have two main complaints the first is we are not allowed any outside time and are not given rooms with any way to get fresh air. Even opening the door to air the room out after exercise is not allowed. Whilst I'm happy to complete the 14 days in quarantine, as a nurse I realise that this is not healthy and even criminals are given outside time in prisons. Our health is being risked to prevent a risk to the community.'

In response to our inquiries, we were informed that when the NSW Police Force considered which hotels were suitable for use as 'designated quarantine facilities', the primary criterion was security. They determined that high-rise buildings would be easier and less resource intensive to keep secure. The drawback of high-rise buildings is that they tend not to have either balconies, or windows that can open. We understand the option to allow guests out of their rooms to

access fresh air was explored but determined to be logistically too difficult and resource-intensive to manage, and that moving people around while in quarantine represented a transmission risk.

The initial urgency of the crisis has passed, and experts have a better understanding of the impact of quarantine on individual mental and physical health, as well as the nature of the virus itself. A national review of hotel quarantine has also been completed. Now, further consideration should be given to ways of meeting the health objective of preventing the spread of the virus while also meeting the need to provide access to reasonable minimum access to fresh air and the opportunity to exercise.

2.3.4. Complaints about delays and decisions on applications for quarantine exemptions

Generally, to successfully seek an exemption from hotel quarantine an applicant needs very strong medical, health or compassionate grounds, or to be transiting through NSW to an international destination. Exemption requests were mentioned 68 times in complaints and inquiries about hotel quarantine. Assessing exemption applications of any type requires decision-makers to exercise discretion. This requires properly considering the merits of the case, including weighing up different evidence and competing interests. Determining how much weight to place on the various factors that must be considered, such as public health and personal circumstance and possible risks, is not always clear-cut and can be challenging.

Decision makers must also provide the person affected by the decision with procedural fairness. This extends (but is not limited) to giving applicants general information about the factors the decision maker can take into account, the supporting information that is required and keeping relevant parties informed during the decision-making process. Clear reasons explaining why an exemption was not granted should be provided. For example, the decision maker should identify the general public health considerations they have considered, and why these have outweighed any particular considerations put forward by the individual (if this is the case). If an exemption is denied, the decision maker should outline the matters they have considered, and the reasons for the decision (for example, why public health considerations have outweighed any particular considerations put forward by the individual).

Finally, the timely provision of information and reasons is essential in a time-critical environment where deadlines are mostly determined by the applicant's flight tickets and are thus inflexible.

Case study 3.

'I'm writing from hotel quarantine and I have a serious complaint about the NSW Health Exemptions Team. I applied twice for permission to self-isolate, once based on my recently adopted daughter's needs and then a review with further adoption expert documentation regarding my 6-year-old son's declining mental health. My son and his mental health concerns weren't considered in the review. His name wasn't even on the denial of our application! My family and I travelled overseas to collect our 11-month-old daughter. We returned last week on [Monday] but didn't get the denial email until we landed at Sydney airport and I had no avenue to point out that my son had been left off the decision. I've emailed the exemptions team 3 times to alert them of this error. I have not received a reply! There is no other way I can contact them. There should be a pathway to accelerate complaints and problems. People are vulnerable in quarantine...The National Review of Hotel Quarantine recommends "People in quarantine should have access to timely decision making, review processes and complaints mechanisms, including pathways for escalation." I haven't had access to any of these. Additionally, we've received our negative COVID results. We've come from a very low risk country with no local cases. To lump all overseas arrivals into the same high-risk category is a waste of quarantine spaces and resources. Both of my children are extremely vulnerable. The stress of quarantine, all its associated problems as well as my son's mental health concerns are affecting the attachment of our new daughter into our family. We are very distressed by the exemptions process. The system is under resourced and we've experienced multiple errors and delays. We urgently want our situation to be investigated as currently we face another week in hotel quarantine.'

Case study 4.

'I spoke with the NSW Exemption Team regarding my application for an exemption to the 14-day quarantine in NSW and I am very disappointed in their lack of compassion. The individual whom I spoke to at length about my application admitted that I had a compassionate situation due to the fact my mother is in a critical condition. He also troubled my Father with a phone call regarding my accommodation arrangements if I were to self-isolate instead and gave him false hope that his daughter would be home at an already very stressful and worrying time for him. I then had to make the difficult call to my Father to say I am actually not coming home. I cannot understand why he was contacted if my application was not going to be approved. The QLD government have confirmed they are happy to release me from quarantine on compassionate grounds, however the NSW government have refused to share the same view. I have been provided no alternatives with precautionary

measures, testing, monitoring etc. I have been left in a room to worry, on my own, day and night. Day 4 and I am already deteriorating. I mentioned to the individual in the exemption team that my mental state will decline as a result of this decision, and as we await an update from the ICU department tomorrow by phone, I am concerned how much further I may deteriorate if the news about my Mum is not favourable.'

2.3.5. Complaints about difficulty in accessing health services

Quarantine can have a significant impact on an individual's physical, emotional and psychological well-being. The National Review of Hotel Quarantine stressed that:

> Good practice health screening is not limited to whether a traveller is symptomatic for COVID-19 rather, it includes assessments for any mobility or cognition issues…mental health concerns, drug and/or alcohol health issues, pregnancy…or any other issue that may affect someone's capacity to undertake or manage the hotel quarantine environment.[13]

Health screening and triaging occurs upon arrival in the airport, and, where appropriate, individuals are sent to SHAs. Despite careful assessment and placement, we have heard from some individuals in quarantine that they can find it challenging to access health services.

Case study 5.

'Being a cancer survivor, I was concerned to seek help immediately upon arrival in Australia by air. I was denied access to my own doctor by NSW Health, but assured that I would be assisted upon arrival. Instead, I was placed in a quarantine hotel and told that I would not be seen for two weeks. Since the Avalon outbreak occurred it appears, I may have to isolate again when I travel to my home in the ACT, thus delaying treatment again.

After raising this with RPA Virtual I was told an initial blood test would be arranged immediately. It took 4 days for local staff to react and so far, I have received no treatment, even initial tests, for a potentially life-threatening condition.'

13. www.health.gov.au/sites/default/files/documents/2020/10/national-review-of-hotel-quarantine.pdf, p. 26.

Case study 6.

'I have diabetes and a chronic kidney disease. The food that has been provided to me in hotel quarantine does not meet my medical needs. I made sure I declared my medical requirements on the Australia Health Declaration card completed on arrival in the country and I also raised my concerns with the hotel, medical staff and HCCC before coming to the Ombudsman but I haven't got any help from them.'

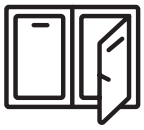
Pressure on people's mental health and wellbeing is a crucial consideration in the hotel quarantine system. Proactive and timely mental health screening and treatment is vital, and should be conducted no later than 24 hours into quarantine. We understand that mental health screening is conducted upon arrival and then on a daily basis, and various supports are also made available to hotel quarantine guests. Nevertheless, even those who are in good mental and physical health will find the experience taxing.[14]

Case study 7.

'By day 5 I was not coping and had an anxiety attack, I reached out to the nurse on call who was very unhelpful and kept just saying "everyone is in this situation and even she doesn't want to be here but has to be." I hung up feeling overwhelmed and feeling like I couldn't cope, when I got a knock at the door and two police officers said they had been told my behaviour was unacceptable and would arrest me if I didn't calm down. This just made the anxiety worse and soon depression kicked in. It took almost 24 hours for a mental health professional to contact me after this. That is too late with anyone let alone a person living with mental illness.'

14. www.health.gov.au/sites/default/files/documents/2020/10/national-review-of-hotel-quarantine.pdf, p. 26.

"I realise that this won't help my situation as I am on day 10 but future arrivals should be given either a room with access to fresh air or outside time as is being done in other states."



2.3.6. The facilities provided in quarantine hotels perceived as inadequate

Complaints about hotel quarantine frequently raised concerns about hotel facilities, including the meals and drinks provided. A cross-section of these complaints is presented below. While we don't have jurisdiction over private organisations such as hotels or caterers, we were able to make inquiries with NSW Treasury to get an understanding of the services which were included in the commercial agreement between the relevant NSW Government agencies and quarantine hotels.

With the introduction of the quarantine fee, beginning 18 July 2020, we anticipated and subsequently experienced an increase in complaints about hotel facilities. It is not surprising that individuals contributing to the cost of their stay have higher expectations about services and facilities. We raised this with NSW Treasury, as we expected they would also notice an increase in complaints.

We found individuals were keen to provide feedback about their experience in the hope that it would benefit future return travellers, rather than necessarily seeking to improve their own situation.

It is also worth noting that while we could not always act on complaints about hotel facilities or services, we were mindful to identify any complaints that involved an immediate health or safety issue so these could be referred to the State Emergency Operations Centre (**SEOC**) Police Liaison Office for their review, and for any appropriate action to be taken.

Case study 8.

'I am currently in hotel quarantine. I have major concerns about not being able to allow fresh air into my room as my window cannot be opened. I have a thyroid issue which is aggravated by the lack of fresh air and the carpet in the room. I am generally fit and healthy but this is making me feel sick.'

[After taking this complaint, we referred the matter to the SEOC and the complainant was moved to another room.]

Case study 9.

'3 days into my stay I discovered bed bugs in my Room [number]. The Police and hotel staff attended and asked me to film the bed bugs as they didn't want to come into the room. I believe the initial sheets on the bed were blood stained (but laundered) due to bed bugs too. I was moved the same day into Room [number].'

Case study 10.

'I have been in quarantine for 6 days now. The hotel has refused to launder personal clothes for guests citing NSW Health advice. No other laundry options were offered by the hotel.'

Case study 11.

'The hotel did not provide me with adequate food/nutrition, nor did it provide me with reasonable means to attain it myself. I was assigned to a room without any means of food preparation - the room had a small fridge and an electric kettle but no microwave, stove or oven. The kitchen staff was entirely unable to meet my dietary requirements.'

2.4. Complaints about the effects of public health orders

Public health orders placed new restrictions on venue capacity, travel, and many day-to-day activities. Public health orders can be made by a variety of people in accordance with the minister's delegations. We are unable to handle complaints about public health orders that are made by the Minister for Health personally.

We received 33 complaints about ministerial directions or decisions, which is 4% of the total number (913) of complaints and inquiries received regarding the government's response to COVID-19. The orders have affected individuals and businesses in very particular ways. The case studies below provide examples of some of these consequences.

Case study 12.

'I am…organising a corporate event for 180 people…aboard a vessel. Last [week] the vessel operators were advised by the NSW Water Police that the venue was considered to be an indoor venue and therefore COVID-19 restrictions to an indoor venue applied. This meant that the maximum capacity was reduced significantly…I am hoping that an exemption can be made in this circumstance as it affects many people's ability to work at the event.'

Case study 13.

'The public health order has limited customers being able to sit in food courts and dine in restaurants in shopping centres. The COVID grant of $3000 is being generalised by industry codes and many businesses are not being assessed under a case by case basis causing further financial stress. This is unfair and the assistance being offered is not helping those food businesses in shopping centres who are having to pay high rent and other associated costs to keep our customers COVID safe while having to deal with a decline in customer attendance because of customer seating arrangements being enforced by the government. Stop generalising by industry code and assess individually.'

2.5. Complaints about refunds and waivers

Many services were suspended, and tickets for travel or events have been cancelled or deferred. Agencies, service providers and event organisers have had to make difficult decisions about whether and how to proceed, and would-be attendees have been forced to consider whether they should attend events that are still going ahead. The economic consequences of these decisions for both the vendor and the consumer are obvious but have manifested in different ways.

Case study 14.

'My wife was to come from [overseas]...to pursue her [university] education in March 2020 (Autumn intake). However, with the current pandemic, she was unable to come into the country as the borders closed down. Therefore, we deferred to the next spring semester (July 2020) as it was the right thing to do. Unfortunately, with this pandemic, she still cannot obtain a visa. The pandemic has impacted on our family and our finances. Therefore, we requested a refund to ease financial pressure. However, the university does not approve a refund based on the fact that the census date has passed on our first semester application.'

Case study 15.

'I made a complaint to Fair Trading because our real estate agent refused to negotiate our rent when we were affected by a COVID-19 reduction in income of more than 25%. The Office of Fair Trading assessed us as meeting the criteria set by The NSW Residential Tenancies Amendment (COVID-19) Regulation 2020...They then failed to...notify us of an outcome.'

Case study 16.

'[Childcare centre] is refusing to suspend our child's fees for withdrawing her from day care. Based on recommendations from the NSW Premier to keep kids home where practical, I cannot believe we are expected to pay day care costs. The centre advised to stop fees we would have to formally withdraw our child, provide 4 weeks-notice and there would be no guarantees of re-entry.'

Case study 17.

'My daughter, a full-time dance student, was entered in [a major dance competition] ... Although all other competitions my daughter has been entered in for the next few months have been postponed or cancelled (and registration fee refunded) due to COVID-19 the [event organisers] decided not to cancel the competition.

> Instead they are expecting those who registered to enter via video, with very specific videos to be submitted between July 1 and July 31 but with registration for that to occur by 1 June. Obviously at present my daughter is not able to attend the studio [to train and have the videos recorded] with the restriction on not being allowed to go out for anything that is non-essential…Therefore I feel they are being unfair in continuing to keep registration fees…I'm wondering if there is anything you are aware of that would give us some grounds for pushing them further to consider refunding the registration fee.'

As noted already, decisions made by private organisations generally fall outside of our jurisdiction – so in these cases we could only refer the individual to possible alternative avenues of redress. However, in cases that involved NSW Government departments or agencies, we took steps to ensure that the merits of each case had been appropriately considered, the relevant policy had been applied in a reasonable manner, and reasons for the decision had been given.

2.6. Complaints about correctional centres and detention facilities

We received 77 actionable complaints from inmates and young people in youth justice centres directly relating to COVID-19. The complaints were about:

- conditions while in quarantine upon intake
- Opioid Substitute Therapy (**OST**)
- suspension of in-person visits
- the use of tablet and audio-visual links (**AVL**s) for visits
- hygiene within correctional centres and the wearing of masks by staff
- access to early release to parole
- the impact of the inability to participate in external leave programs on classification and parole consideration.

We spent substantial time reviewing and keeping abreast of changes to procedures and routines in custodial settings. We provided advice about the reasonableness and lawfulness of the changes. We also gave feedback to Corrective Services NSW (**CSNSW**) and Youth Justice NSW (**YJNSW**) about the matters being raised with us by those in custody. This communication has facilitated the refinement of procedures. It has also helped avoid unnecessary tension in the system, because our staff had the information they needed to provide clear answers to those who contacted us about the actions being taken by the correctional and youth justice systems.

In particular, we were able to provide independent assurance to those in custody that certain actions being taken by authorities were not targeted or capricious, but were being done in a way that was lawful, consistent and reasonable to protect all parties – including themselves and their families.

2.6.1. Quarantine upon intake was essential but hard for inmates and detainees

In early March 2020, CSNSW changed inmate intake processes to prevent COVID-19 from being introduced into the correctional system. These changes included amendments to the separation arrangements, and in some cases medical isolation. During the pandemic, inmates have been:

- separated from others for 14 days from the time of their arrival into custody
- questioned about locations visited, and activities carried out before coming into custody

- assessed for COVID-19 like symptoms
- tested for COVID-19.

Similar measures were also implemented in the youth justice system, resulting in an increase in mandatory notifications our office reporting the segregation of a young person for a period greater than 24 hours. While these segregations may be considered 'routine' in the current times, they still have a significant impact on a young person in custody and we review them with the same care and attention as those which occur during 'normal times', such as when a segregation occurs for a person's safety.

It must be acknowledged that the measures taken by CNSW and YJNSW have so far ensured that the entire custodial system in NSW has remained free of COVID-19 – except for 2 health staff testing positive (which had no flow-on to those who were detained).

Case study 18.

Susan contacted us 4 days after she came into custody and was placed in quarantine at the correctional centre. She had been unable to contact her family because she hadn't been provided the three free calls given to each inmate during 2020 due to COVID-19 restrictions. Susan also complained that she and other women in the wing had only been able to leave their cells individually to use a common room and not to access a yard in the open air.

We advised Susan that funds for the free calls were automatically allocated to every inmate's phone account each week and this process did not involve an inmate being taken to a particular phone to make these calls. We encouraged her to check that her phone account was allocated an amount equivalent to three local calls per week and that this amount would be used more quickly if she called a mobile phone.

We explained the centres needed to ensure people who were being quarantined did not interact with others outside of their 'bubble' and that everyone had some time out of their cells at a minimum, and that yard access would be optimal but not always possible depending on the number of people currently in quarantine.

2.6.2. Delays in accessing Opioid Substitute Therapy have been difficult for inmates

OST offers certain people who are opioid dependent an alternative, prescribed medicine. Prior to January 2020, these inmates were administered opiate replacement drugs such as methadone, buprenorphine and suboxone in the form of liquid, tablets or sublingual strips. Because COVID-19 is a highly contagious virus that can be transmitted through saliva, the Justice Health and Forensic Mental Health Network (**Justice Health**), in partnership with CSNSW, accelerated a pilot program of changes to the delivery of OST. Inmates who were receiving OST orally were transitioned to a form of OST which is instead delivered by a monthly injection.

In the prison economy, 'bupe' (Buprenorphine) can be worth about $200 per strip in a maximum security centre. Unsurprisingly, demand for these prescription opioid replacements has long caused issues in prisons across the state such as assaults, misuse and diversion of the drug between inmates. Diverting these medications holds many risks, one of which is the spread of infection. The delivery of OST by injection removes the possibility of diversion of the medication and associated risks, including 'standovers' for the diverted medication that could involve assault or other intimidation. Using monthly injections instead of daily doses of OST also means many inmates would remain medicated if for any reason inmates were unable to access a centre.

Inmates initially viewed this change with some caution and contacted us to ask if this was 'allowed'. Once the benefits of the new system became clear, we received more contacts from inmates who felt their access to the OST program was taking too long. In both situations, we encouraged those who contacted us to remain engaged with the medical staff at their centre about the changes and what it meant for them.

Case study 19.

David started on the new OST program and he had his first injection 1.5 weeks before he called us and was due to get the second one a few days ago. This didn't happen and he was worried that he would not be properly engaged on the program.

Given the rate at which the OST program was accelerated in early 2020, we contacted Justice Health to ensure that David would still be eligible to continue in the program and was scheduled to receive his next injection. We also received some general information from Justice Health about key time frames and triggers in the administration of the program.

2.6.3. The roll out of digital visits was generally welcomed

In March 2020 when CSNSW and YJNSW suspended all social visits for inmates in response to COVID-19, we began to receive complaints about lack of visits. As this was a policy decision based on medical advice and we had no basis for considering that decision to be unreasonable in the circumstances, our office did not act on these complaints beyond reporting back to the agencies about the concerns.

In response to the suspension of visits, both CSNSW and YJNSW accelerated the roll out of 'digital visits'. These were conducted using tablets set up in visiting areas at centres, and also using existing AVL suites when they were not in use for professional visits or court. Since then, many people in custody have told us how they enjoy the use of technology for visits with their family and friends 'in their home'. They also recognised that such visits were often more convenient to many visitors. Most detainees and inmates we have spoken to, however, would like to see a mix of 'in-person' and virtual visits so they can have in-person interaction with their significant others. This seems particularly important for those who have children.

Case study 20.

Leo has been in custody for 8 years and has 2 adult children who live overseas, so his contact with them has been limited to letters and an occasional phone call. When 'digital visits' were introduced, Leo was hopeful they would be able to see each other once again. People who visit inmates must have a Visitor Identification Number (**VIN**) which they get by providing formal identification that is verified by a correctional officer either at a correctional centre or community corrections office. As Leo's family did not have a VIN, he had sought advice at his centre about how they could arrange this from their home location, and had been given a phone number for them to call. The number however had rung out each time they called. We provided Leo with an email address the family could contact to get the assistance they needed. Leo later told us his family had been approved for video visits and his children were able to see him for the first time in 8 years.

2.7. Complaints about Community Services

In relation to non-government organisations funded to provide community services, COVID-19 related complaints generally involved limits placed on visitor and provider access to:

- assisted boarding houses
- young people in intensive therapeutic care (**ITC**)
- young people in out-of-home care (**OOHC**).

2.7.1. Assisted boarding houses

DCJ authorises and licenses boarding houses accommodating 2 or more people with additional needs. Additional needs are defined as disability, mental illness or age-related frailty. The Boarding Houses Regulation 2013 places obligations on assisted boarding houses as to minimum staffing levels, employment screening, complaint handling and provision of food and nutrition.

During the COVID-19 lockdown (March to May 2020), we received complaints that boarding house proprietors had restricted access to boarding houses to protect residents from contracting COVID-19. The concern raised with us was that if the boarding houses were closed, residents would miss out on essential services that are delivered directly to residents at the boarding houses. We made inquiries with DCJ's boarding house team to ensure that residents were not missing out on essential services, including access to psychological supports, general practitioner (**GP**) visits and case work support.

Case study 21.

We received a complaint about a boarding house's decision to cancel 'all community access, visitors and providers' noting that there seemed to be no distinction between essential and non-essential contacts and no evidence of any consultation with key stakeholders to ensure that the health, wellbeing and safety of residents would not be compromised during COVID-19 measures.

We made inquiries with DCJ's Boarding House Team and were informed that:

- On 16 March 2020 the licensee, following consultation with service providers and families, took the decision to restrict non-essential service providers and visitors.
- The licensee consulted with relevant stakeholders about this decision.
- The restrictions were in line with the *Public Health (COVID-19 Restrictions on Gathering and Movement) Order 2020*.

- The DCJ boarding house team continued to monitor all assisted boarding houses, including on-site visits and checking regularly with residents to ensure they are receiving essential services.
- Essential services continued as normal during that time. These services included personal care, all GP appointments, all specialist medical appointments, podiatry services, optometry services, mental health services, both on-site and by telephone, a health care nurse and psychology and counselling services (provided via Skype).

2.7.2. Intensive therapeutic care

ITC is for children and young people aged over 12 years with complex needs, who are either unable to be supported in foster care or require specialised and intensive supports to maintain stability in their care arrangements. This support is most commonly delivered in a residential setting, with support workers assisting up to 4 young people in 1 residence.

We received several complaints from young people in ITC at the beginning of the lockdown. The young people were concerned about continuing access to their caseworkers, education and family members. We made inquiries with ITC services and were advised that face-to-face contact with caseworkers would continue during the pandemic, and that young people in ITC (as with other young people across NSW) would continue to access their education online. In some cases, family visits were also held online, but only for a limited period during April and May.

2.7.3. Out-of-home care

OOHC is alternative accommodation for children and young people who are unable to live with their parents. The most common alternative accommodation options are kinship care (when a child resides with extended family) and foster care.

As with ITC, the lockdown affected family contact for all children in OOHC. OOHC agencies responded by ensuring that children had access to their families via telephone and online. OOHC agencies worked closely with kin and foster carers to ensure that family contact continued during the lockdown.

Case study 22.

A complainant contacted our office to raise concern about in-person contact visits with his daughter. In response to the COVID-19 pandemic the complainant's visits with his daughter were changed from face to face to Zoom. The complainant was concerned that the in-person visits had not resumed, though restrictions had been lifted. In response to the complaint, we wrote to the agency about the concerns raised by the complainant. The agency advised visits would resume fortnightly from the beginning of July 2020. The complainant confirmed that his complaint was resolved, as face to face visits resumed and he was also continuing to have video calls with his daughter.

2.8. Complaints about applying existing policies in a pandemic environment

COVID-19 has impacted institutional frameworks and people's personal circumstances in varied ways. Complaints to our office have highlighted that existing policies may not adequately account for the new scenarios that have begun to emerge. There is a clear need for agencies and organisations to be flexible in applying their old policies in extraordinary circumstances.

Case study 23.

'I am studying at university. Due to the coronavirus outbreak the university has decided that they will do everything online, even the assessment and exams. I appreciate their efforts. I am an old school student, and I cannot type more than 10 words/minute that also contains a lot of error.

I discussed with this first my unit coordinator and she informed me that I need to ask disability service for further help. However, as I am not a person with disability I am not eligible for assistance.'

Case study 24.

'I am a van owner at the local Council owned Caravan Park. We were advised of the forced closure of all parks on 26th March 2020. We were also advised that Council will continue to charge full fees as per our agreement. Van owners believe it is unfair and unethical to charge fees for services not rendered as we will be paying for a van that we are not able to access.'

Case study 25.

'My query/complaint refers to the following situation. We are renting a residential premises for which we have had to reduce the rent as a result of COVID-19 considerations. It's now time to renew the lease for the same tenant that has been leasing up to this point. The new regulations states that the landlord must ensure that all taps in the premises have a flow rate of 9 L per minute or less. According to my agent, this means that I have to employ a licensed plumber to measure the flow rate of each tap and have them replaced if they don›t comply with the flow rate of 9 L per minute.'

Case study 26.

'I rang Fair Trading to inquire as to why, during these difficult times of COVID-19 pandemic, when the rents are going down or are non-existent as a result of hardship caused by the pandemic to the tenants (which I agree is fair), why would the landlord be required to comply with this regulation which has no impact on the safety, health and well-being of the tenant? In other words, while the landlord's income is rapidly decreasing, this regulation insists that the landlord's expenses be increased. In what way is this fair?'

2.9. Complaints about guardianship decisions

The Public Guardian is responsible for the health and welfare of people under guardianship orders, and is expected to be aware of and oversight the individual circumstances of its wards. Under normal circumstances, the Public Guardian can be granted various authorities over a ward, including the ability to restrain or restrict an individual physically. Guardianship orders are subject to a number of oversight mechanisms and appeal rights to tribunals and courts. In these two case studies, the restrictive powers were granted 'as a COVID-19 response' in a very compressed timeframe.

Case study 27.

Richard, a 76-year-old Aboriginal[15] man, who lives with his wife in regional NSW, is subject to a guardianship order. The Public Guardian sought to vary the terms of the guardianship order to ensure they could protect Richard's health in the context of the pandemic. The Public Guardian was granted the authority to:

> [c]onsent to restrictive practices, specifically the authority to consent to environmental restraint. This request was to enable the Public Guardian to decide whether to restrict Richard's access to his electric wheelchair, which has the effect of preventing him from leaving his home.[16]

The NSW Civil and Administrative Tribunal (**NCAT**) varied the existing guardianship order by adding a so called 'COVID-19 function' which gave the Public Guardian extended powers, so they had the ability to:

> make decisions as to Richards's accommodation, freedom of movement, and access to the community to protect and promote Richard's health, welfare and interests specifically as a result of the COVID-19 pandemic...[17]

Case study 28.

Mary, a 69-year-old Aboriginal woman, lives in Housing NSW accommodation in regional NSW. A variation of her guardianship order was sought to:

> add an additional authority so that Mary may be placed in emergency respite accommodation, and kept there, during the COVID-19 pandemic. This additional authority would, if granted,

15. In this document Aboriginal refers to the First Nations peoples of the land and waters now called Australia, and includes Aboriginal and Torres Strait Islander peoples.
16. NSW Civil and Administrative Tribunal: www.caselaw.nsw.gov.au/decision/5ea112d3e4b0d927f74af263 para 37.
17. NSW Civil and Administrative Tribunal: www.caselaw.nsw.gov.au/decision/5ea112d3e4b0d927f74af263 para 3.

give the Public Guardian the authority to authorise others including members of NSW Police and the Ambulance Service of NSW to:

- take Mary to a place approved by the Guardian
- keep her at that place
- return her to that place should she leave it.[18]

This request was granted.

With the decrease of oversight comes an increase in the risk of violence, abuse, neglect and exploitation.

-Royal Commission into Violence, Abuse, Neglect and Exploitation of People with Disability (2020) Statement of Concern: The Response to the Covid-19 Pandemic for People with Disability. https://disability.royalcommission.gov.au/publications/statement-concern-response-covid-19-pandemic-people-disability

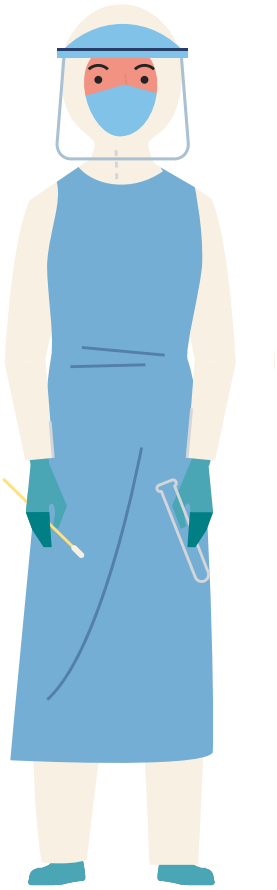
We acknowledge that at the time the orders were made a general stay at home order was in effect, which required all people to remain at home unless there was a reasonable excuse to leave.[19] In Richard's case, the extended powers were also expressly limited to the period in which the public health order required people to stay at home. However, the exceptions to the general stay at home order, including to go grocery shopping and visit family on 'compassionate' grounds, would not have been available to Richard under the authority granted to the Public Guardian.

The extreme nature of these circumstances may mean that there is a risk other checks and balances in place to monitor the exercise of these powers – such as care plans and visits – might not occur, could be stretched, or may even be inappropriate. The Royal Commission into Violence, Abuse, Neglect and Exploitation of People with Disability highlighted that the already limited visibility of this vulnerable population can be further obscured by disruptions to formal and informal oversight mechanisms (such as visits from family and friends).

18. NSW Civil and Administrative Tribunal: www.caselaw.nsw.gov.au/decision/5e827fd2e4b096e236c21bf6 para 6.
19. *Public Health (COVID-19 Restrictions on Gathering and Movement) Order 2020* (NSW) as at 23 April 2020.

3.
The value of complaints in a crisis

If encouraged, listened to and acted upon, complaints allow risks to be identified and controlled before they escalate into major issues.



People may be reluctant to complain, particularly during times of crisis, and they may be criticised if they do so. Inevitably, whatever complaint one might have, there is likely to be someone in a worse situation. Looking around the world, this seems particularly true of COVID-19.

It is generally accepted that the NSW response – and indeed, the national response – to COVID-19 has been highly effective. Indeed, many who did complain to us during the last 12 months were at pains to point out that they were not objecting generally to the government's response. However, complaining about unfair or unreasonable treatment with respect to a particular aspect or experience of the government's COVID-19 response does not necessarily imply a criticism of the system as a whole.

> I would firstly like to say that I believe totally with what the government has put into place to protect the Australian people against COVID-19. I am not against the idea of the quarantine however I believe that everyone in quarantine should get the same treatment be across the board. We should be able to access to fresh air once a day if we do not have a window that can open or a balcony.

Most complainants we spoke to accepted that there was a necessary trade-off to be made between what was necessary to protect the community, and their general rights as individuals.

However, accepting that public health should be the first priority does not mean that other considerations should not also be given full and proper consideration. It is possible to care about and deliver good public health outcomes (in terms of COVID-19 containment) alongside other important public health objectives such as mental health support, respect for individual rights, administrative fairness, non-discrimination and gender equity concerns, and even optimal 'customer experience'. Indeed, confidence that those other priorities are also being respected is likely to enhance broader trust and confidence in the government's public health response, and therefore its effectiveness.

3.1. Why effective complaint management matters

3.1.1. The value of complaints as intelligence

Listening to and acting on the concerns of citizens lays the foundation for a system that can achieve the best outcomes for individuals and the community – including the best public health outcomes.

Complaints are particularly important in helping identify essential system improvements in circumstances.where those systems have been implemented rapidly and at scale, but without any prior experience, detailed planning, widespread consultation or clear precedents.

If encouraged, listened to and acted upon, complaints allow risks to be identified and controlled before they escalate into major issues. Corrective action can be taken to address issues while they are relatively minor, helping avoid major incidents. It has been reported, for example, that a recent decision by the NSW Police Force to discontinue the use of a particular hotel for quarantine purposes arose in part from concerns identified as a result of an unusually large number of complaints about that hotel.[20]

External complaint avenues also provide opportunities to identify issues and risks that may not have surfaced or otherwise been considered during initial planning and operationalisation, including the need for other supports or services beyond public health and security services.

3.1.2. Improving customer satisfaction through internal complaint handling mechanisms

Improving satisfaction with services has been one of the NSW Premier's priorities for several years, and this focus has spurred a range of enhancements to service delivery across the state. This priority should remain central to government agencies' responses to COVID-19, and good complaint handling must form part of that response.

The Complaint Handling Improvement Program (**CHIP**), developed by our office and the Department of Customer Service in 2015, has been adopted by the Secretaries Board for application by all NSW departments and agencies.

In the context of a public health emergency where people have lost elements of their substantive rights (such as freedom of movement) these commitments and principles are more important than ever.

Clear information about complaint processes is essential to greater customer satisfaction and reducing future complaints, and should be made easily accessible. That information should include: what can be complained about, how to make a complaint, who to complain to, and what the possible outcomes of the complaint might be.

The 6 commitments to good complaint handling are:

1. **Respectful treatment**
2. **Information & accessibility**
3. **Good communication**
4. **Taking ownership**
5. **Timeliness**
6. **Transparency**

20. www.abc.net.au/news/2020-08-26/sydney-travelodge-hotel-barred-from-coronavirus-quarantine/12596188

It is well recognised that, when something goes wrong, the way the problem is dealt with is often more important to people than the initial service failure. Successive NSW Government customer satisfaction management surveys have shown that people whose complaint was handled well had a significantly higher overall rate of satisfaction than people who did not have a complaint to begin with.

3.1.3. Access to an independent, external complaint handling mechanism

Government services can be difficult to navigate at the best of times. During the pandemic, the complexities arising from the necessary interaction among various levels of government and the private sector in responding to COVID-19 have made the system even more complex. In addition to internal complaint handling mechanisms, easy access to an independent and external complaint mechanism is crucial. This supports:

- **Greater public confidence in government agencies and the crisis response**: this may be even more important in circumstances where Executive action is so urgent that it must take place in the absence of (or at least in advance of) the usual avenues of democratic accountability, such as parliamentary or public debate.
- **Greater transparency in the crisis response**: an external complaint handler like the NSW Ombudsman can provide complainants with unbiased information and advice. This includes, where appropriate, an assurance that the actions of agencies are in fact consistent and reasonable in the circumstances. This can be particularly important in environments of detention where there may otherwise be distrust of those who are enforcing detention and where tensions can escalate quickly.

  The function of monitoring or 'keeping under scrutiny' the internal complaint handling systems of an agency or regime provides assurance that those systems are robust and functioning effectively.
- **A more effective crisis response**: external sources of feedback enable quick and effective adjustments to service delivery. Oversight bodies can gain insight into potential systemic issues in real time.

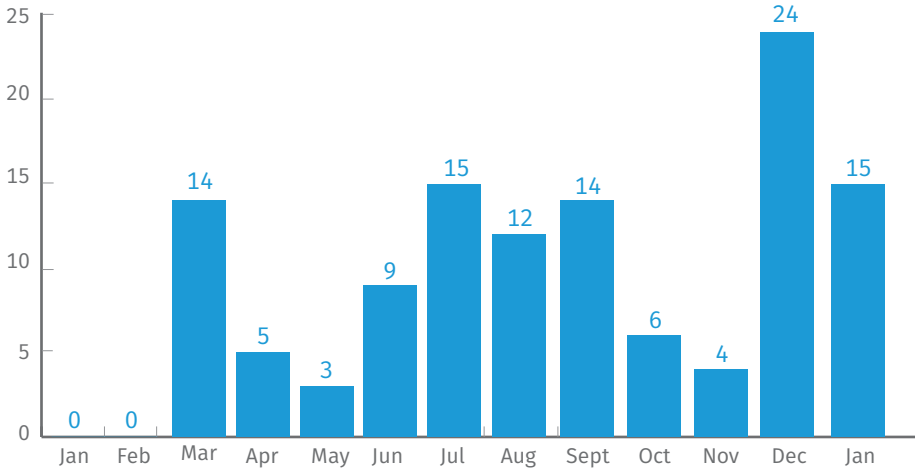
4.
The challenges of oversight during COVID-19

4.1. The 'side-lining' of parliament

4.1.1. Limitations on parliament's ability to oversight during a crisis

In the case of COVID-19, the primary tool used by government to 'legislate' its pandemic response were public health orders. From January 2020 to 31 January 2021, the Minister for Health made 121 principal and amending public health orders under the *Public Health Act 2020* (**Public Health Act**) (see **section 6.2** for a full chronology of orders and legislative amendments).

Figure 4. NSW Public Health orders



The COVID-19 public health orders have authorised an extraordinary level of government intrusion into the lives of citizens, including restricting freedom of movement and the right to gather.

Public health orders are a form of delegated (or 'subordinate') legislation and have the force of law. Delegated legislation is made by authority of an act of parliament. The delegation of legislative powers has, on occasion, raised concerns about the prospect of executive overreach, among other things.[21] However, such delegation may be a useful component of the legislative framework during crises, as they allow for the executive to respond rapidly and flexibly to meet unforeseen and evolving circumstances.

Section 7 of the Public Health Act delegates broad powers to the Minister for Health to respond to public health risks, including the power to declare parts of NSW as 'a public health risk area' and make directions to reduce public health risks and 'segregate or isolate inhabitants of the area'. Unlike in other jurisdictions such as Victoria,[22] this provision can be triggered in NSW without the declaration of a state of emergency, and orders made under it are not subject to review by NCAT.

21. www.parliament.nsw.gov.au/lc/proceduralpublications/DBAssets/wppbook/15%20NSW%20LC%20Prac%20Ch14%20(press).pdf
22. www.parliament.vic.gov.au/publications/research-papers/download/36-research-papers/13962-emergency-powers-public-health-and-COVID-19

There is a separate statutory power under the Public Health Act to make directions where a state of emergency has been declared, including an express power to require people to submit to medical testing.[23] Other specific provisions of the Public Health Act also provide for orders to be made to require particular people who are considered a public health risk to submit for testing and to be detained in quarantine (as per division 4 of the Public Health Act). Orders under that provision are subject to review by NCAT.

However, to date, all COVID-19 related directions under the Public Health Act have been issued under the most general provision of the act: section 7. Those orders were often drafted – necessarily given the circumstances – in broad terms that were open to different interpretations (exemptions from lockdown for 'essential' work and for 'compassionate reasons', for example); they also conferred broad discretions on public officials (the requirement that those in quarantine comply with any "conditions determined, or directions given" by the NSW Police Commissioner, for example).

The orders are not subject to disallowance by parliament, which is usually the case for legislative rules made by the government.[24] Given the ultimate source of authority for delegated legislation is the parliament itself, the disallowance process permits either house of parliament to disallow any legislative rule made by the government. However, public health orders are not disallowable.[25]

4.1.2. Special purpose COVID-19 related legislation

Not all of the government's response to the pandemic could be dealt with by order, however. In March 2020 the government introduced special-purpose COVID-19 legislation,[26] the passage of which was expedited through the NSW Parliament.

The legislation widened the government's authority to respond to possible unfolding events without needing further parliamentary approval. For example, it:

- gave (but did not require) the Corrective Services Commissioner the power to release inmates early to minimise the risk of an outbreak of COVID-19 in the prison system (so far, the commissioner has not exercised this new power)
- permitted (but did not require) pre-recorded evidence in certain criminal trials in the District and Supreme Courts for specified classes

23. Section 8, Public Health Act 2020.
24. Section 41, *Interpretation Act 1987* (NSW).
25. This is because the COVID-19 related public health orders are not statutory rules within the meaning of s 21 of the *Interpretation Act 1987*. As such, the orders are not required to be tabled nor subject to the disallowance process under s 40 and s 41 of that Act. The orders are not listed in Parliament's Indexes of Statutory Rules. Regulations made in support of orders are tabled and disallowable e.g., regulations prescribing quarantine services for the purpose of charging fees, as well as prescribing penalties for breaches of the orders. Orders may also take effect when made (Public Health Act s 7(2), (4)), unlike statutory rules which do not commence until published: *Interpretation Act 1987*: s 39(1)(b)).
26. For details on the full extent of legislative amendments, see: www.legislation.nsw.gov.au/information/Covid19-legislation.

of witnesses (complainants in prescribed sexual offence proceedings and domestic violence offences, violent serious indictable offences, or witnesses or complainants at significantly greater risk of COVID-19 due to age and health)

- allowed (but did not require) certain functions of NCAT to be performed by 2 tribunal members instead of 3 – for example, guardianship and public health functions
- amended the *Environmental Planning and Assessment Act 1979* to allow the minister to authorise development by order and without need for approval under that act or consent from any person
- authorised the government to extend or postpone timeframes imposed by existing laws (e.g., by allowing the Minister to postpone local government elections if reasonable in the circumstances because of the COVID-19 pandemic).

The bill to make these legislative amendments was introduced into parliament on 24 March 2020 and was passed by both houses within 12 hours.

4.1.3. The Public Accountability Committee Inquiry

On 27 March 2020, the Legislative Council's Public Accountability Committee[27] established an inquiry into the NSW Government's management of the COVID-19 pandemic. The terms of reference for the inquiry include 'any matter relating to the NSW Government's management of the COVID-19 pandemic' and the committee is due to report by 30 June 2021.[28] The terms of reference are broad, and the committee has heard from a wide range of stakeholders including:

- government departments and agencies like NSW Health and the Department of Education
- non-government organisations such as Mission Australia and the Salvation Army
- members of the community.

The committee is an important mechanism that was established to oversight the government's performance and exercise of powers during this extraordinary time. However, the current terms of reference of the committee provide that its primary focus is on fiscal and regulatory efficiencies and accountabilities. The human and social impacts of government activities are only considered as they arise in connection to these focus areas. Furthermore, the committee is not a complaint handling body, and is limited in its ability to consider matters as they happen in 'real time'.

27. The Public Accountability Committee was established by the Legislative Council in 2018, 'to inquire into and examine the public accountability, financial management, regulatory impact and service delivery of NSW government departments, statutory bodies or corporations.'
28. www.parliament.nsw.gov.au/committees/inquiries/Pages/inquiry-details.aspx?pk=2593#tab-termsofreference

4.2. The fragmentation of oversight bodies

4.2.1. Fragmented jurisdictions

The NSW Ombudsman is the 'general' parliamentary state ombudsman with respect to NSW public authorities, as well as some government-funded community service providers.

However, while our jurisdiction to take complaints about the NSW public and community sector is exceptionally broad, it has limits. There are numerous other specialist bodies that have jurisdiction over certain bodies, and certain conduct, which complements and, in some cases, overlaps with our jurisdiction.

The table at **section 6.3** sets out some of these other bodies, whose functions are particularly relevant in the context of COVID-19.

The limited jurisdiction of each separate and independent oversight body – in contrast to the necessarily multi-agency nature of the government's COVID-19 response itself – means that no one oversight body is likely to have had full visibility of that response.

It has, at times, been challenging for oversight bodies to gain visibility even over those parts of the response for which they do have jurisdiction – or sometimes even to determine what those parts are.

Two case studies highlight the impact of this complexity and potential confusion in relation to oversight of COVID-19 related decision making by public authorities.

4.2.2. Mandatory hotel quarantine in NSW

On 28 March 2020, 2 public health orders were introduced that required people arriving from overseas to be quarantined at facilities designated by (and in accordance with directions of) the Commissioner of the NSW Police Force.

Earlier, on 17 March 2020, we had written to the NSW Government and our parliamentary oversight committee highlighting the importance of continued independent oversight in the event public agencies may be called on to exercise extraordinary powers. We received no response, and no notice that the public health orders were to be made. In a letter dated 22 May 2020, the Premier acknowledged additional correspondence we had sent on 16 April 2020.

In an attempt to coordinate oversight, we contacted LECC and the Commonwealth Ombudsman, both of whom were in a similar situation to us. None of us had any information about key details, including:

- the legal framework governing the detention of individuals for the purpose of quarantine

- the process for designating quarantine facilities, or the list of facilities that had been designated
- the demarcation of roles of NSW agencies and federal government personnel involved in the administration of the system
- any internal complaints avenues put in place specifically for those held in quarantine
- the proposed oversight arrangements in place to ensure appropriate transparency and accountability.

Our initial discussions with the Commonwealth Ombudsman centred around whether it may be possible for one or other of our offices to delegate powers to the other, to enable a single point of contact and complaint for those in quarantine – irrespective of whether the complaint concerned the conduct of state or federal agencies.

We subsequently made contact with senior officials in the NSW Police Force and NSW Health, who helped us to understand the basic structure of the quarantine system. As the system matured, the allocation of responsibilities has been further refined and clarified.

The NSW Police Force is responsible for the administration of the majority of quarantine facilities; NSW Health[29] has been charged with testing arrivals for COVID-19 and attending to the various medical needs of those in Special Health Accommodation (**SHA**) quarantine; the Australian Defence Force has facilitated the transportation of arrivals from ports of entry to quarantine facilities; and NSW Treasury has funded elements of the quarantine regime.

Nevertheless, even now some aspects of the quarantine system remain unclear. As already noted, the NSW Ombudsman has jurisdiction over decisions and conduct of some agencies and officials involved in hotel quarantine (such as NSW Health and NSW Treasury and their staff) but not others (most importantly, NSW Police Force and its officers). Given these agencies and staff appear to be working closely on the ground, but that arrangements are somewhat informal, we need a particularly high level of detail in order to understand our jurisdiction in any particular case. For example, simply being told that 'police run the quarantine hotels' is not helpful if, in practice, staff of other agencies are engaged in making decisions and performing activities on the ground in those hotels.

By way of illustration: if a person complains to us that they are not receiving meals that meet their medical and dietary needs, it is not enough for us to know that the person is in a police-run hotel. What matters, in determining whether the complaint is in our jurisdiction, is **who** is actually making that particular decision, and who is responsible for the particular conduct that is being complained about.

29. We note that the South Eastern Sydney Local Health District triage arrivals at the airport for COVID-19 symptoms and the Sydney Local Health District manage the SHAs.

A complaint like this could potentially concern the conduct of multiple agencies – a complaint about police who generally run the facility (outside of our jurisdiction), a complaint about private sector catering staff who prepare the meals (also outside of our jurisdiction), a complaint about NSW Treasury in regards to its contract arrangements with the private sector catering staff (within our jurisdiction), or a complaint about NSW Health in regards to its advice directions and services (within our jurisdiction).

The issue of oversight of the conduct of hotel staff and other contracted personnel, including security staff and caterers, is particularly opaque. While the NSW Ombudsman does not generally have direct jurisdiction to receive complaints about the conduct of private sector staff,[30] we may do so if the complaint is (in effect or in addition) a complaint about the conduct of a relevant public agency. For example, we could handle a complaint if it concerned the government agency's decisions or conduct in procuring or managing a contract with a private sector provider, or if it concerned the way the agency itself had handled complaints about that provider.

4.2.3. The Ruby Princess cruise ship

In March 2020, when the first wave of the pandemic was beginning, the Ruby Princess cruise ship arrived back in Sydney Harbour after an 11-day cruise from Sydney to New Zealand. All 2,700 passengers onboard were allowed to disembark in Sydney without sufficient screening.[31] More than 100 felt unwell, at least 900 later tested positive to COVID-19, and 28 people died.

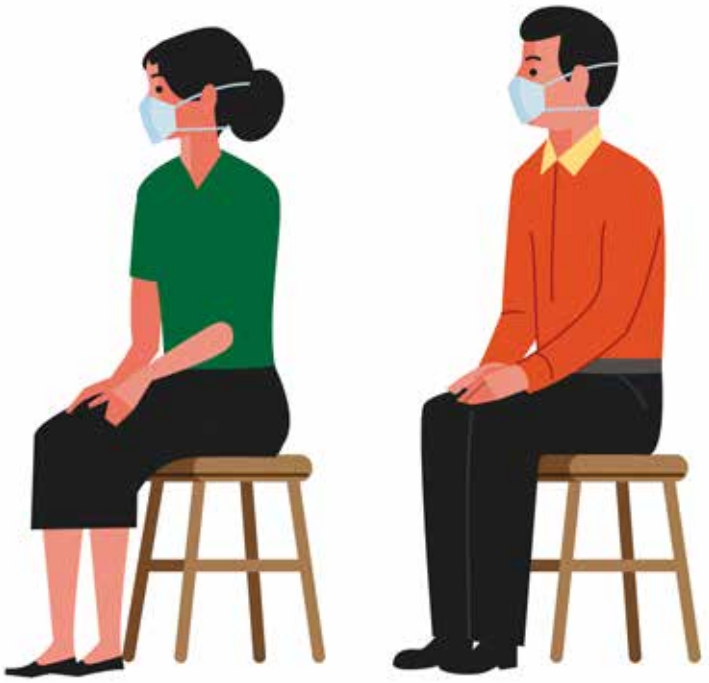
The various processes that ultimately culminated in the decision to allow the passengers to disembark involved the ship's crew and its operator, Carnival Corporation & plc (**Carnival**) as well as various government departments at state and federal level. These included the Australian Border Force; the Federal Department of Agriculture, Water and the Environment; NSW Health; the NSW Police Force; NSW Ambulance; and the Port Authority of NSW.

The complexity of interactions among various state and federal government agencies, and the lack of coordination of oversight meant that, despite numerous standing oversight bodies at state and federal level with royal commission-like powers (including ourselves, the Commonwealth Ombudsman, LECC, and the Australian Commission for Law Enforcement Integrity) there was no existing

30. In some cases, the NSW Ombudsman has been given statutory functions to oversight and receive complaints about private sector bodies and their staff, including privately managed correctional facilities and community service providers that are funded by the Department of Communities and Justice.
31. www.dpc.nsw.gov.au/assets/dpc-nsw-gov-au/publications/The-Special-Commission-of-Inquiry-into-the-Ruby-Princess-Listing-1628/Report-of-the-Special-Commission-of-Inquiry-into-the-Ruby-Princess.pdf

oversight body with the appropriate jurisdiction to investigate the matter. This necessitated the establishment of an ad hoc special commission of inquiry to examine the decision.

The Special Commission of Inquiry into the Ruby Princess was established on 15 April 2020. It found the decision by an expert panel of NSW Health to classify the Ruby Princess as 'low risk' was as 'inexplicable as it is unjustified.' Carnival should have ensured relevant staff 'were made aware of the change' to the Communicable Disease Network of Australia guidelines and that passengers and crew aboard the ship 'were informed that there were suspected cases of COVID-19 on board'.[32]



32. www.dpc.nsw.gov.au/assets/dpc-nsw-gov-au/publications/The-Special-Commission-of-Inquiry-into-the-Ruby-Princess-Listing-1628/Report-of-the-Special-Commission-of-Inquiry-into-the-Ruby-Princess.pdf p.32.

5. Suggestions for the future

Our focus in this report has primarily been to look back at what we have experienced over the last 12 months. In this section we shift our focus to the future and consider the broader lessons we can learn about oversight and complaint handling, both during this ongoing crisis as well as for future crises.

We make a number of suggestions to improve oversight and complaint handling by better integrating it into crisis response planning.

We also consider the potential impact of the Optional Protocol on the Convention Against Torture and other Cruel, Inhuman and Degrading Treatment (**OPCAT**), which Australia has ratified but not yet fully operationalised.

5.1. A key lesson for oversight and complaint handling in a crisis

A key lesson that can be drawn from the 12 months of the COVID-19 pandemic is that it is critical that oversight and complaint handling be consciously considered, and considered and if necessary, designed at the outset and alongside other crisis response planning activities.

Why? First, because the circumstances of a crisis, and the way in which government responds to that crisis are likely to make oversight and complaint handling, even more important than during ordinary times. Some of the reasons for this have already been highlighted in this report:

- **Parliament may be 'sidelined'**: the extraordinary powers called upon by government to deal rapidly and flexibly with the crisis typically mean that the ordinary function of parliament in holding government to account may be omitted, delayed or otherwise not fully realised.
- **There may be significant incursions on individual rights**: the restrictions and controls being exercised by government public officials under those extraordinary, powers were themselves extraordinary and involved significant intrusions into personal freedoms.

  While individual rights may need to make way when reasonably necessary for a greater public good, those whose rights are being sacrificed are entitled to the assurance of independent oversight and clear avenues of complaint – internal and external.
- **There may be a reduction in informal oversight mechanisms**: during a crisis, there may be a greater need to bolster institutionalised oversight and external complaint avenues – because the crisis may otherwise reduce transparency and modes of informal oversight.

This is obviously true of people being held in forms of detention, such as correctional and youth justice facilities and hotel quarantine. It is also potentially true for aged care and residential facilities for people with disability, as well as in respect of out of home and other child protection services. The absence or reduction of 'eyes on the ground', whether that be official community visitors, external service providers, or families and friends, means that greater consideration may need to be given to the adequacy of other safeguards to protect against potential abuse or neglect.

- **More people may find themselves in positions of vulnerability**: a crisis, whether bushfire, flood, contagion or even economic collapse, places people in a position of inherent vulnerability. They may lose their homes or their livelihoods; they may find themselves in physical danger or mental distress. The consequence is that people may need additional assistance to navigate services and systems and understand the review mechanisms and complaint processes available to them.
- **Actions being taken are likely to involve an element of novelty**: While crisis scenario planning is important, inevitably the response to a crisis, when it arrives, will involve an element of 'making it up as you go along'. This means implementing novel measures, or at least implementing measures in novel ways or under novel circumstances. Typically, in a crisis, this happens with little or no time for comprehensive consultation or a full consideration of all the options, risks and contingencies.

  In circumstances where community consultation and detailed planning and analysis is not possible, effective oversight and complaint handling mechanisms are an especially important tool. It supports information gathering, input from those affected by the measures, and the ability to make early and rapid corrections and improvements. As discussed in **section 3.1**, complaints provide an essential source of real-time, on-the-ground intelligence and enhance the potential to identify and manage risks early – and thereby to adapt responses quickly to avoid unintended consequences and unforeseen calamity.

The second reason why oversight and complaint handling systems require special focus when planning a crisis response is that, just as those systems are (for the reasons discussed above) becoming more important, the crisis and its response may render them less effective than usual. Again, this report has already illustrated how this has been so in the context of the COVID-19 pandemic:

- **A fragmented oversight system may result in multi-agency responses that are misaligned**: the best response to a crisis, and particularly a massive and widespread crisis, may be (and often will be) to establish and co-ordinate multi-agency responses. However, the existing oversight system is not designed to align with such a response. As discussed elsewhere in this report, oversight bodies are typically limited in their jurisdiction, typically by agency, by conduct, or by both.

- **Oversight and complaint handling bodies enter the crisis with an information deficit**: over time, bodies that oversight a sector will develop a deep expertise of that sector, which will assist them to undertake their oversight role more effectively. The Ombudsman and the Inspector of Custodial Services, for example, have expert staff who understand the corrective services system. In the case of the Ombudsman, this enables us to respond rapidly and effectively to any complaints from those being held in the system.

  The same is not true when wholly new systems are implemented to respond to a crisis, such as the hotel quarantine system. In that case, we began to receive complaints from those in quarantine before we had any meaningful information (beyond what was publicly available in the public health orders themselves) about how they worked.

  Unless briefed early and comprehensively, oversight and complaint handling bodies will be slower and less effective in a crisis.
- **Oversight bodies may themselves be impacted by the crisis**: particularly in a widespread crisis like COVID-19, the bodies that comprise the oversight and complaint handling system are themselves likely to be impacted by that crisis. The impact of the pandemic on the Ombudsman's office, for example, is outlined in the Annexure to this report.

5.2. Approaches for this, and future crises

The particular approach needed to optimise the oversight system for a crisis will depend upon the particular crisis – its nature, impact, extent, and duration – and the response it triggers.

The following approaches (listed in escalating order) may need to be considered:

1. **Keeping oversight bodies informed**: identify all existing oversight and complaint handling bodies whose jurisdiction may be enlivened by the crisis response activities. Brief all of them early and often to ensure they understand what is happening, can ascertain their jurisdictional responsibilities, have clear points of contact with the relevant agencies, and can respond rapidly and effectively when they are approached with a complaint or query.

   At the same time, ensure the public who may be impacted by the crisis response are informed of the different oversight bodies, their responsibilities and their contact points.

   This, we suggest, is the minimum approach that should be taken in any significant crisis.
2. **Informal designation of 'lead' oversight body for queries and triaging of complaints**: in addition to keeping oversight bodies informed, identify and designate one oversight body as the 'lead' for the particular crisis or for a particular part of the crisis response.

This need not necessarily involve any formal change to jurisdiction. It could simply involve informal recognition of the following:

- The designated body is to be kept continuously informed (by government and relevant agencies) of the crisis response activities, perhaps by daily or weekly briefings depending on what is appropriate for the particular crisis.
- Any queries from the public can be directed to that body, including queries about the crisis response itself and about how to make a complaint.
- Any complaints can also be directed through that designated body. Complaints not within the jurisdiction of the designated oversight body may be referred to the more appropriate oversight body using existing powers of referral. In this way, the designated body would offer a single 'front door' or complaint concierge service (a precedent for this approach already exists in the nsw.gov.au website, which contains a complaint portal that allows the public to complain about any and all government agencies. The NSW Ombudsman's office receives and triages those complaints, referring them to relevant agencies and oversight bodies as necessary).[33]
- The designated body will inform other oversight bodies of developments in the crisis response that are relevant to them.

This approach would support improved customer service, as the public (or 'guests' as they are termed in the context of hotel quarantine) would benefit from a single point of contact for complaints, and a central and independent source of up to date and accurate information.

3. **Formal designation of a 'lead' oversight body for handling complaints**: similar to point 2, but here the jurisdiction and functions of the designated oversight body may be adjusted (including, if necessary, by legislative amendment) to empower it to receive, handle and seek to resolve all relevant complaints.

   One opportunity to consider and enact such amendments to jurisdiction or functions would be when parliament is considering the passage of special crisis specific legislation, such as the COVID-19 legislation discussed in **section 4.1** above.

   This approach could have been (and may still be) appropriate for hotel quarantine. The NSW Ombudsman (or perhaps even the Commonwealth Ombudsman, if a single national approach is preferred) could be authorised to handle all hotel quarantine complaints in the first instance, irrespective of which agency or agencies they concern. However, where the complaint raises

33. See s 35E, *Ombudsman Act 1974* (NSW).

allegations of a serious nature or that otherwise might warrant investigation by a specialist body those would still be referred on. Complaints suggesting 'serious misconduct' by a NSW police officer, for example, would be referred by the designated body to LECC; complaints suggesting professional misconduct by a health services provider referred to the HCCC.

That is, the designation of a general complaint handling body for all complaints arising in relation to hotel quarantine (or perhaps even in relation to any actions taken under the COVID-19 related public health orders) would not derogate from the specialised oversight of particular expert bodies. Rather it would complement them, by providing a single point of access, a rapid and effective mechanism to respond to requests for information, queries about less-serious issues and complaints, and an efficient system for triaging and referring serious allegations to those specialist bodies when investigation may be necessary.

This approach may be particularly useful in circumstances where the crisis response is such that the conduct of the various agencies being oversighted cannot be easily distinguished, for example, where the different functions of agencies are unclear, converge or overlap.

4. **Conferral of a 'keep under scrutiny' or monitoring function**: if a body is formally designated as the front-line external complaint handler for a particular crisis response measure (such as hotel quarantine), consideration could also be given to conferring on that body a clear power to monitor (or 'keep under scrutiny') the associated internal complaint handling systems of relevant agencies.

   Generally, if complaints can be addressed at the front line agency level, before being escalated to an external body, they should be. If the relevant external body has a function of monitoring the internal complaint handling system then they are better placed to work with agencies to ensure that this happens, wherever possible.

It will also be important to consider the resourcing needs of oversight bodies. A designated oversight body, in particular, will need to be adequately resourced to maintain a call centre (on-line or telephone) or a presence in the facilities to ensure accessibility to those affected.

5.3. OPCAT and National Preventative Mechanisms in NSW

5.3.1. The delay in nominating a National Preventive Mechanism (NPM)

The Optional Protocol to the Convention Against Torture and Cruel, Inhuman and Degrading Treatment (**OPCAT**) is an international treaty designed to strengthen protections for people who are held in any form of detention. The Australian Government ratified OPCAT in December 2017.

Article 4 of OPCAT requires states to allow visits to 'any place under [their] jurisdiction and control where persons are or may be deprived of their liberty', with deprivation of liberty being defined as 'any form of detention or imprisonment or the placement of a person in a public or private custodial setting which that person is not permitted to leave at will by order of any judicial, administrative or other authority'.[34]

A key obligation that arises from ratifying OPCAT is the establishment of a system of regular preventive visits by independent bodies, known as National Preventative Mechanisms (**NPM**s).[35] The Australian Government opted to postpone its (and states' and territories) obligations to implement NPMs for 3 years.

So far, only the federal government and Western Australia have nominated NPMs for places of detention operating in those jurisdictions. NSW has until January 2022 to operationalise its NPM arrangements. To date, the NSW Government has made no announcement as to which body or bodies are to be conferred NPM functions in respect of the various places of detention in NSW.

The experience of countries around the world that have well-established NPMs, including the UK and New Zealand, show that they have had an important role to play in enhancing proactive oversight during a crisis like COVID-19. This has occurred, for example, by bringing diverse bodies together to discuss and identify issues of common concern: the 20 bodies that compose the UK NPM regularly highlight issues such as isolation and solitary confinement; and the Scottish members have established joint working relations.[36] Formalised channels of communication between oversight bodies are beneficial in the event of state or national emergencies, as institutional frameworks for inter-agency cooperation (and jurisdictional boundaries and remit) are already in place, and do not have to be developed in haste.

34. www.ohchr.org/EN/ProfessionalInterest/Pages/OPCAT.aspx
35. www.ohchr.org/EN/HRBodies/OPCAT/Pages/NationalPreventiveMechanisms.aspx
36. Monitoring places of detention, Sixth Annual Report of the United Kingdom's National Preventive Mechanism, 1 April 2014 – 31 March 2015. Available at www.nationalpreventivemechanism.org.uk/wp-content/uploads/2015/12/NPM-Annual-Report-2014-15-web.pdf, pp.21-51.

5.3.2. The relevance of OPCAT to the COVID-19 pandemic

If one or more NPMs had been operating in NSW in accordance with OPCAT during the COVID-19 pandemic, this would likely have had significant implications for oversight – given the particular impacts of the pandemic on people in places of detention as well as the establishment of new places of detention.

NPMs are not complaint handlers as such. Rather, they are tasked with proactively initiating inspections of places of detention. This function complements the existing oversight framework, which is typically more reliant on individuals coming forward to complain about their management and treatment while in detention.[37]

The experience of countries around the world that have well-established NPMs, including the UK and New Zealand, show that NPMs have had an important role to play in enhancing pro-active oversight during a crisis like COVID-19.

Obviously prisons, youth detention centres, and police stations are a focal point within OPCAT's remit. However, the concept of 'detention' is significantly broader. For example, as part of its oversight of the pandemic response, the New Zealand Ombudsman conducted inspections of secure wings in specialist treatment facilities, forensic hospitals and acute mental health facilities.[38]

5.3.3. NPM's and mandatory hotel quarantine

The NSW Ombudsman considers that people in mandatory hotel quarantine are in a form of 'detention' as a result of the 2020 *Public Health (COVID-19 Maritime) Order* and the *(COVID-19 Air-Transportation) Order*.[39] This is because quarantined people are subject to an administrative order that requires them to accede to the control of those officers supervising the quarantine, and prevents them from leaving their place of quarantine for the period prescribed by the order. Further, those people are compelled to comply with directions while in quarantine, and to accept whatever practical limitations are imposed in the facility where they are placed.

37. In NSW, there is an Inspector of Custodial Services who has responsibility for inspecting (some) places of detention: www.inspectorcustodial.nsw.gov.au/
38. OPCAT COVID-19 report: Report on inspections of mental health facilities under the *Crimes of Torture Act 1989*. Available at: www.ombudsman.parliament.nz/resources/opcat-COVID-19-report-report-inspections-mental-health-facilities-under-crimes-torture
39. This is consistent with the view of Dr Elina Steinerte, Vice-Chair of the United Nations Working Group on Arbitrary Detention who is of the view that in the majority of cases, mandatory hotel quarantine would fall within the definition of 'place of deprivation of liberty' in Article 4 of OPCAT. Victorian Aboriginal Legal Service, OPCAT: An opportunity to prevent the ill-treatment, torture and death of Aboriginal and Torres Strait Islander people in custody, 3 March 2021, Unlocking Victorian Justice: OPCAT - YouTube. So, for example, the NZ Ombudsman has been inspecting hotel quarantine facilities in New Zealand pursuant to its role as NPM: https://www.ombudsman.parliament.nz/news/chief-ombudsman-begin-inspections-COVID-19-isolation-facilities.

Had an NPM been in place in NSW during 2020, it would have meant that there would have been at least one agency with clear responsibility for inspecting all such facilities throughout the crisis.

5.4. Suggestions

As highlighted throughout this report, key insights we have drawn from our experience of the COVID-19 pandemic include the need to:

- include, as an integrated part of crisis planning and response, comprehensive consideration of oversight and complaint handling mechanisms
- consider whether existing systems might need to be adjusted to ensure that they are comprehensive, effective and efficient in the context of the particular crisis
- ensure that relevant agencies' internal complaint mechanisms are functioning well
- provide clear information to the public about how to access information, or complain, about their treatment or related issues.

Based on these insights, we make several suggestions to the NSW Government:

1. **Recommit all NSW agencies to the NSW Government's Complaint Handling Improvement Principles, including by affirming that those principles should be included as an element of any major crisis response plan.**
2. **Ensure that external oversight and complaint handling are integrated into crisis response planning, including by:**
    a. **identifying and briefing the relevant independent oversight bodies before the introduction of any new measure if possible (and otherwise as soon as practicable after), and keeping them informed of developments**
    b. **where appropriate, designating a single oversight body as the 'front door' for any external queries or complaints relating to a crisis response measure**
    c. **where appropriate, conferring on the designated oversight body a function of also monitoring or 'keeping under scrutiny' the internal complaint handling mechanisms of relevant agencies involved in delivering crisis response measures.**
3. **Move expeditiously to nominate, fund and operationalise National Preventative Mechanisms in accordance with Australia's obligations under the Optional Protocol to the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment.**

6. Supporting information

6.1. Chronology of key events

Date	Details
2020	
25 January	The first case of novel coronavirus is detected in Australia. A man in Victoria, who arrived by plane from Wuhan, China on 19 January 2020, is diagnosed with COVID-19.[40] On the same day, 3 cases are diagnosed in NSW. The 3 men had arrived by plane from China on 6 January, 18 January and 20 January respectively.[41]
27 February	Prime Minister Scott Morrison activates the Australian Health Sector Emergency Response Plan for Novel Coronavirus (COVID-19) to guide the health sector response.[42]
1 March	Australia reports the first death from COVID-19: a 78-year-old man from Perth, who was one of the passengers on the Diamond Princess cruise ship.[43]
11 March	WHO declares a global pandemic.[44]
19 March	2,700 passengers are permitted to disembark from the Ruby Princess in Sydney. 712 passengers later test positive for coronavirus.[45]
20 March	Australian borders are closed to all non-residents.[46]
21 March	NSW introduces public health restrictions limiting mass gatherings of people. Gatherings that are permitted to proceed must be on premises that allows at least 4 square metres per person.[47]
23 March	NSW imposes public health restrictions that require some businesses and other publicly accessible premises to close to the public altogether, or open only under significant restrictions.[48]
24 March	NSW introduces public health measures to restrict access to residential aged care facilities.
25 March	The Prime Minister establishes the National COVID-19 Coordination Commission as a strategic advisory body for the national response to the pandemic. The commission's purpose is to provide timely and direct advice from a business perspective to support the government's management of COVID-19, and its plans for economic recovery.[49]

40. The Hon. Greg Hunt MP, Cth Minister for Health, Media Release 'First confirmed case of novel coronavirus in Australia' 25 January 2020, available at www.health.gov.au/ministers/the-hon-greg-hunt-mp/media/first-confirmed-case-of-novel-coronavirus-in-australia
41. NSW Health, Media Release 'Coronavirus cases confirmed in NSW' 25 January 2020, available at www.health.nsw.gov.au/news/Pages/20200125_03.aspx
42. Australian Health Sector Emergency Response Plan for Novel Coronavirus (COVID-19) www.health.gov.au/sites/default/files/documents/2020/02/australian-health-sector-emergency-response-plan-for-novel-coronavirus-COVID-19_2.pdf
43. www.abc.net.au/news/2020-03-01/australia-records-first-coronavirus-death-perth-man-cruise-ship/12014742
44. www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-COVID-19---11-march-2020
45. Report of the Special Commission of inquiry into the Ruby Princess, available at www.dpc.nsw.gov.au/assets/dpc-nsw-gov-au/publications/The-Special-Commission-of-Inquiry-into-the-Ruby-Princess-Listing-1628/Report-of-the-Special-Commission-of-Inquiry-into-the-Ruby-Princess.pdf p. 48
46. www.pm.gov.au/media/border-restrictions#:~:text=Australia%20is%20closing%20its%20borders,spouses%2C%20legal%20guardians%20and%20dependants.
47. *Public Health (COVID-19 Gatherings) Order 2020 (NSW)*, 20 March 2020.
48. *Public Health (COVID-19 Places of Social Gathering) Order 2020* (NSW)
49. National COVID-19 Commission Advisory Board: https://pmc.gov.au/ncc

Date	Details
27 March	The National Cabinet agrees that mandatory hotel quarantine should be introduced no later than 28 March 2020.[50] NSW Parliament establishes a committee to consider NSW Government's management of the COVID-19 pandemic.[51]
28 and 29 March	NSW imposes requirements for people arriving by sea and air to enter mandatory quarantine for 14 days, at facilities arranged by the government.[52]
30 March	The Australian Government announces its largest economic support package in response to the crisis – the $130 billion 'JobKeeper' wage subsidy program.[53]
31 March	NSW introduces public health restrictions significantly limiting public movement. Most people are required to stay at home and not leave without a reasonable excuse. Public gatherings are limited to 2 people. Most businesses, and other publicly accessible premises are now subject to restrictions on opening to the public.[54]
5 April	The NSW Police Force launches a criminal investigation into whether Carnival Australia, the operator of the Ruby Princess, contravened the *Biosecurity Act 2015* (Cth) and NSW state laws by deliberately concealing COVID-19 cases.[55]
11 April	An outbreak is identified at Anglicare's Newmarch House, an aged care nursing home in NSW. By 19 May 2020, 69 COVID-19 cases had been linked to the facility.[56]
15 April	A Western Australian man becomes the first person in Australia to be jailed for breaking a self-isolation directive.[57]
15 May	In NSW, public health restrictions requiring people to stay at home are lifted, but employers are required to permit staff to work from home if reasonably practicable. Restrictions on public gatherings and public access to businesses and other premises are eased.[58] Restrictions continue to be eased over the next 2 months, and new requirements are introduced requiring COVID-19 safety plans and the recording of personal information for contact tracing purposes.
25 May	A night duty manager at one of Melbourne's quarantine hotels reports a fever and tests positive to COVID-19 the following day. Five security guards on contract from United Security also test positive.[59]

50. www.pm.gov.au/media/update-coronavirus-measures-270320
51. www.parliament.nsw.gov.au/committees/inquiries/Pages/inquiry-details.aspx?pk=2593
52. *Public Health (COVID-19 Maritime Quarantine) Order 2020* (NSW), *Public Health (COVID-19 Air Transportation Quarantine) Order 2020* (NSW)
53. www.pm.gov.au/media/130-billion-jobkeeper-payment-keep-australians-job
54. *Public Health (COVID-19 Restrictions on Gathering and Movement) Order 2020* (NSW)
55. www.abc.net.au/news/2020-04-05/ruby-princess-cruise-coronavirus-deaths-investigated-nsw-police/12123212
56. Newmarch House COVID-19 Outbreak Independent Review Final report, available at www.health.gov.au/sites/default/files/documents/2020/08/coronavirus-COVID-19-newmarch-house-COVID-19-outbreak-independent-review-newmarch-house-COVID-19-outbreak-independent-review-final-report.pdf
57. www.abc.net.au/news/2020-04-15/man-jailed-for-breaching-coronavirus-quarantine-by-leaving-hotel/12149908
58. *Public Health (COVID-19 Restrictions on Gathering and Movement) Order (No 2) 2020* (NSW)
59. www.abc.net.au/news/2020-08-18/victoria-Covid-crisis-traced-back-to-seven-travellers-inquiry/12568408

Date	Details
30 June	The Victorian Government reintroduces lockdown measures across 10 postcodes in Melbourne. Residents cannot leave their residence except to go shopping for essential items, for medical or compassionate needs, to exercise, or to go to work or school.[60]
2 July	The Victorian Premier, Daniel Andrews, announces the Judicial Inquiry into Hotel Quarantine Program.[61]
2 July	NSW prohibits non-residents entering NSW from Victoria if they have been in a COVID-19 hotspot in the previous 14 days. NSW residents are permitted to return but must self-isolate for 14 days.[62] From 8 July 2020, a permit system is introduced to allow specified classes of people to enter NSW, and border regions are established which allow less restricted movement within these regions.[63] These border controls remain in place until 23 November 2020.
4 July	The Victorian Government adds 2 postcodes to the lockdown zone. Nine public housing towers housing 3000 residents are also placed in lockdown, with the additional condition that residents cannot leave the tower under any circumstances for 5 days, with the possibility of this extending to 14 days.[64]
5 July	At the request of the NSW Government, the Australian Government introduces restrictions on the number of passengers permitted to land at Sydney Airport: a maximum of 50 passengers per flight, and 450 international arrivals per day.[65]
10 July	The Prime Minister, Scott Morrison, announces National Cabinet has agreed to a national review of hotel quarantine.[66]
12 July	NSW announces that compulsory hotel quarantine, previously free to international arrivals, would cost travellers $3000. Those already in quarantine would not be charged, nor those who had purchased flights before 11.59 pm on 12 July 2020.[67]
18 July	The sitting of federal parliament scheduled for the first 2 weeks of August is cancelled. Medical advice notes a 'significant risk' if members were to return to Canberra from all over Australia.[68]
2 August	A state of disaster is declared in Victoria. Metropolitan Melbourne moves to stage 4 restrictions, and regional Victoria to stage 3 restrictions. The increased restrictions include a curfew across Melbourne from 8 pm to 5 am.[69]

60. www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp2021/Chronologies/COVID-19StateTerritoryGovernmentAnnouncements#_Toc52275800
61. www.premier.vic.gov.au/sites/default/files/2020-07/200702-Judicial-Inquiry-Into-Hotel-Quarantine-Program.pdf
62. *Public Health (COVID-19 Interstate Hotspots) Order 2020* (NSW)
63. *Public Health (COVID-19 Border Control) Order 2020*
64. www.ombudsman.vic.gov.au/our-impact/investigation-reports/investigation-into-the-detention-and-treatment-of-public-housing-residents-arising-from-a-COVID-19-hard-lockdown-in-july-2020/
65. www.nsw.gov.au/media-releases/nsw-sets-new-airport-arrival-limits
66. www.pm.gov.au/media/national-cabinet
67. www.nsw.gov.au/media-releases/nsw-to-charge-returned-international-travellers-for-hotel-quarantine
68. www.pm.gov.au/media/sitting-parliament
69. www.premier.vic.gov.au/statement-changes-melbournes-restrictions

Date	Details
14 August	The Special Commission of Inquiry into the Ruby Princess publishes their final report.[70]
6 September	The Victorian Government releases their 5-step roadmap to reopening, which detailed the conditions to be met to facilitate the gradual easing of restrictions.[71]
16 October	A trans-Tasman travel bubble comes into effect – travellers from New Zealand can travel to NSW, ACT, and NT without having to undergo 14 days of quarantine upon arrival. Australians travelling to New Zealand must still undergo quarantine.[72]
23 October	The National Review of Hotel Quarantine Final Report is released.[73]
26 October	Victoria records no new cases or deaths state-wide for the first time since 9 June 2020.[74]
1 November	Australia records no cases of community transmission nation wide for the first time since 9 June 2020.[75]
16 November	South Australia reintroduces restrictions after an outbreak of COVID-19 in the northern suburbs of Adelaide.[76]
19 November	NSW prohibits non-residents entering NSW from South Australia if they have been in a COVID-19 hotspot in the previous 14 days. NSW residents are permitted to return but must self-isolate for 14 days. 77 people who have not been in a hotspot must complete a declaration with their personal details and movements in the previous 14 days. This remains in place until 13 December 2020.
21 November	The South Australian Government ends their state lockdown after discovering a patient had given false information to health officials and had not come into contact with as many people as initially thought.[78]
17 December	The Victorian Ombudsman releases their report 'Investigation into the detention and treatment of public housing residents arising from a COVID-19 'hard lockdown' in July 2020'.[79]

70. www.dpc.nsw.gov.au/assets/dpc-nsw-gov-au/publications/The-Special-Commission-of-Inquiry-into-the-Ruby-Princess-Listing-1628/Report-of-the-Special-Commission-of-Inquiry-into-the-Ruby-Princess.pdf
71. www.premier.vic.gov.au/statement-from-premier
72. https://parlinfo.aph.gov.au/parlInfo/download/media/pressrel/7590201/upload_binary/7590201.pdf;fileType=application%2Fpdf#search=%22media/pressrel/7590201%22
73. www.health.gov.au/resources/publications/national-review-of-hotel-quarantine
74. www.dhhs.vic.gov.au/coronavirus-update-victoria-26-october-2020
75. www.abc.net.au/news/2020-11-01/coronavirus-australia-live-updates-Covid19-latest-mental-health/12836336
76. www.abc.net.au/news/2020-11-16/sa-reintroduces-coronavirus-restrictions-amid-outbreak/12887770
77. *Public Health (COVID-19 Border Control—South Australia) Order 2020* (NSW)
78. www.COVID-19.sa.gov.au/documents/emergency-directions-COVID-19/revoked/stay-at-home/Emergency-Management-Stay-at-Home-No-3-COVID-19-Revocation.pdf
79. www.ombudsman.vic.gov.au/our-impact/investigation-reports/investigation-into-the-detention-and-treatment-of-public-housing-residents-arising-from-a-COVID-19-hard-lockdown-in-july-2020/

Date	Details
18 December	Sydney's Northern Beaches is declared a national COVID-19 hotspot, following an outbreak that was linked to 28 cases. Chief Medical Officer Paul Kelly designates the region a hotspot in line with the National Cabinet's guidelines. The guidelines designate a metropolitan area a potential hotspot if it registers 30 or more community transmissions within 3 days. In response, states reintroduce border restrictions on travellers from NSW[80] On 19 December, NSW imposes restrictions on movement into and out of the Northern Beaches local government area, requiring residents in the area to stay at home and not leave without a reasonable excuse.[81]
21 December	NSW increases public health restrictions in the Greater Sydney area, including halving the number of people allowed on publicly accessible premises generally, and significantly limiting visitors to a place of residence (including over the Christmas and New Year holiday period).[82] Special restrictions were also imposed to limit public access to key central areas during New Year's Eve celebration.[83] NSW also revokes a long-standing public health order exemption that unaccompanied minors be released to a parent or guardian to self-isolate rather than enter mandatory hotel quarantine. From 21 December 2020, the preference is for unaccompanied minors to complete quarantine in SHA. The Victorian COVID-19 Hotel Inquiry release their final report.[84]
2021	
3 January	NSW introduces a requirement to wear masks in many public settings in Greater Sydney.[85] Over the following weeks, the settings where masks are required are reduced.
8 January	NSW imposes health restrictions requiring people who had been in certain COVID-19 hotspots in Queensland to self-isolate after entering NSW, and to complete a declaration with their personal details and movements in the previous 14 days. These restrictions are lifted on 11 January 2021.
10 January	Restrictions on travel to and movement of people within the Northern Beaches LGA are repealed.
1 February	NSW imposes health restrictions requiring people who had been in certain COVID-19 hotspots in Western Australia to self-isolate after entering NSW and wear a facemask when leaving their home. They are also required to complete a declaration with their personal details and movements in the previous 14 days. These restrictions are lifted on 5 February 2021.

80. www.health.gov.au/ministers/the-hon-greg-hunt-mp/media/doorstop-interview-on-18-december-2020
81. *Public Health (COVID-19 Northern Beaches) Order 2020* (NSW)
82. *Public Health (COVID-19 Restrictions on Gathering and Movement) Order (No 7) Amendment Order (No 2) 2020 (NSW); Public Health (COVID-19 Restrictions on Gathering and Movement) Order (No 7) Amendment Order (No 3) 2020* (NSW).
83. *Public Health (COVID-19 Sydney New Year's Eve Arrangements) Order* 2020
84. www.quarantineinquiry.vic.gov.au/reports-0
85. *Public Health (COVID-19 Mandatory Face Coverings) Order 2021* (NSW)

6.2. Chronology of COVID-19 related legislative amendments and public health orders

The information in the table below is largely drawn from 'NSW public health restrictions to deal with the COVID-19 pandemic: A chronology',[86] a background paper published in partnership between the NSW Parliamentary Research Service and the NSW Ombudsman's office. The public health orders, their full names and exact wording can be accessed here: www.legislation.nsw.gov.au/information/Covid19-legislation

Date	Details
2020	
16 March	A 500-person limit is imposed on public events.
17 March	A requirement to self-isolate is imposed for people who have been in another country in the previous 14 days.
18 March	Public gatherings are restricted to 500 people outdoors, and 100 people indoors – unless they are considered an essential or exempted gathering.
21 March	A social distancing requirement is introduced for public gatherings.
22 March	Access to Lord Howe Island is restricted.
23 March	Significant classes of public premises and businesses are closed or restricted to the public. Food and drink premises are restricted to operating on a takeaway basis only.
24 March	Access to residential aged care facilities is restricted. Visitors are allowed for care and support (1 visit per day limited to 2 hours), and end of life support only. Young people under 16 years are not allowed to visit.
26 March	• More non-essential public venues and businesses are closed to the public. • Restrictions are placed on weddings and funerals, community sporting activities and other activities. • Social distancing requirements are imposed more broadly. • Government agencies are authorised to collect and disclose personal and health information if necessary for health and welfare purposes during the pandemic.
26 March	People diagnosed with COVID-19 are required to self-isolate or go to hospital.
28 March	• Mandatory hotel quarantine commences for people arriving from outside of NSW by sea. • Unaccompanied children are permitted to be released from airport to parents or guardians for 14 days isolation.

86. www.parliament.nsw.gov.au/researchpapers/Documents/NSW%20public%20health%20restrictions%20to%20deal%20with%20the%20COVID-19%20pandemic.pdf

Date	Details
29 March	• Mandatory hotel quarantine commences for people arriving from outside NSW by air. • The NSW Government clarifies that people already in self-isolation because they had been in another country in the previous 14 days are to complete their self-isolation, but are not required to enter mandatory hotel quarantine.
31 March	• A general public lockdown is imposed, requiring people without a 'reasonable excuse' to stay at home. • Public gatherings are limited to 2 people. • Places of public worship are closed to the public, except for weddings (5-person limit) and funeral services (10-person limit).
3 April	The NSW Government clarifies how to calculate the length of the mandatory quarantine period.
4 April	Closure restrictions for premises are amended to permit the streaming and recording of religious services. A food and drink exception is introduced for truck stops and drivers.
8 April	The crew of all vessels are allowed to disembark to undertake essential vessel work, and other public officials (including union officials) are allowed to board.
9 April	Intentionally spitting or coughing at public officials to cause fear of COVID-19 infection is prohibited.
20 April	The prohibition on intentionally spitting or coughing is extended to protect all workers.
1 May	• NSW allows certain businesses (spas, nail, beauty, waxing and tanning salons) to reopen to sell goods but not services. • The list of reasonable excuses to leave your residence is expanded to include visits to provide care and support of another. There is a limit of 2 visitors at a time.
9 May	The list of reasonable excuses to leave residences is expanded to include real estate purposes related to sale or lease of a property.
15 May	• The general public lockdown is lifted. • The public gatherings limit is increased to 10 people. • The number of people allowed on premises is limited to 500 outdoors and 100 indoors, or less if required to maintain social distance requirements. • Some businesses remain closed to the public – restriction on dining-in is lifted, but the number of patrons permitted on premises at any time is limited to 10. • Certain public recreational facilities reopen on a restricted basis. • A limit of 5 visitors to a residence is introduced. • Prohibition of holidays in regional areas is continued. • Employers are required to allow working at home where reasonably practicable. • The limit on attendees at weddings and funerals are increased to 10 and 20 (or 30 if outdoors) respectively. In-person religious services recommence, with a limit of 10. • Requirements to provide contact information are introduced.

Date	Details
19 May	Physical spacing requirements provided for recreational vessels.
1 June	• Public health restrictions are eased further – businesses can open, with conditions including having a COVID-19 safety plan. Individual group limits of 10 are imposed for certain premises, in addition to a cap on total numbers on premises. • The limit on the number of people permitted to attend weddings, funerals and religious services is increased to 20, 50 and 50 respectively. • Requirements to provide contact information are continued. • Limit on visitors to place of residence are continued.
13 June	• The size of individual customer groups for business is increased to 20. • The number of visitors permitted to residences is increased to 20.
18 June	Restrictions on access to Lord Howe Island are continued.
22 June	An exemption from the 500-person outdoor cap is introduced for ski resort premises (subject to conditions).
23 June	• The requirement for those diagnosed with COVID-19 to self-isolate is continued. • Restrictions on length and number of care and support visits to aged care facilities are eased, and young people are permitted to visit.
25 June	Requirements for mandatory hotel quarantine of people arriving by air and sea are continued.
29 June	The mandatory quarantine period for arrivals by air and sea is amended to at least 14 full days. The person may be required to quarantine for up to 24 full days if the Chief Health Officer is not able to be satisfied after 14 days that the person is not a COVID-19 infection risk.
1 July	• The limit on public health gatherings is increased to 20 people. • Business restrictions are eased further, with conditions requiring a COVID-19 safety plan in most cases. • Individual group limits are lifted. Larger recreational premises and businesses are permitted to reopen. • Restrictions on community sporting activities are eased.
2 July	People who have been in a COVID-19 hotspot in Victoria recently are barred from entering NSW – except NSW residents who must self-isolate upon return.
4 July	Areas are added to the interstate hotspots order.
7 July	• More areas are added to the interstate hotspots order. • The order prohibiting intentionally spitting or coughing on workers to cause fear of COVID-19 infection are continued.
8 July	• Border restrictions are extended to bar people who have been anywhere in Victoria recently from entering NSW, except in certain cases. • A permit system is introduced, requiring most people seeking entry from Victoria to apply for a permit to enter – including border community residents. • Health enforcement officers are empowered to require information to determine if a person may enter.

Date	Details
9 July	An exemption is introduced allowing NSW residents to return from Victoria in limited circumstances.
14 July	Gatherings of more than 500 people for netball associations are permitted, subject to specified distancing requirements.
17 July	Pubs are restricted to 300 people on premises, with an individual group limit of 10. All people on premises must provide their individual contact details.
22 July	• Travel within border community areas ('border zones') is limited to certain permitted purposes. • Permits to enter NSW for education are extended to day school students. • Significant changes are introduced to existing permit classes and conditions – all existing permits of people outside NSW are effectively cancelled, and people are required to apply for new permits.
23 July	The requirement to self-isolate is extended to people who have had contact with confirmed COVID-19 case and are identified as at risk of developing COVID-19.
24 July	• Limits on the number of people permitted on pub premises are increased. Venues must have safety marshals and ensure patrons remain seated (as far as practicable). • Permit are introduced allowing care for vulnerable people in border zones.
25 July	Travel from NSW to Victoria for medical or hospital services is limited to services necessary to treat or maintain health. Permitted border travel is extended to essential care services.
1 August	Electronic registration of contact details is introduced.
3 August	Restrictions on access to Lord Howe Island are continued.
6 August	• Gyms are required to register COVID-19 safety plans and have safety marshals. • Sea crew are permitted to disembark for essential tasks.
7 and 10 August	Certain border entry permits now require people travelling from Victoria to NSW by air to undergo mandatory hotel quarantine.
13 August	• An exemption is introduced allowing people living in or near remote communities to cross the border for essential goods and services. • A temporary exemption is introduced allowing residents of the ACT in Victoria to transit through NSW on their way home.
18 August	A new permit class is introduced to allow entry into NSW for critical service (agricultural) workers.
20 August	An exemption is introduced for Year 11 and 12 students and their teachers to cross the border (subject to conditions).
26 August	A loophole for 'party buses' is removed.
27 August	An exemption is introduced allowing weddings to have up to 150 attendees if in places of worship. Places of worship are also now permitted to host up to 100 people per building (subject to conditions).

Date	Details
31 August	Restrictions on access to Lord Howe Island are continued – with exceptions now being made for access by transiting vessels.
4 September	• A single border region introduced to replace multiple border zones outlined in previous orders. Region extends 50 km each side of the border • People holding critical service permits are exempted from self-isolation, (subject to conditions).
11 September	Students and teachers are exempted from mandatory quarantine (subject to conditions).
12 September	Critical service agriculture permits are made available for work in Victoria.
14 September	Auctions and open houses are required to have a COVID-19 safety plan.
17 September	The border region movement condition of 'permitted purpose' is removed.
18 September	Access restrictions are continued, with no significant changes.
21 September	Mandatory quarantine of arrivals by air and sea is continued.
24 September	Updates are required to COVID-19 safety plans for certain premises.
25 September	The order prohibiting intentionally spitting and coughing on a worker is remade. Entry for agriculture related services is expanded to non-critical services (including seasonal workers). People from interstate may self-isolate in their home state, if determined suitable.
28 September	An exception is made allowing for vessels travelling along the Murray River.
2 October	• The Lord Howe Island order is repealed – access is now permitted (subject to conditions). • The prior border control order is remade with no substantial changes.
8 October	An exemption from general indoor gatherings limits is introduced to allow up to 50 people to attend funeral and memorial services, provided certain conditions are met (such as attendees maintaining a minimum distance from each other if not part of same household).
12 October	An exemption is introduced allowing public gatherings for musical rehearsals or performances of up to 500 people if certain conditions are met.
16 October	• People are permitted to transit through NSW and through Victoria. • The New Zealand travel bubble commences. People entering from New Zealand are not required to enter mandatory hotel quarantine. • Social distancing requirements eased for outdoor areas in hospitality venues with an electronic entry recording system.
20 October	The self-isolation order is remade with the power to direct people diagnosed with COVID-19 to provide information about contacts over the past 28 days.
23 October	Restrictions on public gatherings are further eased.

Date	Details
19 November	Restrictions are imposed on people entering NSW from South Australia if they have been in an COVID-19 hotspot in the previous 14 days. People allowed to enter must self-isolate and complete a declaration.
23 November	Mandatory quarantine of arrivals by air and sea is continued.
7 December	• Special arrangements are made to restrict and control access to certain areas of the Sydney CBD and harbour foreshore during New Year's Eve celebrations. Travel to these zones is restricted to residents or event ticket holders. • Restrictions on gatherings are continued.
13 December	An order closing the border with South Australia is repealed.
14 December	Mandatory quarantine of arrivals by air and sea is continued.
15 December	Restrictions on entering aged care facilities are continued.
17 December	• An order prohibiting intentionally spitting and coughing on a worker is remade. • Restrictions on gatherings are amended to deal with seating of spectators at outdoor rehearsals and performances.
19 December	An order limiting travel to, and movement of, people within the Northern beaches Local Government Area (LGA) is introduced, and residents are required to remain at home and not leave without a reasonable excuse.
20 December	• An order limiting travel to, and movement of, people within the Northern beaches LGA is remade. • The self-isolation order is remade. Unaccompanied minors are now to quarantine in SHA.
21 December	• Restrictions on gatherings in Greater Sydney are increased.
23 December	• The order limiting travel to and movement of people within the Northern beaches LGA is extended. • Restrictions on gatherings are tightened for the Christmas period. Only 10 people permitted to visit a place of residence on any day during Christmas period.
29 December	• The order relating to the Northern beaches LGA is amended to ensure residents do not leave the area for food, goods and services unless not reasonably available locally, and to incorporate exemptions relating to some recreational activities and gatherings. • Restrictions on gatherings are returned to pre-Christmas period arrangements – including that no visitors are permitted.
30 December	The order relating to the Northern beaches LGA is amended to further restrict people entering the LGA, and to restrict the areas residents may leave to obtain food, goods, services or for exercise or recreation.

Date	Details
31 December	• A temporary exception is made to the order limiting travel to and movement of people within the Northern beaches LGA. During the New Year period, residents within the northern and southern areas of LGA are permitted to visit others within their particular area. • Restrictions on gatherings are tightened for the New Year period. In greater Sydney, only 5 people are permitted to visit a place of residence on any day during that period. Outside greater Sydney, 50 visitors are permitted.
2021	
3 January	• Restrictions on travel to and movement of people within the Northern beaches LGA are amended to apply only to the Northern part of the LGA. • The self-isolation order is remade. • Fitted face coverings become mandatory in designated indoor areas and public transport across greater Sydney. • Greater Sydney restrictions are amended to confirm that the number of people allowed on premises is generally limited to what is necessary to allow 4 square metres per person in indoor areas and 2 square meters per person in outdoors areas, and to remove the exemption allowing a minimum number of people regardless of the size of the premises.
8 January	Restrictions are placed on attendance at the New Year's Cricket Test. Any person who visited an affected area on or after 24 December 2020 may not enter the Sydney Cricket Ground (SCG). Attendees must wear a fitted face covering.
10 January	Restrictions on travel to, and movement of, people within the Northern beaches LGA are repealed.

6.3. Key complaint handling and oversight bodies relevant to COVID-19 in NSW

The following table outlines the key complaint handling bodies in NSW involved in the oversight of systems and processes related to the pandemic response in NSW. The table does not include Commonwealth bodies, such as the Commonwealth Ombudsman, which may have complaint handling responsibilities in relation to Commonwealth agencies that operate within NSW

Table 1. Oversight bodies

Oversight body	Functions (most relevant to COVID-19)
The NSW Ombudsman	The NSW Ombudsman's primary function with relevance to COVID-19 is to handle and investigate complaints about maladministration by NSW government agencies and community service providers funded by NSW Government departments. Although our jurisdiction covers most NSW Government departments, local councils and state-run universities, we cannot handle complaints about the NSW Police Force, the conduct of members of parliament, ministers, and courts, among others.
Health Care Complaints Commission (HCCC)	The HCCC's primary function is to act to protect public health and safety by resolving, investigating and prosecuting complaints about health care. The HCCC deals with complaints about all health services and providers in NSW including hospitals, registered health practitioners, and unregistered health practitioners. In addition to its complaint handling function, the HCCC has oversighted the implementation of COVID-19 testing and treatment across NSW.
Law Enforcement Conduct Commission (LECC)	The LECC's primary functions are to detect, oversight, investigate and expose misconduct and maladministration within the NSW Police Force and the NSW Crime Commission. With reference to COVID-19, the LECC is responsible for monitoring and dealing with complaints about the enforcement of public health orders by the NSW Police Force.
Inspector of Custodial Services (ICS)	The ICS's primary function is to review the conditions, treatment and outcomes for adults and young people in custody, including 24-hour court complexes, inmate/detainee transport and transitional centres. The ICS is also responsible for administering the Official Community Visitor program for those held in custody. During the pandemic, the ICS has been monitoring the planning and responses to COVID-19 by the agencies that deliver custodial services. The ICS does not investigate individual complaints made by inmates, young people in custody or their families. Any such complaints are handled by the NSW Ombudsman.

Oversight body	Functions (most relevant to COVID-19)
Independent Commission Against Corruption (ICAC)	The ICAC's primary functions are to investigate and expose corrupt conduct in the NSW public sector, to actively prevent corruption through advice and assistance, and to educate the community and public sector about corruption and its effects. ICAC's jurisdiction extends to most NSW public sector agencies, including local councils, and their employees and contractors; members of parliament and ministers; the judiciary, and the governor. The ICAC's jurisdiction does not extend to officers of the NSW Police Force or the NSW Crime Commission.
Information and Privacy Commission	The IPC's primary functions are to undertake external reviews of decisions made by government agencies on applications for the release of information made under the *Government Information (Public Access) Act 2009*, provide advice and assistance, and deal with complaints about access to information and privacy. During the pandemic the IPC encouraged agencies to take proactive steps to put arrangements in place with applicants about how their applications will be dealt with, including whether a request for an extension of time will be necessary.
Other complaint handlers in NSW	The Energy and Water Ombudsman NSW provides a dispute resolution service for electricity and gas and some water customers in NSW.

Annexure A: Impact of the pandemic on the operations of the NSW Ombudsman's office

Like all organisations, COVID-19 impacted not only the work we were doing but also the way we did it.

In this report, we have primarily reported on changes relating to the content of our work: the new and changed government activities and services we have been oversighting, and especially the new and different kinds of complaints we have been receiving.

In this annexure, we shift the focus internally – outlining the ways our own organisation has had to respond and adapt to the changing environment caused by the COVID-19 pandemic.

Looking back, it can be difficult to appreciate the speed with which events were moving in the early days of the pandemic, and the uncertainty about what might happen next.

In mid-March we had to close our physical office both to staff and the public, after being alerted to a confirmed instance of COVID-19 in our building. Initially, we planned for this closure to be in place for 14 days – the idea being that, by keeping all staff at home for the 'incubation period', this would prevent any further spread within our office in the event that any of our staff had contracted the disease from the infectious person (fortunately none of our staff did).

However, before that 14-day period expired the government issued public health orders making it mandatory for all employers in NSW to allow staff to work from home where practicable.

As a consequence, our staff continued to work from home for almost the entire 12 months, with limited ability to return to the office under new COVID-safe plans.

The events of March 2020 meant that, with little notice, we transitioned from an almost entirely office-based work environment to a fully remote working environment. We quickly put in place operational and technological solutions to ensure continued and safe delivery of our services to NSW public. However, legacy IT issues, including on-site (non-cloud based) technology platforms and strict network bandwidth limits meant that only a small proportion of staff were able to access our secure network at any one time.

Throughout, a core objective has been to maintain the availability and accessibility of our complaint services. Here, we outline some of the measures we put in place to ensure that the people of NSW could always continue to access our services, while at the same time protecting the health and wellbeing of our staff and contributing to the broader public health measures.

6.3.1. Using technology to remain accessible

Most of the contacts we have with the public occur over the phone or online, so we were able to maintain this form of accessibility with most complainants.

However, our limited capacity to access our case management and document record systems remotely and the inefficiency of our dated IT systems inevitably affected our work. We fast-tracked upgrades to our IT systems, and are continuing to build our expertise with these new technology tools so we are better positioned to face future crises.

6.3.2. Maintaining complaint lines and accessibility

While we were able to continue to fulfil our statutory obligations, we were initially hampered by limited system access and an inability to answer calls directly from the public.

We prioritised systems workarounds and upgrades for our Assessments Unit to ensure the public had continued access to our services. Specifically, we:

- immediately secured direct ongoing telephone contact for adult inmates and youth detainees – this has meant that, with the exception of a few hours on the first day of our office being shut down, there has been no break in access to our office for individuals in custody
- initiated a telephone call back system for all other members of the community
- prioritised email, online and call-back complaints from the most vulnerable members of the community, and those that raised more serious or urgent issues.

By April and May 2020, more staff gained remote system access. By 23 June 2020 we had launched a cloud-based telephony system to answer calls directly from the public.

In July 2020 we reinstated a reduced program of visits to correctional and youth justice centres to ensure we remained visible to inmates, detainees and centre staff, and to observe conditions in these centres during the pandemic. By January 2021 we have returned to a regular and comprehensive program of visits.

6.3.3. A fall in overall complaints

Our office was not inundated with complaints during the first 12 months of COVID-19. There has been a significant fall in actionable complaints to our office since the emergence of COVID. The number of actionable complaints received in 2020 (11,726) is 31% lower than the average number of actionable complaints received over the prior 3 years (17,082).

Reasons for the decline in overall complaint numbers are likely to include:

(a) The disruption of normal routines of government at all levels and its agencies – many of the ordinary services that people receive (and therefore may have cause to complaint about) were temporarily suspended.

(b) Many people, especially in the early months of the pandemic, were focused on grappling with the new realities created by the pandemic, and not much else.

(c) Large components of the government's COVID-19 response are performed by officials whose conduct is excluded from our jurisdiction (such as ministers and police). Thus, we are less likely to have received contact about these issues.

(d) The COVID-19 response included, particularly at the federal level, a significant package of financial supports (for example JobKeeper and JobSeeker). These may have lessened some of the impact on people and their livelihood. Complaints about these federal government supports are also outside of our jurisdiction.

(e) In some cases, people may not have been aware of their complaint rights and avenues.

(f) Our office itself was impacted, and so we may not have been as accessible (particularly in the early days of the pandemic) to members of the public. We suspended in-person visits to prisons and communities. Initially, we were only able to offer a telephone call back service to complainants, other than those in custody who could call us directly. But we are now back to normal, and from this month we will be reopening our physical office to 'walk in' complaints.

In recent months, our complaint numbers have been rising, and we expect them to return to their long-term average levels in the current financial year.

6.3.4. Continuing preliminary inquiries and investigations

We were acutely aware that many public authorities and community service providers were facing their own additional pressures as they responded to COVID-19. While carrying out our work and making inquiries to departments and agencies, we sought to make accommodations where possible. This was to ensure that our involvement would not result in an unnecessary diversion of resources, or any other disruption to the authority's primary functions and their response to the pandemic.

We made several adjustments to the way we interact with agencies to protect the health and safety of all involved. Specifically, we:

- increased communication with the agencies and extended the flexibility of deadlines
- improved our ability to receive information from agencies in stages and electronically
- moved to a model of virtual meetings, interviews and hearings (that would ordinarily be conducted in person)

- permitted some witnesses to give statements or provide answers to questions in writing, rather than through face-to-face interviews.

6.3.5. Engaging with Aboriginal communities

One of the NSW Ombudsman's functions is to monitor and assess prescribed Aboriginal programs – the first of which is the government's OCHRE plan for Aboriginal affairs.

Due to COVID-19 restrictions, we curtailed face-to-face community engagement activities, replacing them with a blended model of engagement that allows for both face-to-face and online engagement.

This new mode of communication has enhanced our connectivity and collaboration with community groups. From March to December 2020, we held 57 quarterly liaison meetings and 31 community engagement meetings via this new mode.

In June 2020 we held the twice-yearly Aboriginal Procurement Advisory Committee meeting online and were able to link a larger than normal group of participants together across a range of locations in NSW. The response from communities and stakeholders has been positive, and we will look at maximising the benefits of technology moving forward.

6.3.6. Training and education

As a result of the closure of our office, and in accordance with health restrictions and government guidelines, we cancelled all in-person training workshops from 18 March 2020.

To adapt to this new demand for remote learning we fast-tracked our training modernisation project, which will allow us to further improve the delivery of our sector-leading training programs. The project includes:

- engaging a vendor through an open tender process to deliver a learning management system and instructional design services
- adapting our complaint handling workshops for remote and blended learning delivery, beginning with Managing Unreasonable Complainant Conduct, our most popular training program
- procuring other remote learning tools such as video conferencing tools
- developing a go-to-market strategy.

We were able to deliver a limited number of workshops online from 25 August 2020. Several courses required major work to adapt them to the new online or blended learning delivery. Trainers have had to upskill and adapt to the requirements of remote training delivery, including developing new ways to encourage learner engagement. However, feedback from participant evaluations has been overwhelmingly positive – both in terms of the content and delivery.

Our new blended learning training business is on track to be relaunched in March 2021. These new learning opportunities will complement our existing face-to-face workshops, enabling us to engage more learners around NSW and the world, including remote communities.

6.3.7. Continuing to monitor community services

We promote and protect the rights and best interests of people using community services in NSW by handling and resolving complaints about these services, and by monitoring and reviewing how these services are delivered. In line with these responsibilities, we have been undertaking various COVID-19 related activities. We have:

- liaised with the Department of Communities and Justice about its planned responses to the pandemic
- reviewed and monitored COVID-19 related information and plans published on the websites of relevant peak associations and key providers of community services
- monitored COVID-19 related complaints received by our office
- requested and received information from DCJ and Specialist Homelessness Services about access to refuge and temporary accommodation for homeless people during the pandemic
- reviewed information provided by DCJ and peak homelessness associations about homeless people's access to venues and general services during the pandemic.

6.3.8. Reviewing the deaths of children

Another of our functions is to convene the Child Death Review Team, which (among other things):

- maintains a register of all child deaths in NSW
- analyses data to identify trends and patterns in those deaths
- undertakes research to help prevent or reduce the likelihood of child deaths
- makes recommendations as to legislation, policies, practices and services to prevent or reduce the likelihood of child deaths
- reports biennially to parliament on its analysis and research.

Meetings of the NSW Child Death Review Team moved from quarterly face-to-face discussions to online meetings across various platforms. The move to virtual meetings proved successful, although it did limit informal networking amongst members.

We also chair a national child death review forum – the Australia and New Zealand Child Death Review and Prevention Group. We had to cancel the 2020 2-day annual meeting and conference which had been arranged for March-April 2020.

For 2021, we have made significant changes to the format to allow for online sessions, which will go ahead in May 2021 as a series of virtual presentations and discussion forums.

6.3.9. Continuing oversight of the Public Interest Disclosure scheme

We are also responsible for promoting public awareness of the *Public Interest Disclosures Act 1994* (**PID Act**) and monitoring and reporting to parliament on compliance by agencies with the PID Act.

We were able to continue our monitoring function, however audits of agency compliance with the requirements of the PID Act were suspended. Meetings of the PID Steering Committee, which provides advice on the operation of the PID Act and recommendations for reform were moved online.

6.3.10. Protecting the health and wellbeing of our staff

The health and safety of our staff and the community has been a paramount consideration in all our decisions related to the closure of our physical offices and subsequent crisis management activities. We implemented a wide range of workplace health and safety measures to ensure we adhered to this guiding principle. Notable measures include:

- **Providing for an ergonomically safe work environment**: in supporting staff to work from home, we hired equipment for staff who could not provide an ergonomically safe working-from-home environment given the short notice provided due to COVID-19.
- **Extra promotion of our Employee Assistance Program**: we made sure staff were aware of the external supports available, and we made extra 1-on-1 counselling sessions available.
- **Increased flexibility of work arrangements**: to assist staff balance their work and personal commitments (such as home-schooling children or caring for vulnerable members of their household) we extended the bandwidth of hours within which staff could complete their duties.
- **Additional peer-to-peer supports**: to mitigate the isolating effects of social distancing and working from home, we established a buddy system to maintain connections between staff and to monitor health and wellbeing. Additional supports were put in place for frontline staff including the establishment of a system that facilitated easy and immediate channels of communication to the team support group.[87]

87. A group composed of supervisors and senior managers.

- **Guidelines for front-line staff**. The content of some of our work can be challenging and at times distressing (for example reviewing materials relating to child deaths). Although our staff receive careful induction, ongoing training and counselling to support their wellbeing, we were acutely aware that working from home would pose a very different dynamic, and certain stressors may be more difficult to manage. So we developed guidelines to support staff well-being while handling complaints from home. The guidelines included escalation matrices and built-in 1-on-1 check-ins between staff and supervisors.

In June 2020 we undertook a 'pulse survey' of staff to get feedback on our crisis management. The response was positive, indicating that our staff had exhibited significant resilience in the face of the crisis and had felt supported throughout the crisis. The survey also showed that many staff enjoyed many benefits from flexible working. The pulse survey was conducted in part because the sector-wide People Matters Employment Survey (**PMES**) was delayed. In late 2020 also completed the PMES, the results of which reinforce what staff had told us in the pulse survey.

6.3.11. Dealing with the unreasonable conduct of some complainants

At times, speaking with people in a complaint environment involves difficult conversations, which may be due to someone's vulnerability, demeanour or behaviour. We anticipated that the pandemic might increase distress and vulnerability in the community, and this in turn may have an impact on the way individuals interacted with our office and staff.

While our staff are carefully inducted and receive training in how to sensitively deal with people in distress and in managing unreasonable conduct of complainants, we worked hard to adapt existing practices to the remote working environment. Key aspects of this process included:

- **Behaviours**: we refreshed our staff on the key principles of dealing with difficult or unreasonable conduct by a complainant and highlighted a lower threshold for the kinds of behaviour they should manage before urgent escalation. We highlighted the new channels that should be used to escalate such matters.
- **Referrals**: we made sure the referral information we provide included the additional services callers may need to assist with the financial and social hardships caused by the pandemic.
- **Emergency protocols**: we adapted the protocols triggered when a caller refers to self-harm or harming others to make sure staff were both equipped and supported to deal with these situations remotely. We established an 'on-call' roster to ensure that at any given time during business hours, senior members of staff with the appropriate delegations were available to front-line

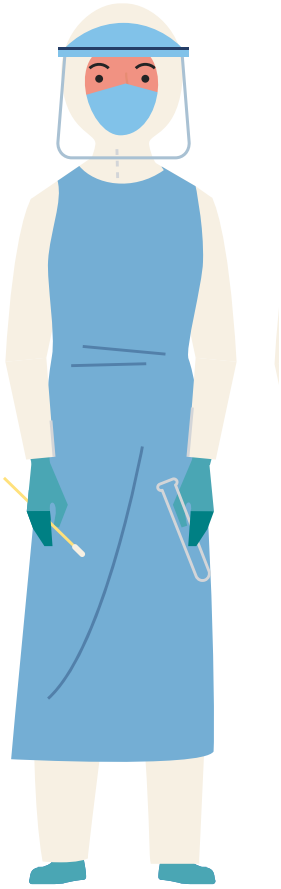
staff to help with contacts that require additional action. Once the upgrades to our IT system had been completed, additional platforms for support became available.

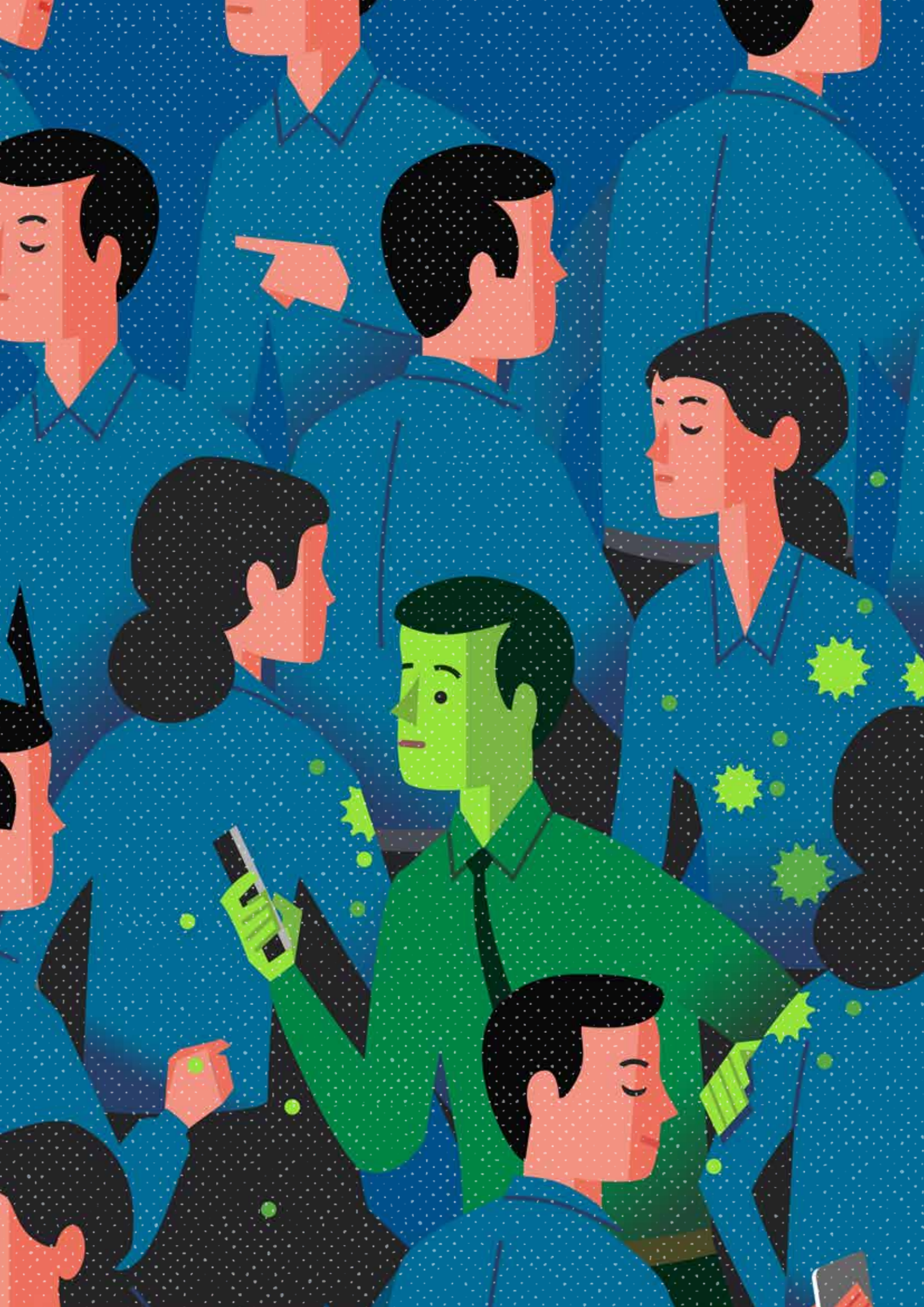
- **Remote debriefs**: debriefs with a supervisor are part of our ordinary emergency escalation protocols. While working in the office, colleagues seated close to each other invariably liaise and support one another. This support through immediate, close-proximity human interaction is not available when working from home, so we took care to build a system of remote debriefs into our practice.

Anecdotally, staff reported that the level of unreasonable conduct by complainants did not increase materially in the early months of the pandemic.

Indeed, most people who contacted our office communicated reasonably, often taking the time to acknowledge that many people had been impacted by the pandemic in one way or another and recognising that the general response to the pandemic, although disruptive and challenging, was evidently motivated by a proper purpose and necessary for the good of the community as a whole.

As mentioned in **section 2.3** above, our experience is that many complaints are motivated by community-minded concerns, rather than self interest. Many complainants raise issues with us because they wish to contribute to improving the health response or other government service provision, or to ensure that, if they experienced poor service or were mistreated, that others who might in future be in similar circumstances have a better experience than they did.





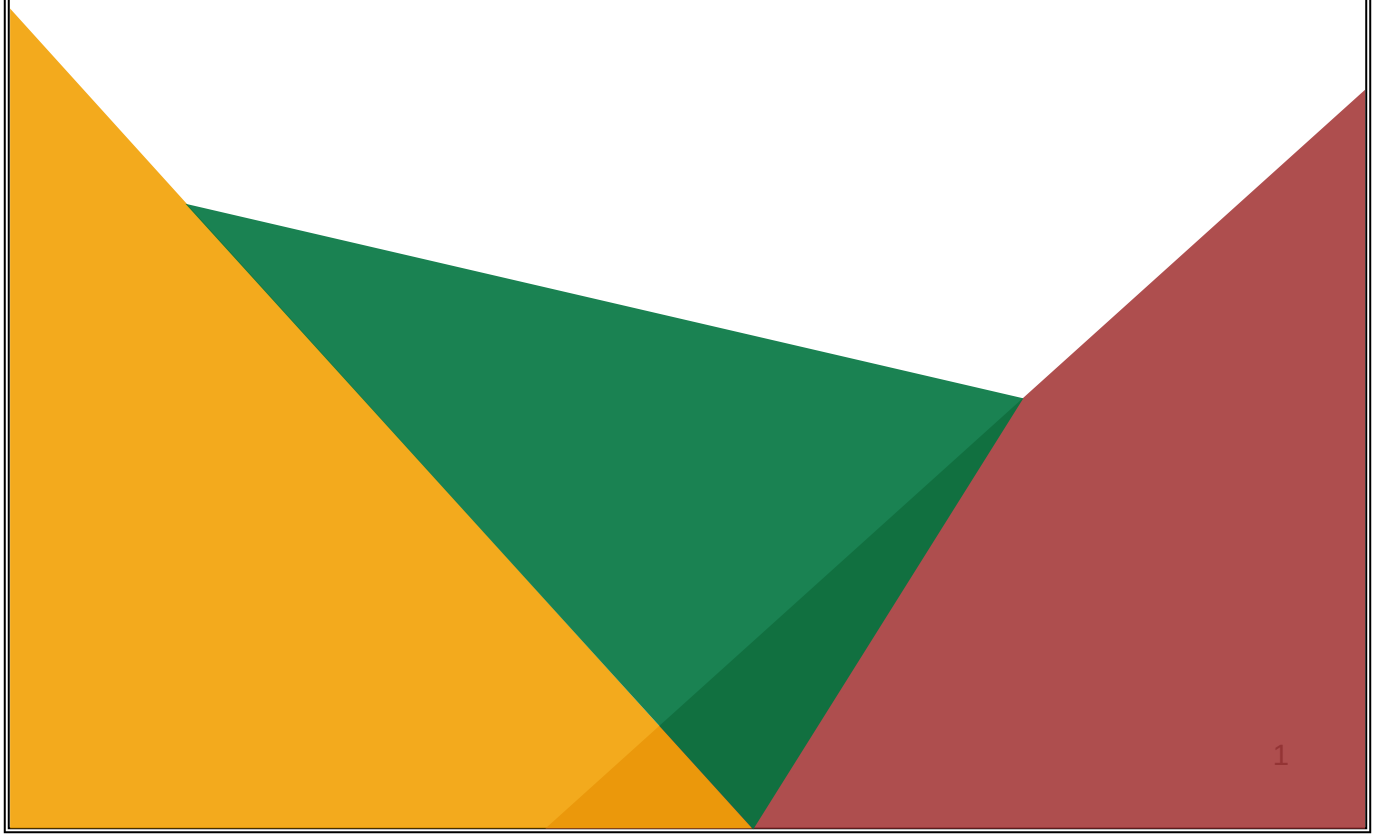
PRESCRIPTION:
STAY AT HOME

DISEASE:	COVID-19
PATIENT NAME:	EVERYONE
TAKE:	DAILY

Review of Western Australia's Hotel Quarantine Arrangements

Final Advice

Tarun Weeramanthri, 12 March 2021



Scope of this Advice

The Review of Western Australia's Hotel Quarantine (HQ) arrangements was announced on 1 February 2021, and commenced on 2 February 2021. It was commissioned by the Western Australian Government in light of the international COVID-19 situation, and the infection of a HQ worker, who was diagnosed with COVID-19 on 30 January 2021.

This new case led to a 5-day lockdown (31 January – 5 February 2021) in the Perth metropolitan, Peel and South West regions of WA. Intensive contact tracing and testing was undertaken in the community, and revealed no further cases.

The review was commissioned to 'identify opportunities for strengthening current processes and practices, and ensure the system is as robust as possible' (see Terms of Reference at Appendix 1).

The review is complementary to a parallel investigation (Case #903), not formed on the basis of a criminal investigation, undertaken by WA Police Force, to examine how the case contracted COVID-19, and to confirm the further movements and contacts of the case. A Briefing Note to the State Emergency Coordinator on this investigation was published on the WA Police Force website on 26 February 2021,[1] and is referred to later in this advice.

My first interim advice was provided on 4 February 2021, and recommended re-assessment and mitigation of the risk posed by ventilation in HQ sites, as well as other measures to strengthen infection prevention and control (IPC), as key means of controlling immediate public health risk. All recommendations were supported by the WA Department of Health and WA Police Force, and are in the process of being implemented.

The second interim advice (11 March 2021) covered the overarching governance, accountability, organisational and risk management structures, that direct and determine the operational systems and protocols in place across all HQ sites over the medium-long term. That advice contains a full description of review methods, which will not be repeated here.

This final advice is divided into two sections.

The first section provides a picture of quarantine arrangements in WA through a range of quantitative and qualitative data. An additional two recommendations are made covering data systems, gaps and quality, and information sharing.

The second section provides a consolidation of all findings and recommendations from the review as a whole, and explores ways to think about and design a fit for purpose quarantine system for the future.

I would like to thank the many people who have participated in this review process, and acknowledge their work in creating the HQ arrangements that have helped keep WA largely free from COVID-19 transmission over the last year.

I would also like to thank each member of the Review Secretariat drawn from three government departments: Angela Elder (DPC) for her leadership of the team, and coordination of efforts; Ed Raby (Health) for his scientific and IPC expertise, and for identifying the ventilation issue early on in the review; Lauren Tait (DPC) for governance and cross-jurisdictional analysis; Sarah Joyce (Health) for analysis of public health options; Pauline Grant (Police) for her detailed end-to-end process mapping and contributing to legislative and data analysis; and Rudyard Connery (DPC) for executive support and report

[1] WA Police Force, February 2021. WA Hotel Quarantine Review - COVID-19 - Case #903.

development. All members of the team participated in site visits and interviews, and robust group discussions. Each member contributed unique and valuable policy insights, and material for the written advice. Whilst we tested and formed our views collectively, I am responsible for the pitch of the findings and recommendations, including any shortcomings.

Data

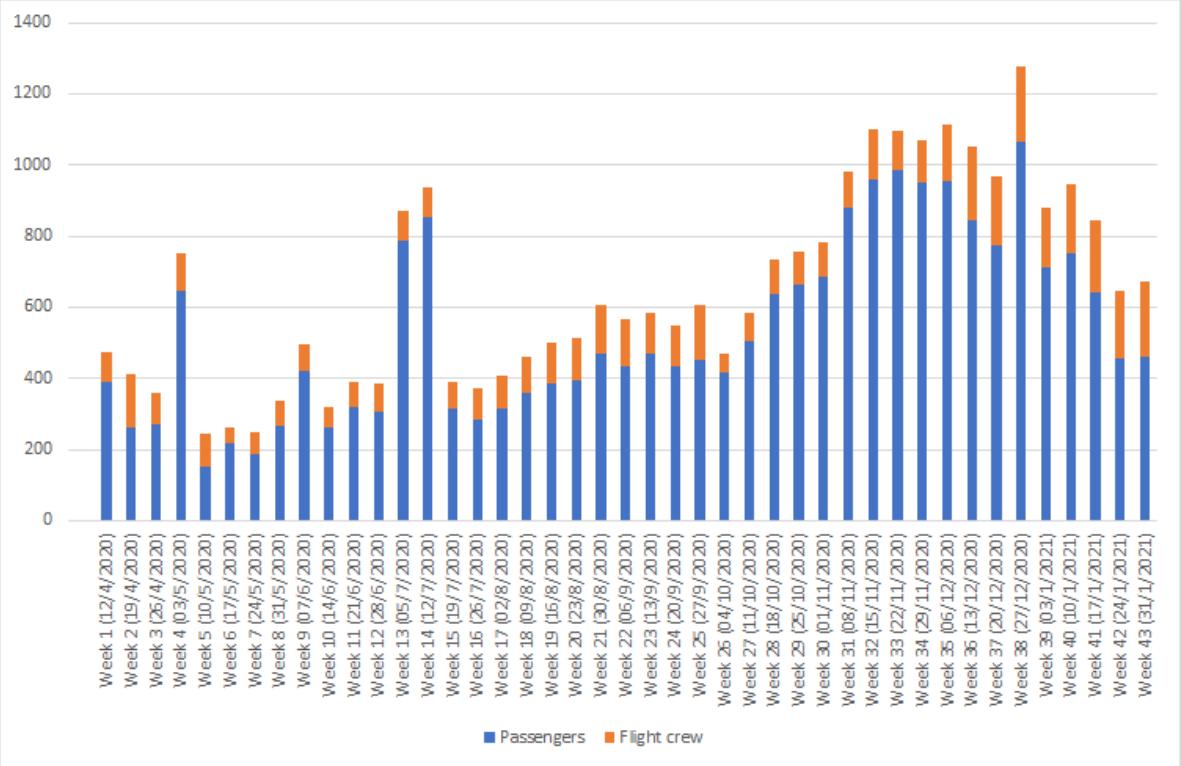
Quarantine statistics

Information on people arriving into Western Australia is critical to understanding the needs of people entering quarantine, whether this is changing, and how this might impact on-the-ground operations.

Throughput

Data on international arrivals by air into WA is collated by the WA Police Force through the Border Control Application (BCA). Since April 2020, just under 23,000 passengers, arriving by air from overseas, have been placed in HQ.[2] International flight crews, who are issued with directions to quarantine at a specified crew hotel until their departure flight, comprise approximately 17 per cent of all international arrivals by air. Trends in the number of international passenger and flight crew arrivals are illustrated in Figure 1.

Figure 1: Number of International Arrivals by Air Placed in HQ, April 2020 to 31 January 2021

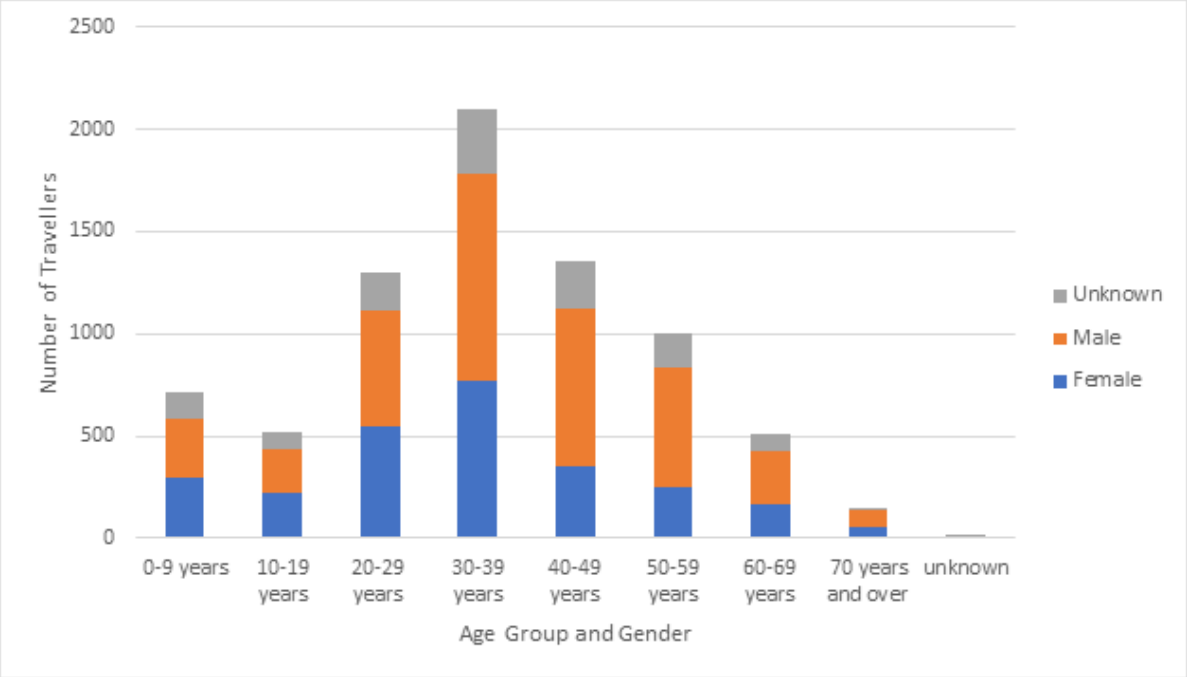


The BCA also collects self-reported demographic information, although this is unverified and some fields are not mandatory. Regardless, it provides some insight on the demographics of international arrivals to WA. Data for international travellers arriving by air between

[2] Over 37,000 people have been placed in hotel quarantine once we include arrivals from interstate and by sea.

14 November 2020 and 31 January 2021 indicates the largest cohort of passengers were recorded as male (49.2%), and remaining passengers were recorded as female (34.8%), or unknown (15.9%). Figure 2 indicates the gender and age bracket for these travellers.

Figure 2: Age and Gender of International Arrivals by Air, 14 November 2020 to 31 January 2021



Further review of younger travellers indicated that children (under 18 years) made up 11.7 per cent of the passenger arrivals. Although family status and travelling groups are not reported in the BCA, the data suggested that most children travelled with a parent, guardian or sibling and only six in the past fortnight were noted as unaccompanied.

The BCA records the point of embarkation for the last leg of a traveller's journey, which generally correlates to the flight number. The WA Police Force advise that the information on point of origin is captured through manual entry and unverified. Analysis of the available data, noting these limitations, indicates that a significant proportion of travellers' point of origin is the United Kingdom, Singapore, India, South Africa, Indonesia, USA and Hong Kong.

Exemptions from Hotel Quarantine

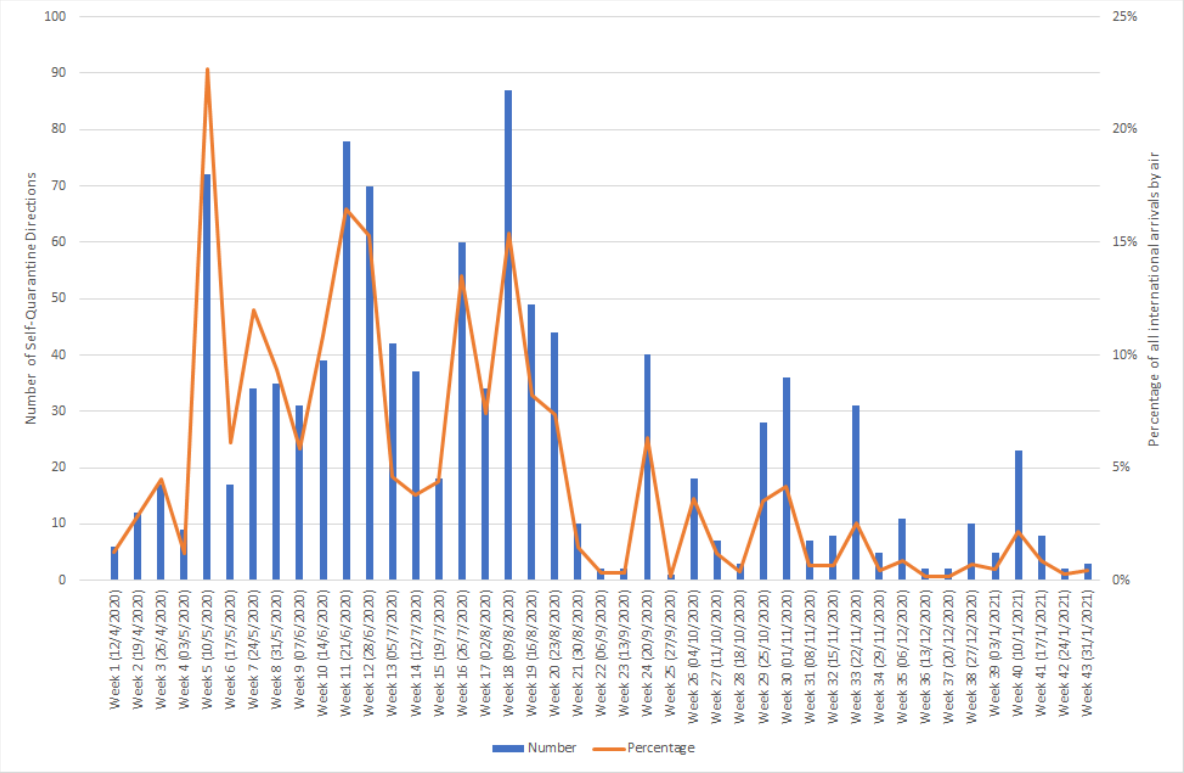
Whilst the majority of international travellers are subject to HQ, some travellers may quarantine at another hotel or suitable premises (self-quarantine), and have different transport, IPC and testing protocols. The main categories that are likely to be exempt from HQ are diplomatic passport holders, international flight crew who ordinarily reside in WA, and travellers who are exempt because of their employment (e.g. Australian Defence Force member and Commonwealth officials). Unaccompanied children may be allowed to quarantine at another location, but most will have a parent or guardian enter HQ with them. In exceptional circumstances, a person may be granted permission to leave HQ and quarantine at another location. A list of the criteria for these travellers and associated transport considerations is contained in Appendix 2.

Data on exemptions is captured by the BCA and figure 3 illustrates the trend of directions to self-quarantine issued to international arrivals by air since 12 April 2020, expressed as a count and percentage of all international arrivals.

Only 3.4 per cent of international arrivals by air have been directed to self-quarantine, and this has steadily decreased over time.

In the first three months of HQ arrangements being established, 8.2 per cent of international arrivals by air received a direction to self-quarantine. However, this has decreased to only 1.1 per cent since 1 November 2020.

Figure 3: Directions to Self-Quarantine for International Arrivals by Air, 12 April 2020 to 31 January 2021



COVID-19 Test Positivity

Pathology data is collected by the Department of Health and is updated live in PHOCUS, the data management system for cases and close contacts, with positive cases also being recorded in the WA Notifiable Infectious Diseases Database. A COVID-19 dashboard is also managed by the Department of Health and includes all pathology results, with data linkage used to verify and improve demographic data captured on the pathology forms.

Laboratories immediately email positive results for hotel guests to the Public Health Emergency Operations Centre (PHEOC) Surveillance team to commence contact tracing.

Of the 37,408 guests who have entered HQ since March 2020, 409 (1.1%) guests have become positive cases whilst in HQ.[3]

Guest experience of hotel quarantine

There is limited quantitative data available to describe the experiences of HQ guests. Several agencies receive complaints and feedback from guests but not all have formal

[3] Figure provided by Department of Health, 4 March 2021. This does not include flight crew but does include interstate arrivals who quarantined in a hotel.

recording systems in place. Some categorise and track the complaints, whilst others provide a thematic assessment.

The National Review of Hotel Quarantine proposed that guest experience should be considered a measure of quarantine system performance and improving the overall experience of HQ would likely lead to fewer complaints and mental health episodes.[4] Taking this a step further, a better guest experience with early identification of stressors could also lead to fewer incidents and breaches and thus should be considered as part of risk assessment and mitigation.

Health and Welfare Services

Health and wellbeing support services are primarily provided to HQ guests through phone screening, assessment and counselling.

Upon arrival at the hotel, all guests receive a set of Frequently Asked Questions, which provides a contact number for the on-duty triage nurse who can assist with:

- alcohol and tobacco withdrawal
- mental health support services and
- obtaining prescription medication

On-site medical staff at the hotel will contact all guests within the first couple of days to conduct a health check and assess the need for ongoing medical support,[5] including referral to the Health and Wellbeing Team.[6]

The Health and Wellbeing Team is a multi-disciplinary and culturally diverse team of allied health professionals who provide mental health and psychosocial support. Clinicians are trained in the areas of acute mental health care, aged care and drug and alcohol counselling. Telephone interpreting services are utilised for all calls to non-English speaking guests. If not already referred by the on-site medical staff, the team will contact all guests within the first week of their stay.[7]

A Mental Health Assessment and Brief Intervention Team is available to provide telehealth psychiatry services if required.

The Department of Communities contact the guest at some time during their stay to provide a welfare support function and can also be reached via the 13 COVID line.

Data is collected by each service on their contacts with guests. However, there is no single integrated database that captures inputs from all health services for every guest.

Feedback from Guests

This review recognises the commitment from all hotel providers to deliver the best possible experience for guests. Examples included organised entertainment, menus to allow guests some choice and autonomy in an otherwise structured environment, recognition of special events and commemoration of quarantine completion.

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[4] Halton J. 2020. National Review of Hotel Quarantine.
[5] Guests contact on-site medical staff via phone with face-to-face visits initiated based on clinical need.
[6] Department of Health, 2021. Frequently Asked Questions for Hotel Guests.
[7] Department of Health, January 2021. COVID-19 Public Health Operations Standard Operating Procedures. Version 9.

However, the quarantine experience is still onerous for guests. A recent paper observed that when individuals do not have access to coping mechanisms, it can be much easier for stress levels to accumulate. In this situation, relatively minor stressors (e.g. quality of food) can become major sources of distress for the individual.[8]

Guest feedback on their experience is not actively sought but there are several avenues by which guests may provide feedback and complaints. This review requested information captured by the 13 COVID line as well as direct contacts made with the Human Rights Commission, Ombudsman WA, WA Police Force, Chief Medical Officer of the Mental Health Commission and the Chief Psychiatrist. The quality and representativeness of each data source varies but a preliminary analysis uncovered several common themes to guest feedback:

- Unhappiness with requirement to be placed in HQ
- Suitability of accommodation (lack of fresh air, size of room for families and those with special requirements)
- Quality of accommodation services (food, cleaning and linen)
- Cost of quarantine and payment options particularly as it related to standard of service
- Issues around access to health services (both clinical and mental health)
- Communication and lack of clear information regarding quarantine stay
- Concern about isolation and one's own or other's mental health

There is no formal process currently in place to elicit feedback from guests and information that is captured is not routinely shared between agencies. In the time available, this review was unable to adequately explore many of the issues identified in the thematic analysis and did not speak with guests. However, understanding the guest experience will help identify opportunities for further improvement.

Incidents

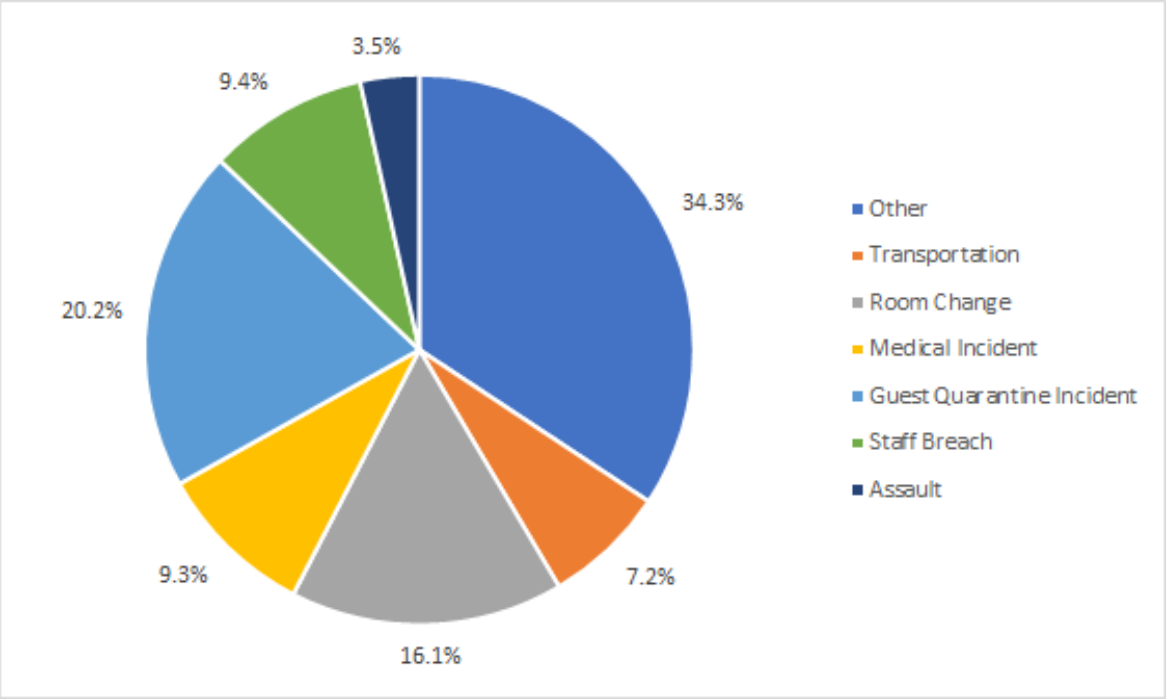
The State Health Incident Coordination Centre (SHICC) maintains a log of all incidents and issues observed and reported by hotel staff, security, SHICC, PHEOC, and WA Police Force. A standardised form to capture information provides a consistent and reliable dataset to help inform continuous quality improvement across the system.

Since April 2020 there have been 2,360 incidents and issues logged across HQ sites.[9] These can range from severe (e.g. attempted escape or assault of staff) to more minor (e.g. room change). Figure 4 illustrates the frequency of different types of incidents captured in this system.

Approximately one in three incidents were classified as Other (e.g. items being left outside of quarantine room or contraband intercepted during delivery). One in five incidents related to a guest quarantine incident which was defined as the guest not being compliant with the regulations (e.g. opening the door or coming out of their room) and one in six incidents related to a room change or hotel move.

[8] Jurblum M, Ng CH, Castle DJ. 2020. Psychological consequences of social isolation and quarantine: Issues related to COVID-19 restrictions. AJGP. 49(12). doi: 10.31128/AJGP-06-20-5481.
[9] Data provided by Department of Health.

Figure 4: Incidents Logged in Hotel Quarantine, by Incident Type, April 2020 to January 2021



A strong culture of reporting was evident,[10] and incidents are discussed in regular weekly briefings with HQ staff and security. It was not clear if all providers including on-site medical teams attend these briefings.

After a recent review of the data, amendments to the form were made to provide further detail on each incident. This will facilitate more in-depth analysis in the future.

Breaches

A quarantine breach refers to an arrest, summons, infringement or caution relative to not complying with a direction issued under the *Emergency Management Act 2005*. They represent the most serious attempts to evade HQ and may, in some cases, reflect underlying mental health conditions and/or responses to extreme stress.

WA Police Force monitor data on all quarantine breaches. Data indicates that very few quarantine breaches relate to people diagnosed with COVID-19 or isolating due to close contact or pending test results.

Only 6.7 per cent of quarantine breaches are related to people in HQ.[11] The average number of breaches from HQ is less than one per week[12] and there has been no significant changes over time. In most weeks, there are no breaches recorded.[13]

[10] Security officers are lawfully obliged to complete an incident report for each matter under s.78 of the *Security and Related Activities Control Act 1996.*
[11] Of the 507 breaches up until 31 January 2021, only 34 relate to hotel quarantine.
[12] Note that this reflects number of breaches as opposed to number of individuals. One individual may result in multiple breaches recorded.
[13] No breaches recorded in 22 weeks (of 43).

Hotel Quarantine Workforce

At a systems level, there is a range of non-workforce data available within SHICC, including risk registers, PPE supplies and data from internal audits and inspections.

However, there is very little integrated information available centrally that can identify the current workforce and monitor staff compliance with training, testing, contractual obligations or legal directions.

Multiple service providers, sub-contractors and agencies are involved in the delivery of HQ arrangements and each employer group holds information on their own employees.

This limits the capacity of SHICC to 'close the loop' on assurance.

System Performance

Reliable, timely and complete data is critical to good planning, preparedness, assessment of risk, end-to-end assurance, and monitoring of system performance. Agencies rely on quality data in order to be agile and responsive. Furthermore, a culture of data sharing stimulates crucial conversations to develop a mutual understanding of risk.

This review observed that information on guests, from arrival at the airport to departure from the hotel, is captured through multiple datasets, and held by different agencies, at various points in the quarantine journey. Quality of the data collected varied considerably.

There was a notable gap in data on family size and port of origin for incoming arrivals. Port of origin data could inform risk assessments of incoming travellers both in terms of current infection rates and future vaccination rates, as well as indicate potential language and cultural needs.

Information on guest contacts with on-site medical teams and other support services was fragmented except for cases and close contacts. Daily briefings occur between SHICC and PHEOC to discuss current guests and those with additional health or wellbeing needs are often flagged here, but there is no centralised database to capture inputs from all providers nor to share this information quickly and effectively.

A strong patient or customer focus is a key feature of good clinical governance and should be the foundation for any quarantine program. In a clinical setting, the patient experience is actively sought and informs continuous improvement practices and overall system performance. With no systematic invitation for guest feedback, there is limited data available. Information captured is spread across multiple agencies making it difficult to have clear visibility of the overall guest experience.

SHICC have established clear processes to report incidents and use this data to inform continuous improvement. This approach now needs to be applied across all aspects of guest experience.

While data on breaches demonstrated that the number was low, the nature and scale of breaches was recognised in the National Review of Hotel Quarantine as an important measure of system performance, and this information should continue to be monitored for this purpose.

There is currently no centralised source of information on HQ staff and therefore limited measurement, or at least limited visibility, of compliance with training, IPC protocols and testing requirements. NSW has a single integrated data system on HQ staff, linked to their

usual clinical information systems. This has recently been expanded to track and provide assurance around HQ worker mandatory testing and vaccination.

Current fragmentation and, in some cases, the lack of data, reflects the urgency with which HQ arrangements were initially set up and the involvement of multiple agencies with different existing platforms or software. However, an opportunity now exists to streamline the data processes and inputs. NSW and Victoria have recently both moved to establish integrated, centralised data systems which will give them better oversight of HQ guests and workers. Significant data expertise exists across the Department of Health, WA Police Force and other government agencies which could guide the development of such a system.

Data Recommendations

1. HMA/SHICC to create an integrated data system to cover quarantine guests and all quarantine workers.

   This includes, but is not limited to:

   a. defining key compliance metrics, particularly around training, testing, contractual obligations, legal directions and offering of COVID-19 vaccinations to workers, as well as metrics on guest experience
   b. developing centralised registers of HQ guests and workers
   c. regular and consistent reporting of metrics across all HQ sites

2. HMA/SHICC to identify data gaps, address data quality concerns and commit to data sharing arrangements with relevant partner agencies.

   As data gaps and/or concerns with data quality are identified, solutions should be sought as a matter of priority.

   Data privacy concerns can be addressed in the establishment of formal data sharing agreements.

Consolidation of Review Advice

Advice on Ventilation

I will begin by revisiting the interim advice provided on 4 February 2021, in light of subsequent work done by this review and others.

That advice provided three recommendations relating to ventilation risk in the HQ environment: the instigation of an expert review of airflow and ventilation in all WA quarantine hotels; a higher level of protection for all workers at sites where ventilation may be problematic or not adequately assessed; and consideration of ventilation adequacy when requisitioning quarantine hotels.

The WA Department of Health has commissioned an independent team to conduct ventilation assessments on all SHICC quarantine hotels. These assessments have not been released publicly but the review team has been briefed on the first such assessment, and I have no reason to resile from any of the recommendations made on 4 February 2021.

It should also be noted that this review was commissioned in parallel to an investigation conducted by WA Police Force (Case #903). A Briefing Note to the State Emergency Coordinator on this investigation, published on the WA Police Force website on 26 February 2021, confirmed the feasibility of airflow from a guest's room to the corridor contributing to how Case #903 contracted COVID-19, and did not identify any more plausible explanation. The Briefing Note included consideration of greater use of CCTV on all floors of HQ facilities, and the merits of changing the seating position of security guards away from COVID-positive guest rooms, taking into account airflow direction.

In the written advice of 4 February 2021, I stated that airborne transmission from a hotel guest to Case #903 is considered 'likely', and I have no reason to change that assessment.

In early March 2021, the World Health Organization (WHO) published a 'Roadmap to improve and ensure good indoor ventilation in the context of COVID-19', which includes all quarantine facilities as part of a higher category of 'healthcare' facilities, and stresses the importance of ensuring air flows from clean to non-clean areas, not the other way round.[14]

The WHO ventilation requirements for quarantine facilities are also consistent with Victorian Health Technical Advice for ventilation for airborne infectious diseases, recently updated in light of COVID-19.[15]

Therefore, WA should use the expertise and learnings from its ventilation assessments of HQ sites to immediately establish ventilation criteria, assess existing and future sites as either compliant or not compliant with such criteria, and choose sites or introduce modifications accordingly. This is essentially an expansion of the third recommendation in the interim advice of 4 February 2021, so will not be separately made. It is consistent with the AHPPC statement on National Hotel Quarantine Principles (December 2020), which includes a principle that facilities for HQ must be selected against specific criteria which reduce the risk of transmission of COVID-19. This includes consideration of the hotel environment and its suitability for IPC.[16]

[14] World Health Organization, 2021. Roadmap to improve and ensure good indoor ventilation in the context of COVID-19.
[15] Victorian Health and Human Services Building Authority, November 2020. HVAC System Strategies to Airborne Infectious Outbreaks, Health Technical Advice, HTA-2020-001-Rev B.
[16] Australian Health Protection Principal Committee (AHPPC), December 2020. Statement on Australia's National Hotel Quarantine Principles.

Thematic Findings

As required by the Terms of Reference of this review, ongoing advice, both verbal and written, has been provided over a six-week period to inform HQ arrangements, identify opportunities for improvement, and allow for quick adjustments as needed.

For example, most recommendations from Interim Advice provided on 4 February 2021 have already been substantially implemented (see responses from WA Health and WA Police Force), and most recommendations in Interim Advice #2 and this Final Advice have been canvassed widely, and some have been agreed to already.

The methodology of this review was constructed with an underlying continuous improvement philosophy, and allowed for frank and open discussions throughout, for which we thank all participants. Compared to a traditional review process, where recommendations are made only at the end, and are contained in a final report, this review process has contributed to an ongoing change process, and the final output will be a compilation of the sequential pieces of written advice.

As a group, the review team have identified a number of thematic findings that apply across the current HQ arrangements.

1. Quarantine is a public health function, where the assumption must be that everyone is COVID-positive from arrival in Australia to departure from quarantine; hotels are simply convenient sites for that function and IPC practices within hotels must meet health care standards for COVID-positive patients.
2. There is a high and unwarranted level of variability in practice and protocols for PPE use, training and COVID-19 testing, and a need for greater consistency based on assessment of public health risk, rather than employment arrangements (see Appendix 3).
3. The same risk controls need to apply to all workers across the HQ arrangements with the same risk exposure.
4. Roles and responsibilities need to be clarified and documented.
5. There is a need for strategic thinking in a changing environment, where multiple risks (health, social and economic) are shared and joined across government.
6. The lack of an integrated data system is hindering identification and management of risk, and monitoring of compliance with training, testing and directions.
7. Greater on-site HMA/SHICC presence is necessary to provide assurance that practice on the ground matches program design.
8. A culture of collaboration is needed across the whole of the HQ system, to support a workplace culture of safety central to clinical governance.
9. Continuous improvement is only possible with active encouragement of feedback from all stakeholders, periodic involvement of external auditors, and a structured inclusive ‘lessons learnt’ approach.

The overarching finding is that in this protracted emergency, the current set of patchwork arrangements, though sanctioned through legislation, has led to a fragmented end-to-end system in terms of practice and protocols, workforce, workplaces and data.

The overarching recommendation is to transition to a ‘one program, one culture’ model with strengthened corporate and clinical governance, in order to enhance assurance and manage current and future risks.

Consolidated Recommendations

Overarching recommendation

HMA/SHICC to transition hotel quarantine to a ‘one program, one culture’ model with strengthened corporate and clinical governance, in order to enhance assurance and manage current and future risks.

Advice #1 Ventilation recommendations

1. WA Government to instigate an immediate independent expert review of airflow and ventilation in all WA quarantine hotels, to inform any risk mitigation strategy for airborne transmission from infected guests to quarantine workers, and determine appropriate ventilation standards.
2. In the meantime, SHICC to require all quarantine centre workers to wear face masks at all times while indoors, and strongly consider a higher level of respiratory protection (e.g. P2/N95 masks and/or eye protection) for all workers at sites where ventilation may be problematic or not adequately assessed.
3. Consider ventilation adequacy when requisitioning quarantine hotels.

Advice #1 Other non-ventilation recommendations

4. Introduction of daily shift salivary PCR testing, in addition to weekly nasopharyngeal swab PCR.
5. Quarantine centre workers to not work at other sites, and not to be financially disadvantaged by such a restriction.
6. SEC to strengthen the Direction, and SHICC to strengthen protocols for testing and medical care of quarantine workers who develop any symptoms or fall ill.
7. SHICC to:
    a. Monitor and provide system assurance that all HQ staff undergo regular face-to-face IPC training.
    b. Introduce periodic external IPC safety audits (as recommended by the Victorian COVID-19 Hotel Quarantine Inquiry) to complement the current weekly internal safety audits at each site.

Advice #2 - Governance

1. SEC to create a new Quarantine Advisory Panel within the existing EM framework.
2. HMA/SHICC to strengthen the existing HQ model by appointing on-site managers to cover all HQ sites and Perth Airport.
3. HMA/SHICC to bolster its end-to-end assurance capacity by drawing further on clinical governance expertise within WA Health to develop a specific clinical governance framework for the entire quarantine process.
4. HMA/SHICC to review roles and responsibilities for hotel management and clarify these arrangements in writing.
5. WA Government to negotiate immediately with the Commonwealth to re-establish the provision of passenger manifests.
6. HMA/SHICC to undertake a comparative risk assessment for Quarantine Centre Drivers to determine appropriate testing protocols.

Final Advice - Data

1. HMA/SHICC to create an integrated data system to cover quarantine guests and all quarantine workers.
2. HMA/SHICC to identify data gaps, address data quality concerns and commit to data sharing arrangements with relevant partner agencies.

Appendix 4 outlines the recommendations as they relate to the scope of this review.

Given the limited time frame for this review, we were unable to do justice to the critical mental health and wellbeing aspects of HQ. Nor were we able to speak directly with, or obtain structured input from HQ guests or staff. These issues are addressed in the next section, as part of the discussion of what might change over the next year, and what might follow this review.

Redesigning the Quarantine Program in WA - from risk to opportunity

The HQ arrangements for international travellers to Australia were stood up with little notice in March 2020, as COVID-19 case numbers rose. Though a Commonwealth responsibility under the Constitution, states and territories agreed to take responsibility for implementation.

WA Government quickly put in place a series of formal and informal arrangements with a range of external providers, and managed the known public health risks in the HQ system, as well as a plethora of other COVID-related issues.

A year later, after successful control of COVID-19, the need for quarantine remains and the risk appetite for any community transmission in WA is close to zero.

This review has looked at the existing model of HQ in WA, and made a series of recommendations to strengthen it, and reduce any residual risks, particularly relating to ventilation.

We have argued strongly for a transition from the current patchwork quarantine arrangements to a ‘one program, one culture’ approach, on the basis of better management of current risks and heightened assurance.

But with vaccination against COVID-19 now rolling out in Australia, it is timely to look forward to the opportunities such a transition creates.

This review, and other reviews of HQ in Australia, have highlighted the importance of an optimal HQ environment that is supportive of the mental as well as physical health and welfare of HQ guests. The inherent isolation, loss of autonomy and uncertainty related to quarantine means that there will be continued demand for support services, and occasional breaches. Indeed, the HQ environment can be seen as a modifiable risk factor, and providing a supportive environment may help reduce the number of quarantine breaches, and hence be an important public health measure in and of itself.

Equally, if we view HQ as healthcare in a hotel environment, our concern should be as much for the staff as for the guests. This is an obvious occupational health and safety issue, but also a critical public health issue, as infection of HQ staff is the most likely route of transfer of COVID-19 from HQ guests into the community, even after all HQ staff are offered vaccination.

Therefore, a follow-up review of the HQ environment from the perspective of guest and staff safety and wellbeing is warranted. It could take 2-3 months to include time for detailed consultation with both guest and staff groups to elicit their experience, feedback and ideas for improvement. Such a review would also explore in detail the social and societal factors underpinning employment and workplace relations in the hotel, security, cleaning and catering professions that are at the frontline of HQ operations.

Over this next period, we are also likely to see a greater focus on continuous improvement across Australia, with learnings shared across jurisdictions, each operating different models, and the formation of an effective ‘community of practice’. Such sharing might occur at strategic, policy and operational levels. This type of learning needs to happen faster. Our review consultations with other jurisdictions were very informative, and a time-efficient way to exchange ideas on best practice. There will also be lessons to be learnt from the handful of other countries that have instigated HQ programs (e.g. New Zealand, Singapore, South Korea and Taiwan in our region).

In a usual short-lived emergency situation, debriefs and lessons learnt exercises are conducted routinely post-emergency. In this protracted emergency, equivalent learning processes need to be established while the emergency continues.

Change and innovation are constant features with COVID-19, as our understanding of the basic science evolves along with our evaluation of 'what works' in control measures. Our review focus was on making the existing HQ model in WA more effective, rather than exploring new models, but there were many issues that came up, such as 'hot hotels', new testing strategies and greater use of CCTV and other technologies, that warrant ongoing examination as possible modifications to the existing WA model. Other more radical changes, such as purpose-built quarantine sites, akin to Howard Springs in the NT, or utilisation of alternate existing sites, could also be examined.

This next six-month period is a window of opportunity to optimise HQ governance for the period that follows, which may include changes to the emergency management arrangements. The Quarantine Advisory Panel will be a critical new strategic element, and its membership and terms of reference should be aligned with any similar body set up to oversee vaccination rollout.

The period from the end of the initial vaccination rollout in Australia to a 'post-COVID' future could last years. In any scenario, quarantine will be required in some form, as it will be impossible to confidently exclude COVID-19 in all international travellers until transmission is reduced across the globe, vaccination is widespread in all countries and highly effective against all variants, and we have accurate tools to verify immunity. Surveillance for new strains will need to continue, and proof of vaccination alone will be insufficient to guarantee unrestricted entry to Australia.

In WA, the best defences against COVID-19 will remain borders, vaccination, quarantine, contact tracing and outbreak management (including lockdowns). And the effectiveness of each defence will determine the need for other measures, and the overall level of community protection.

It may be possible to return to a full state of economic normality with few if any state border restrictions, and an international quarantine system that is optimised to support the return of Australians living abroad, international students, seasonal workers, tourists and business visitors.

Quarantine, seen in this light, is a tool for recovery and an essential pillar of competitiveness and community confidence.

Quarantine remains a complex public health function, with strong program elements of logistics, security, compliance and risk management. It requires the highest levels of corporate and clinical governance, and continuous attention to fundamental IPC principles throughout the end-to-end process. It is government's responsibility, but requires private sector partnerships. It is mandated by law and restricts freedoms, but works best if supported willingly. Health is the obvious lead government agency but risks are shared across government. It requires planning, budgeting and contracting for workforce, operational and capital expenses. The daily operations focus is unrelenting, but agile strategic thinking, collaboration and communication are critical to evolve the program in a fast changing environment. Underlying it all are the human, social, behavioural and environmental determinants of success and failure.

These are not reasons to be overwhelmed but drivers to step back and design the very best program possible for this and future pandemics.

Appendix 1 Terms of Reference

Review of Western Australia's hotel quarantine arrangements

1 February 2021

Context:

The WA Government continues to review and refine the measures in place to protect Western Australians from the spread of COVID-19, which includes pursuing opportunities to strengthen the State's management of COVID-19.

Western Australia's hotel quarantine system has continuously improved since its inception, adopting lessons learnt from our own, and other jurisdictions', experiences. The system has successfully contained hundreds of COVID-19 cases since March 2020.

With ongoing, uncontrolled community transmission and unknown, highly transmissible variants of COVID-19 emerging outside of Australia, the international border represents the greatest threat to Australia, and hotel quarantine the greatest defense.

Purpose:

In light of the international COVID-19 situation, as well as the recent infection of a WA hotel quarantine worker, it is timely to review WA's hotel quarantine system to identify opportunities for strengthening current processes and practices and ensure the system is as robust as possible.

Professor Tarun Weeramanthri, drawing upon additional expertise as required, will lead an end-to-end review of the operation of WA's hotel quarantine system, from the arrival of passengers at Perth airport through to their departure from hotel quarantine.

Scope:

The Review is to provide a particular focus on:

- end-to-end operational processes, from arrival of passengers at an airport through to departure from hotel quarantine, including assurance processes
- infection control policies and processes including testing
- compliance with infection control policies and processes
- security overlays
- management and oversight of any external providers, including training prior to providing services associated with hotel quarantine
- roles and responsibilities of government agencies and other stakeholders
- information sharing between relevant entities
- health and wellbeing of hotel quarantine workers and guests

The following considerations will guide the Review:

- suitability of protocols to manage and mitigate infection risks, including the risks of emerging COVID-19 variants
- appropriateness and transparency of governance arrangements, including chains of command and decision making processes
- implementation of any relevant existing review recommendations including the National Review of Hotel Quarantine system (also known as 'the Halton review')

- issues that have arisen in other jurisdictions, for example, the COVID-19 Hotel Quarantine Inquiry in Victoria
- consistency of the system with Australia's National Hotel Quarantine Principles.

Approach:

Professor Tarun Weeramanthri will lead the review, drawing upon the appropriate expertise as needed, including in infection prevention and control, public health and risk management.

A secretariat comprising officers from the Department of the Premier and Cabinet, the Department of Health and the WA Police Force will support Professor Weeramanthri undertake the Review.

The Review will engage with all relevant stakeholders to obtain information necessary to assess the above. In doing so, consideration must be given to any impost provided on those staff continuing to work on the COVID-19 response, particularly any staff on the frontline.

In addition to stakeholder engagement, the Review will undertake research and analysis, including of other jurisdictions' experiences and relevant reviews and inquiries.

Reporting:

Commencing the week of 1 February 2021, Professor Weeramanthri will provide ongoing written advice on opportunities for improvement to the Director General of the Department of the Premier and Cabinet, with subsequent reporting to the Premier, the Emergency Management Team and, ultimately, State Disaster Council.

Appendix 2 Categories of International Travellers who are not Subject to Centre Quarantine Requirements

Category of Traveller	Application Process	Transport Requirements	IPC & Testing for Traveller	IPC & Testing for Transport
Diplomatic passports AHPPC agreement[17] allows self-quarantine	Overseen by the WA Police Force - Border and Quarantine Operations Superintendent.	Private vehicle; taxi; rideshare (excludes mass public transport).	Facemask while travelling to premises. 11th Day testing protocol at nearest COVID-19 Clinic	Driver must wear face mask. Nil testing requirement.
International Flight Crew (not ordinarily WA resident)	Processed through G2G Pass to quarantine at crew hotel until departing on outbound flight	Vehicle provided by employer.	Facemask in terminal and crowded areas. Testing on arrival and 7th day if still in WA.	Driver must wear facemask and comply with rolling 7 day testing protocol.
International Flight Crew (ordinarily WA resident)	Processed through G2G Pass to self-quarantine at suitable premises	Private vehicle; taxi; rideshare (excludes mass public transport).	Facemask in terminal and crowded areas. Testing on arrival and 7th day if still in WA.	Driver must wear face mask. Nil testing requirement.
Requests on **compassionate grounds**	Requests must be approved by SHICC before further Direction issued by police	May be specified in further direction	Likely testing at HQ within 48 hrs of arrival and 11th Day testing protocol at nearest COVID-19 Clinic.	Nil requirements unless specified in further direction.
Unaccompanied Children	SHICC may approve an unaccompanied child for self-quarantine with their parents. In most cases, the parent will enter quarantine with the child.	Private vehicle; taxi; rideshare (excludes mass public transport).	Facemask while travelling to premises. 11th Day testing protocol at nearest COVID-19 Clinic	Driver must wear face mask. Nil testing requirement.
Exempt from Quarantine, e.g. ADF member, commonwealth officials	Processed through G2G Pass in consultation with their respective organisations	As agreed with their respective organisations	Facemask while travelling to premises. 11th Day testing protocol at nearest COVID-19 Clinic	Driver must wear face mask. Nil testing requirement.

[17] HPPC agreement Coronavirus (COVID-19) advice for international travellers: Recommended quarantine exemptions for some other travellers.

Appendix 3 Table of PPE Requirements for Service Providers and Agencies Operating within the HQ System as of 8 February 2021

Agency	Surgical Mask	Gloves	Eye Protection	Gown/ Coveralls
Perth Airport (T1 International)				
Australian Border Force (ABF)	✓	✓[a]	✓[b]	✗[c]
Dept. Agriculture Water and Environment (DAWE)	✓	✓[a]	✓[b]	✗[c]
Airport Cleaning Staff	✓	✓	✓	✓
Clinical Health Screen Staff (incl. co-located DAWE)	✓	✓	✓	✓
Dept. of Communities Welfare Officers	✓	✓	✗	✗
Ground Crew - airline staff	✓	✓[d]	✓	✗
Ground Crew - baggage handlers	✓	✓[d]	✓	✗
Ground Crew - support staff	✓	✓[d]	✓	✗
Other agencies involved with processing flights	✓	✗	✓[e]	✗
WA Police Force/AFP	✓	✓[f]	✓	✗
Escort to Hotels				
Transperth (Swan Transit)	✓	✓[d]	✓	✗
WA Police Force – escorting Transperth	✓	✓[f]	✓	✗
Hotel Quarantine[18]				
Hotel Staff - Check in	✓	✗	✗	✗
Hotel Staff - Luggage handling	✗	✓	✗	✗
Hotel Staff - Meal delivery	✓	✓	✗	✗
Hotel Staff - Waste removal	✓	✓	✗	✗
Hotel Staff - Laundry collection	✓	✓	✗	✗
Hotel Staff - Cleaning (vacate)	✓[g]	✓[g]	✓[g]	✗
Hotel Staff - Maintenance (urgent)	✓	✓	✓	✓
Hotel Staff - Other facility staff	✗	✗	✗	✗
Health Service Providers - Routine care[19]	✓	✓	✓or visor	✓
Health Service Providers - Aerosol generating proc.	P2/N95	✓	✓	✓
Security - Guard in high risk location[20h]	✓	✗	✓	✗
Security - Guard in other location	✗	✗	✗	✗
Security - Crowd controller[21]	✓	✓	✓	✗
WA Police Force - Attending non-compliant guest[22]	✓	✓	Visor	✓

(Recommended at a national level; b) If physical distancing cannot be maintained; c) If need to board; d) Contact with pax/belongings expected; e) When pax in vicinity; f) If physical contact with pax/belongings; g) Pertains to chemicals for cleaning.; h) Changed February 2021.

[18] Department of Health, December 2020. Infection prevention and control guidelines for state quarantine facilities V9.
[19] Department of Health, December 2020. Information for clinical teams attending to guests who are undergoing 14 day quarantine in hotels and other accommodation.
[20] Advice from Department of Health, 8 Feb 2021.
[21] Security Contractor Standard Operating Procedures.
[22] Email direction from Superintendent Border & Quarantine Operations, 7 Jan 2021.

Appendix 4 Terms of Reference against Recommendations

Review Scope	Review Recommendation
End-to-end operational processes, from arrival of passengers at an airport through to departure from hotel quarantine, including assurance processes	**Advice #1 Recommendation 7**: SHICC to: A) monitor and provide system assurance that all HQ staff undergo regular face to face IPC training. B) introduce periodic external IPC safety audits (as recommended by the Victorian COVID-19 Hotel Quarantine Inquiry) to complement the current weekly internal safety audits at each site. **Advice #2 Recommendations 1-4:** 1. SEC to create a new Quarantine Advisory Panel within the existing EM framework. 2. HMA/SHICC to strengthen the existing HQ model by appointing on-site managers to cover all HQ sites and Perth Airport 3. HMA/SHICC to bolster its end-to-end assurance capacity by drawing further on clinical governance expertise within WA Health to develop a specific clinical governance framework for the entire quarantine process. 4. HMA/SHICC to review roles and responsibilities for hotel management and clarify these arrangements in writing. **Final Advice data recommendations**: 1. HMA/SHICC to create an integrated data system to cover quarantine guests and all quarantine workers. 2. HMA/SHICC to identify data gaps, address data quality concerns and commit to data sharing arrangements with relevant partner agencies.
Infection control policies and processes including testing and compliance with infection control policies and processes	**Advice #1 all recommendations:** *Ventilation recommendations* 1. WA Government to instigate an immediate independent expert review of airflow and ventilation in all WA quarantine hotels, to inform any risk mitigation strategy for airborne transmission from infected guests to quarantine workers, and determine appropriate ventilation standards. 2. In the meantime, SHICC to require all quarantine centre workers to wear face masks at all times while indoors, and strongly consider a higher level of respiratory protection (e.g. P2/N95 masks and/or eye protection) for all workers at sites where ventilation may be problematic or not adequately assessed. 3. Consider ventilation adequacy when requisitioning quarantine hotels. *Other non-ventilation recommendations* 4. Introduction of daily shift salivary PCR testing, in addition to weekly nasopharyngeal swab PCR. 5. Quarantine centre workers to not work at other sites, and not to be financially disadvantaged by such a restriction. 6. SEC to strengthen the Direction, and SHICC to strengthen protocols for testing and medical care of quarantine workers who develop any symptoms or fall ill. 7. SHICC to: A) monitor and provide system assurance that all HQ staff undergo regular face to face IPC training. B) introduce periodic external IPC safety audits (as recommended by the Victorian COVID-19 Hotel Quarantine Inquiry) to complement the current weekly internal safety audits at each site.

	Advice #2 Recommendation 3: HMA/SHICC to bolster its end-to-end assurance capacity by drawing further on clinical governance expertise within WA Health to develop a specific clinical governance framework for the entire quarantine process. **Advice #2 Recommendation 6:** HMA/SHICC to undertake a comparative risk assessment for Quarantine Centre Drivers to determine appropriate testing protocols and other risk controls. **Final Advice data recommendations**: 1. HMA/SHICC to create an integrated data system to cover quarantine guests and all quarantine workers. 2. HMA/SHICC to identify data gaps, address data quality concerns and commit to data sharing arrangements with relevant partner agencies
Security overlays	**Advice #1 Recommendation 2:** In the meantime, SHICC to require all quarantine centre workers to wear face masks at all times while indoors, and strongly consider a higher level of respiratory protection (e.g. P2/N95 masks and/or eye protection) for all workers at sites where ventilation may be problematic or not adequately assessed. **Advice #1 Recommendations 4-7:** 4. Introduction of daily shift salivary PCR testing, in addition to weekly nasopharyngeal swab PCR. 5. Quarantine centre workers to not work at other sites, and not to be financially disadvantaged by such a restriction. . SEC to strengthen the Direction, and SHICC to strengthen protocols for testing and medical care of quarantine workers who develop any symptoms or fall ill. 7. SHICC to: A) monitor and provide system assurance that all HQ staff undergo regular face to face IPC training. B) introduce periodic external IPC safety audits (as recommended by the Victorian COVID-19 Hotel Quarantine Inquiry) to complement the current weekly internal safety audits at each site. **Advice #2 Recommendation 2:** HMA/SHICC to strengthen the existing HQ model by appointing on-site managers to cover all HQ sites and Perth Airport.
Management and oversight of any external providers, including training prior to providing services associated with hotel quarantine	**Advice #1 Recommendation 7:** SHICC to: A) monitor and provide system assurance that all HQ staff undergo regular face to face IPC training. B) introduce periodic external IPC safety audits (as recommended by the Victorian COVID-19 Hotel Quarantine Inquiry) to complement the current weekly internal safety audits at each site. **Advice #2 Recommendation 2:** HMA/SHICC to strengthen the existing HQ model by appointing on-site managers to cover all HQ sites and Perth Airport **Final Advice data recommendation 1:** HMA/SHICC to create an integrated data system to cover quarantine guests and all quarantine workers.
Roles and responsibilities of government agencies and other stakeholders	**Advice #2 Recommendation 2:** HMA/SHICC to strengthen the existing HQ model by appointing on-site managers to cover all HQ sites and Perth Airport. **Advice #2 Recommendation 4:** HMA/SHICC to review roles and responsibilities for hotel management and clarify these arrangements in writing.

Information sharing between relevant entities	**Advice #2 Recommendation 5:** WA Government to negotiate immediately with the Commonwealth to re-establish the provision of passenger manifests. **Final Advice data recommendations**: 1. HMA/SHICC to create an integrated data system to cover quarantine guests and all quarantine workers. 2. HMA/SHICC to identify data gaps, address data quality concerns and commit to data sharing arrangements with relevant partner agencies.
Health and wellbeing of hotel quarantine workers and guests	**Advice #2 Recommendation 2:** HMA/SHICC to strengthen the existing HQ model by appointing on-site managers to cover all HQ sites and Perth Airport. **Advice #2 Recommendations 5:** SEC to create a new Quarantine Advisory Panel within the existing EM framework. **Final Advice data recommendation 1**: HMA/SHICC to create an integrated data system to cover quarantine guests and all quarantine workers.

Government of **Western Australia**
Department of **Health**

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Dear Premier

VENTILATION REVIEW OF QUARANTINE HOTELS

The Review of Western Australia's Hotel Quarantine arrangements by Professor Tarun Weeramanthri was announced on 01 February 2021, in light of the infection of a hotel quarantine worker (Case 903) on 30 January 2021. On 04 February 2021, Professor Weeramanthri provided interim advice, which included advice on ventilation systems. The advice recommended that the Western Australian (WA) Government instigate an immediate independent expert review of airflow and ventilation in all WA quarantine hotels, to inform any risk mitigation strategy for airborne transmission from infected guests to quarantine workers and determine appropriate ventilation standards (Recommendation 1), and consider ventilation adequacy when requisitioning quarantine hotels (Recommendation 3). Glossop Consultancy was contracted to undertake an occupational hygiene assessment, initially of the Four Points Sheraton Hotel and then of the remaining 9 hotels (8 currently in use and 1 proposed replacement hotel – Adnate Hotel). PDF Engineering was also contracted to provide engineering advice as part of a mechanical services ventilation review.

On receipt and analysis of the initial report on the Four Points Sheraton, WA Health recommended to the State Government on 24 February 2021 that the Four Points be retained until at least the Adnate Hotel had been procured, the hotel be utilised for low risk seasonal workers from Pacific countries and the retention of the hotel be reconsidered once the review of all hotels had been considered. This was agreed, and two groups of seasonal workers have now completed hotel quarantine successfully, with a further group expected shortly.

The initial review was received on 10 March 2021 and, after initial analysis, WA Health representatives met with the consultants on 23 March 2021 to clarify different views between the consultants and the recommendations within the reports. A final report was provided on 31 March 2021. After analysis of the reports, a summary report (Attachment A) and SHICC assessment (Attachment B) was submitted to the Chief Health Officer for consideration on 08 April 2021.

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The summary report notes that PDF Engineering and Glossop Consultancy have not identified flaws or faults in the air handling systems of any of the hotels that necessitate the removal of hotels from quarantine use. The recommendations are designed to maximise what is considered internally to be good practice supported by the World Health Organisation to minimise risk of transmission.

The following measures were recommended for implementation across all state quarantine hotels, but were seen to be particularly important to mitigate risks for hotels in the amber and red category identified in the Glossop Consultancy report.

1. Administrative measures

a. moving or eliminating guard stations; and/or
b. replacement of security guard by CCTV;
c. connecting rooms to be used for family units or as single room occupancy (using one room of the two rooms); and
d. Ongoing iterative review of training/education in infection control for security guards, hotel staff including the use of PPE.

2. Engineering measures

a. use of HEPA units in rooms with positive cases;
b. operable windows to be closed and secured, so as to maintain a consistent pressure in the rooms; and
c. regular maintenance checks of supply and exhaust room ventilation systems.

After review, I provided further comments on the reports, assessments and the proposed next steps on 14 April 2021 (Attachment C). I noted that the SHICC assessment had provided a risk stratification of the 10 hotels concerned, including 3 moderate risk and 3 higher risk hotels, and that these risks could be mitigated either by closure or by application of various administrative or engineering measures, some of which have been or are being implemented. It was also acknowledged that the SHICC only has the capacity to manage up to nine hotels due to staffing, availability and other Covid-19 related priorities. It is also understood that the State Government wishes to bring in a further 900-1000 seasonal workers from low risk south-west Pacific countries, to supplement the 800 who have already arrived in 2021.

As the Adnate Hotel has now been procured and will be available from the beginning of May 2021, one of the higher risk hotels could be retired as a quarantine hotel. Assessment of the three higher risk hotels indicates that the Mercure Hotel is probably the most difficult to mitigate, given positive pressure rooms, opening windows and the age of the facility. The other two higher risk hotels (Four Points Sheraton, Novotel Langley) are easier to mitigate utilising measures already implemented and the recommended measures. The Mercure Hotel, however, could be utilised as a self-quarantine facility for lower risk cohorts.

On these grounds, and after assessment of the analysis and the reports, the following is proposed:

- the administrative and engineering recommendations are agreed and will be progressively implemented across all quarantine hotels;

- the Four Points Hotel will be retained, permanent Closed Circuit Television (CCTV) will be installed, to supplement the temporary CCTV in place, by mid-June and the Hotel will be transitioned back to a normal SHICC hotel;
- the Mercure Hotel will be closed as a SHICC hotel, but CCTV installation will be completed, and consideration will be given to its use, at least in the interim, as a contracted hotel for low risk international seasonal workers;
- further consideration will be given to the timing of the transition from these respective hotels, noting timings of CCTV installation and the Adnate Hotel coming on board; and
- I will consult with the State Emergency Coordinator on the next steps for the proposed transitions, including any amendments to Directions or Public Health Orders.

Yours sincerely

Dr Andrew Robertson
CHIEF HEALTH OFFICER

16 April 2021

Department for Health and Wellbeing
CDCB COVID Operations Team

Report on Potential Intra-Medi-hotel Transmission of COVID-19 May 2021

25 May 2021

Government of South Australia
SA Health

Background

On 11 May 2021, SA Health COVID Operations was notified of a case of COVID-19 infection in an adult male whom became infectious whilst in Victoria. The guest (Case A) had recently arrived from overseas on 19 April 2021 (22 days prior to returning a COVID-19 positive result) and had been quarantining in a South Australian Medi-hotel between 19 April and 4 May 2021. Routine laboratory testing and mandatory quarantine had been undertaken and he was released from hotel quarantine on 4 May 2021. He returned to Victoria on 4 May 2021 and was tested after feeling unwell on 8 May 2021. An SMS had been sent to the individual as per standard protocol on day 17 (6 May 2021) to get tested if any symptoms of COVID-19 are experienced. On 11 May 2021, a positive COVID-19 result was received on the patient. Further laboratory testing using whole genome sequencing linked Case A to another person infected with COVID-19 (Case B). Case B was in the same Medi-hotel in South Australia and had been staying in an adjacent room to Case A until Case B was moved to a dedicated COVID-19 positive Medi-hotel. An investigation into the source of infection for Case A was undertaken, due to infection occurring after discharge from the Medi-hotel system and after 22 days after arrival in Australia from international travel.

Aim

To identify the potential source of infection for COVID-19 infection in a male that had recently arrived from overseas and became unwell 22 days after arrival in Australia. To provide recommendations to address identified risks with the aim to improve infection prevention and control practices and standardise practice across Medi-hotels where possible as per the SA Health Medi-hotel Continuous Quality Improvement (CQI) paradigm.

Investigation

The investigation combined several epidemiological methods to identify possible transmission and the associated risk factors. Expert advice was sought from epidemiologists, engineering and infection prevention and control professionals. Laboratory testing, including whole genome sequencing was used to link cases of infection. Epidemiological investigation was conducted by case interviewing, review of staff rostering, review of closed-circuit television (CCTV), telephone records, review of Safety Learning System (SLS) records, onsite investigations, and examination of ventilation and air-condition systems. Other returned travellers (194 guests) who were quarantining in the same facility were retested and there were no other suspected cross transmission cases detected. The 162 guests in the same facility who had resided on different floors were contacted and asked to retest and those on the same floor (32 people) were required to retest and undertake a further quarantine period. All staff (104 people) who worked in the facility during the time period of concern were also immediately tested and their compliance with mandatory Medi-hotel staff surveillance requirements assessed.

Findings

At the time of the investigation, there were four cases of COVID-19 in quarantining travellers that were genomically clustered with the same COVID-19 variant, B1.617.1.

1. Case A: onset of illness 8 May 2021. The laboratory result was positive in Victoria, 22 days after arrival from overseas. He had undertaken all quarantine requirements including 14 days Medi-hotel quarantine and providing three negative COVID-19 tests in South Australia, on day 1, day 5 and day 13 of quarantine.

2. Case B: onset of illness 3 May 2021. Was a close contact of Case C. Upon Case C becoming positive, Case B was moved to the room adjacent to Case A in the Medi-hotel to enable the shared room to be thoroughly cleaned. Case B would have been infectious from 1 May 2021. Case B was moved to the COVID-19 dedicated Medi-hotel facility on the 4 May 2021.

3. Case C: onset of illness 27 April 2021. Case C and B were sharing a Medi-hotel room. Case C was moved to the COVID-19 dedicated Medi-hotel facility on 29th April 2021.

4. Case D: onset of illness 19 April 2021. Case D arrived in Victoria on the 19 April 2021 and undertook quarantine in a Victorian quarantine facility. Case D flew from Singapore to Melbourne after flying from the Maldives to Singapore. Case A, B and C were also travellers on the Maldives to Singapore flight.

Following all investigations no high-risk infection prevention and control breaches were identified. No records of high-risk breaches or any areas of concern were identified in the SAPOL log which is maintained by Medi-hotel CCTV operators, in relation to the investigation. For completeness, the SLS was also reviewed as part of this investigation. In particular the following should be noted:

1. There were no identified incidences of face-to-face contact or passing of items between rooms.

2. All staff were fully compliant with required testing regimes including post-work testing regime.

3. No other Medi-hotel guests or intermediary cases were identified in this outbreak investigation.

4. HVAC (heating, ventilation, air-conditioning) review did not reveal any contribution of ventilation to the possible transmission event in this case.

5. However, the adjacent rooms were at the end of a corridor on one floor of the Medi-hotel. There were two occasions on 3 May 2021, when entry doors opened within 30 minutes of each other. For example, on one occasion, Case B opened his room door to collect his meal, then 18 seconds later Case A opened his door to collect his meal. This was during the time Case B was infectious but prior to staff knowing his positive COVID-19 status (he was subsequently moved to the dedicated COVID-19 Medi-hotel). A similar situation was observed again, on the same day with a time lapse of less than 12 minutes. Due to the camera angle, it was unclear from the review of the CCTV footage if both Case A and Case B wore a disposable surgical mask during these episodes of door opening.

Discussion

Following the investigation, there are considered to be two possible explanations for Case B contracting COVID-19 in the Medi-hotel setting.

1. There was the potential for aerosol transmission to have occurred on the 3 May 2021, related to the close timing of the door opening and closing between adjacent rooms occupied by Case A and Case B. Case B opening their door could have resulted in potentially contaminated corridor air either directly exposing Case A or forcing contaminated air into his room, particularly given Case B's room was situated at the end of a corridor and the intervening time period may not have allowed exchange of fresh air to have occurred despite adequate ventilation levels in the corridor.

2. There exists the possibility of a very long incubation period for Case A. A systematic review including 42 studies performed predominantly in China showed a mean and median incubation period for SARS COV-2 of maximum eight days and 12 days respectively. While it was difficult to estimate the longest incubation period based on small sample sizes, the highest estimated 99th percentile would be as long as 20.4 days, indicating long incubation periods are possible[1].

Current evidence and guidelines have been predicated on the understanding that COVID-19 transmission is predominately contact, and droplet spread (unless aerosol generating procedures or behaviours are present). However, there is emerging evidence that aerosols are also a transmission risk[2] and therefore the following recommendations should be considered.

Recommendations

Recommendations have been made based on findings from the investigation by COVID Operations and should be considered and scoped for implementation with the Medi-Hotel service providers. The recommendations recognise existing good practices and identify new recommendations based on the current investigation.

1. Increase support and education for guests to follow optimal infection prevention and control steps including:
    - following established protocol for opening door.

- wearing a disposable surgical mask when opening door and advice regarding removal of mask and hand hygiene. In addition, consider eye protection for guests when opening their doors.

2. Designated zones outside guest rooms for dirty and clean items including:
    - establishing dedicated food and rubbish/laundry zones to facilitate food delivery and collection by Medi-hotel staff, with clear instructions for guests regarding these requirements.

3. Room deliveries (including food deliveries):
    - Deliveries and opportunities to open guest doors should be kept to a minimum and undertaken only as necessary for clinical care and guest experience. Where possible, items should be held and then delivered in bulk at the same time, whilst ensuring the correct PPE, hand hygiene and delivery and collection processes are practiced.

4. Guests who have been identified as being in close contact with a case of COVID-19 infection should not be placed in adjacent rooms to other guests where possible given the higher rate of them developing the infection. Instead it is recommended that the option of housing all close contacts in Medi-hotels on a dedicated floor or area within the Medi-hotel system be investigated.

5. Heating, Ventilation and Air Conditioning (HVAC) systems should continue to be reviewed as per the current CQI recommendations. Additionally, it is recommended specialised HVAC system staff be consulted to determine the value in instructing guests to close any open balcony door or window prior to opening their room door.

6. Advice to guests to have COVID-19 testing following release from quarantine; this should now include a requirement for all guests to have a day 17 test regardless of symptoms (supported with a discharge letter and pathology form) and an additional SMS at day 21 as a reminder to get tested if they have developed symptoms.

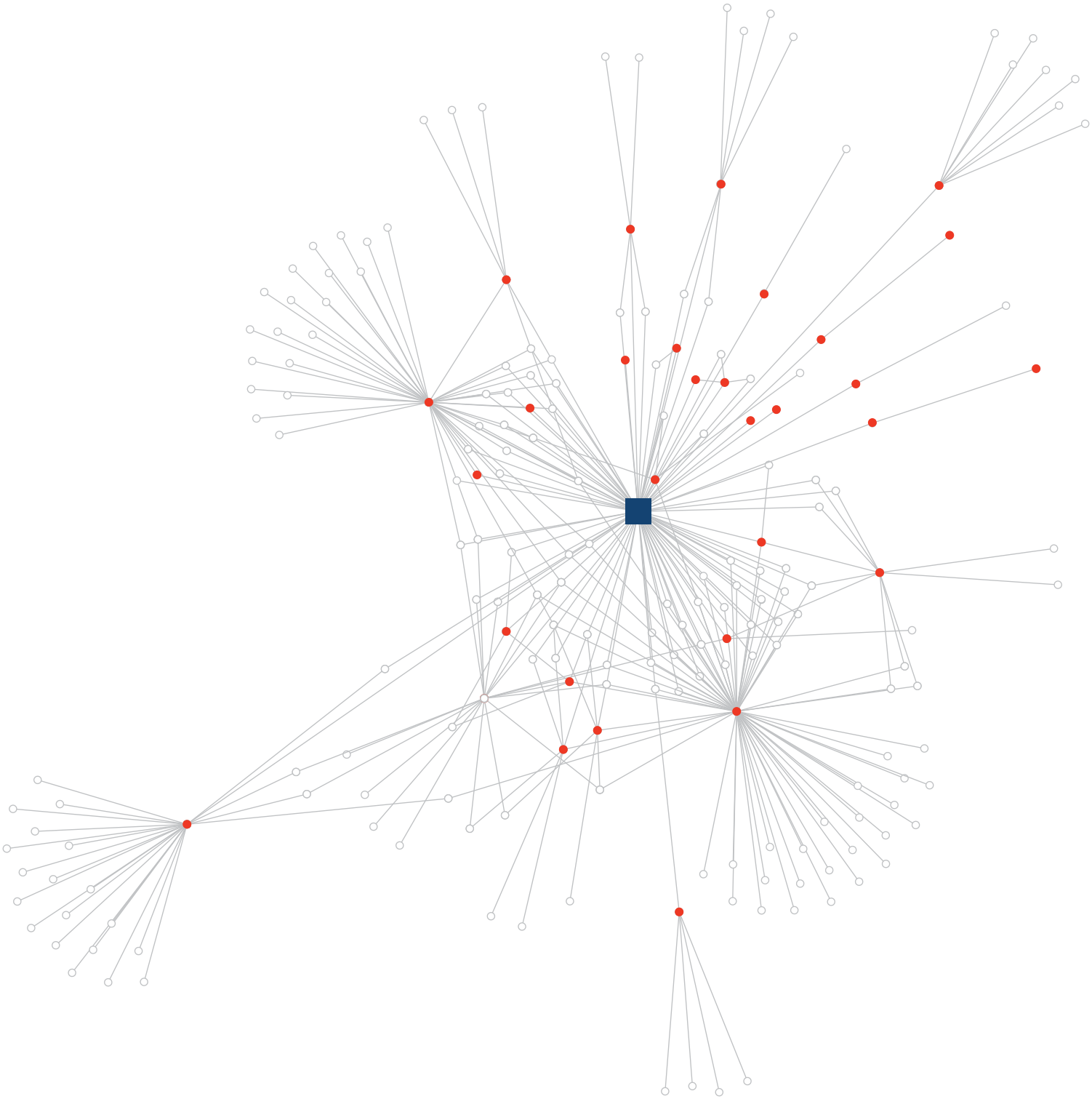
Conclusion

As outlined in this report, there was no high-risk single event or high-risk breach in infection prevention and control practices identified during this investigation. Therefore, while there is no single conclusive cause of transmission, it is highly likely the close timing of doors opening and closing between adjacent rooms was responsible given the clear role of aerosol transmission of this virus. A review of the timing and placement of food/goods/waste/linen outside of guest's rooms is likely to reduce the risk of further episodes of similar transmission events. In addition, careful management and placement of guests at higher risk of developing COVID-19 (i.e. close contacts) will also likely assist.

Reference:

1. Dhouib, W., Maatoug, J., Ayouni, I. et al. The incubation period during the pandemic of COVID-19: a systematic review and meta-analysis. Syst Rev 10, 101 (2021). https://doi.org/10.1186/s13643-021-01648-y
2. World Health Organization. Coronavirus disease (COVID-19): How is it transmitted? 30 April 2021. https://www.who.int/news-room/q-a-detail/coronavirus-disease-covid-19-how-is-it-transmitted

National Contact Tracing Review



A report for Australia's National Cabinet

November 2020

Content contained herein should be attributed as *National Contact Tracing Review, A report for National Cabinet*, Australian Government Department of Health.

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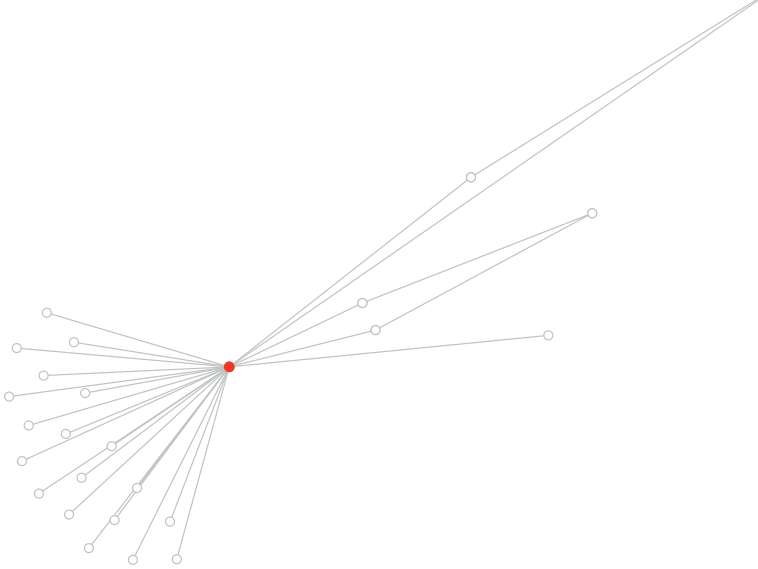


Vision

A mobile, healthy community and active economy, in the presence of COVID-19, made possible by public health preventative and control measures.

Rationale

In the absence of a vaccine or effective treatment for COVID-19, an important means to bring about a return to normal economic and community activity is rapid testing, contact tracing, isolation and outbreak management.

This is supported by modeling that indicates reducing the duration from patient testing to quarantine of their close contacts to fewer than 48 hours, substantially lowers community transmission.

LETTER FROM THE CHAIR

Dear Prime Minister, Premiers and Chief Ministers,

In this extraordinary year Australia has been confronted by fires, floods and a pandemic. Through the combination of long term preparation, collegiate governance and respected public health advice, Australia has done better dealing with the pandemic than most comparable countries, but the cost and disruption have been substantial. My fellow Panel members and I trust that our review will assist the Commonwealth, state and territory governments and Australia's public health systems to further strengthen management of the pandemic and ensure our prosperity.

To prepare our review, the Panel visited every state and territory, most in person but two by video link. We were warmly received by Premiers, Ministers, Heads of Department, Chief Health Officers, Police Commissioners, Heads of Emergency Services, Chief Information Officers and others. I collectively thank them all for their patience and their openness.

Our overwhelming impression was that wherever we looked we saw excellence and commitment. Each jurisdiction runs its pandemic health response its own way, but they are all willing to share and to learn.

I am confident in Australia's ability to achieve and maintain the vision of a prosperous and mobile society even in the presence of COVID-19. The secret is preparation. The most effective responses have been achieved through long term investment in public health and other emergency capabilities. Through preparation, when faced with a fast emerging public health emergency we can efficiently activate the machinery of preventative public health and control measures. This pandemic is far from over – we must remain vigilant against the possibility of outbreaks, mutations or entirely new pandemics.

The genesis of this review was the response by National Cabinet to the review covering NSW and Victoria that Commodore Mark Hill and I presented to National Cabinet in September. I thank Mark for the experienced and analytical thinking he brought to that effort.

For the current review, the Panel needed expertise in public health and policy, and in digital technology and delivery. These skills have been admirably provided by Tarun Weeramanthri and Leigh Jasper, respectively. We were supported by a highly capable taskforce drawn from the Australian Public Service.

I take this opportunity to thank the Prime Minister and other government leaders for the opportunity to chair a number of significant reviews in my five years as Australia's Chief Scientist. It has been a privilege to lead the development of evidence based reviews across low emissions strategies, science education and research systems, and now public health. One standout factor that has made my work possible has been the invisible work of public servants. When the task is huge, the time is short and the public good is calling, they work as hard and as astutely as the teams I used to lead when I ran a company in Silicon Valley.

Prime Minister, Premiers and Chief Ministers, I commend to you our review on optimising COVID-19 contact tracing and outbreak management across our nation.

Yours sincerely,

Dr Alan Finkel
Australia's Chief Scientist
Chair of the National Contact Tracing Review Panel

CONTENTS

OVERVIEW FROM THE PANEL

Strengthen capacity, build confidence, avoid complacency

We were tasked by National Cabinet with reviewing COVID-19 contact tracing and outbreak management systems in each state and territory to determine their ability to support an active economy by Christmas 2020. This includes systems for testing and tracing, quarantine and isolation, outbreak management, data exchange, and surge capacity. Although our remit was the current COVID-19 pandemic, we note that most of our recommendations may be relevant to managing future pandemics caused by other infectious diseases.

As we visited each jurisdiction in October 2020, it became clear to us that internal borders will only reopen and remain open if state and territory leaders have confidence in how their interstate counterparts are managing the pandemic. By the same token, the economy will only bounce back if Australians feel confident they can participate and travel safely. Many of our recommendations are aimed at building this confidence and ensuring it is well founded.

The states and territories have decision making authority for public health and will remain responsible for their own contact tracing and outbreak management systems. Our review acknowledges this autonomy while identifying areas where changes to processes, information sharing and technology will improve national capability.

Our remit was contact tracing and outbreak management. These systems must perform extremely well if we are to successfully live with COVID-19 until a vaccine or an effective therapeutic arrives, and perhaps longer. However, contact tracing and outbreak management are necessary but not sufficient components of an overall response and they are measures we would prefer never to have to activate. Crucially important in the first line of defence are measures relating to physical distancing, personal hygiene, staying away from work and gatherings if unwell, testing if symptomatic, mask wearing where required, limiting access to vulnerable communities where appropriate, COVID Safety Plans, attendance limits at public events, and quarantine for international travellers and others at risk of having been exposed.

Overall, we found very strong commitment to prevention and control measures across the country. All jurisdictions are committed to implementing effective COVID-19 contact tracing and outbreak management systems, have increased their investment and are training and preparing constantly. Across all states and territories the information technology systems used for contact tracing have improved significantly over recent months.

However, we found processes that can be improved. In some jurisdictions, interviews with contacts are recorded on paper before being entered into a database, causing delays and the potential for error. Contact information is inconsistently collected when people visit venues. Text messages to people with COVID-19 and contacts are not always in the preferred language of the person. Domestic airline passenger lists and contact details are not always accurate. Real time performance metrics are not sufficiently ambitious.

Our report sets out the characteristics of an optimal contact tracing and outbreak management system, and invites every jurisdiction to evaluate its performance against this blueprint.

We also recommend clear, measurable and transparent metrics that should be published by each state and territory to allow the public to track performance.

The two key performance metrics we recommend relate to fast testing and fast notifications to contacts. The currently agreed national target of 48 hours from reporting a positive test result to directing close contacts to quarantine is inadequate from the point of view of suppressing community transmission.

We recommend that test results should be available within 24 hours of a sample being taken, maximising the likelihood that people will isolate themselves while awaiting test results. We recognise this may be difficult in remote parts of Australia, but it is an important stretch goal and confirmation of our national capability.

Further, we recommend no more than 48 hours in total from the time a test sample is first taken to the point at which close contacts of a confirmed case are notified to quarantine. Advice to us is that if this turnaround time is achieved, we can substantially reduce community transmission.

Across the jurisdictions we discovered quite different digital solutions for case management and contact tracing, developed in isolation. In some instances, the digital systems are built on similar underlying platforms, but they are heavily configured and require different training for users.

However, the panel does not recommend the creation of a single integrated national contact tracing system. The important thing is that information is shared efficiently, where necessary. States and territories must be able to access and transfer information about cases and contacts where people have crossed borders. Currently, such information is conveyed through phone calls or emails, a practice that would not withstand high case numbers.

For this reason, we recommend the development of a digital data exchange mechanism. Building this capability now would prepare the states and territories for coordinated contact tracing to more effectively manage future outbreaks. The mechanism we suggest would allow the states and territories to share contact tracing data, and incorporate contact tracing data from sources such as airline and shipping passenger manifests, registries of test results and relevant government agency data stores. Only data relevant to contact tracing would be transferred, such as phone numbers, addresses, case interviews and diagnostic test results. No data would be held or stored in the data exchange. As such, we are confident the data exchange can be consistent with privacy requirements and community expectations.

We make a number of recommendations to improve the use of technology.

In that context, we recommend that the states and territories share information about new and emerging technologies, such as electronic venue and workplace attendance registration systems, smartphone apps to monitor self-quarantine, new diagnostic tests and wastewater surveillance. For example, the venue attendance app used in the ACT is as simple as “click and enter”, the only information shared is an email or phone number, no information is used for marketing and data are purged every 28 days.

Patient testing, contact tracing and case management should be fully digital end to end, starting at the point of testing. This includes collection of information, reporting of results, contact tracing, case management and outbreak management.

However, while a fully digital system dramatically improves the efficiency of contact tracing, it will never replace the need for well trained contact tracers and expert public health oversight, especially for difficult interviews, cluster analysis and outbreak responses. All states and territories should employ a permanent workforce for tracing and outbreak management, with senior public health leadership, and should have an additional surge workforce trained and at the ready. Digital case management and contact tracing systems should allow easy and secure onboarding of contact tracers from other states and territories and from the Commonwealth.

In the event of an outbreak, every effort should be made to go hard and go early. The driving principle for contact tracing must be to never fall behind, which means operating procedures should allow a risk based prioritisation of contact tracing practices that if the surge workforce becomes overwhelmed. These would include, for example, initial notification of close contacts by text instead of by phone. Desktop exercises and field rehearsals should be run regularly to ensure the system can deal with a sustained surge of around four new cases per day per million population and be able to rapidly scale up should there be a further escalation.

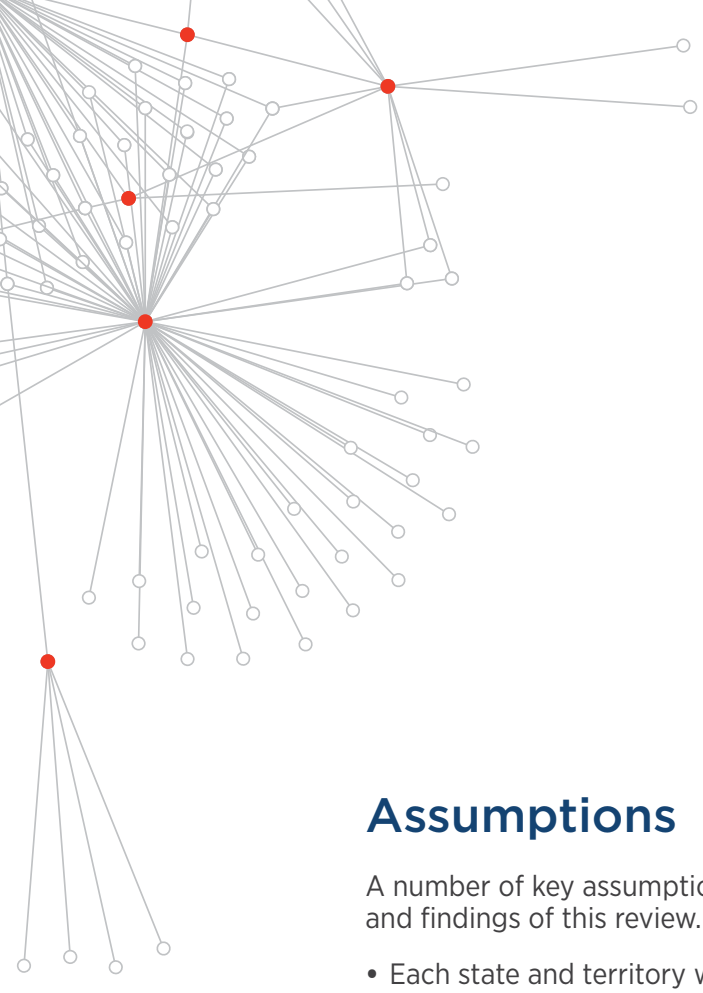
As Australia takes steps to reopen, we emphasise that a national testing and contact tracing system is only as good as its weakest link. No jurisdiction can afford to let down its guard. Each must have a strong focus on continuous improvement, including regular stress testing, a highly trained workforce, high functioning technology, and a commitment to transparency on performance metrics. We must keep awareness high and the safety message front and centre if we are to avoid the complacency that can be a dangerous companion to low case numbers.

COVID-19 remains a complex and highly communicable disease. Even with the best systems in place, outbreaks are likely to be unavoidable. We are acutely aware of the lockdowns being imposed once again in many countries as the world struggles to find a way to live with the pandemic. However, we believe that Australia's internal borders and economy can safely, confidently and successfully reopen, and the nation can manage an early cluster or outbreak and a moderate number of confirmed cases in the community without resorting to wide area lockdowns. To ensure this, each state and territory needs to be well aligned to the characteristics of an optimal contact tracing and outbreak management system as outlined in this report, alongside important measures to prevent transmission.

Alan Finkel

Leigh Jasper

Tarun Weeramanthri



Assumptions

A number of key assumptions have guided the consultation process and findings of this review.

- Each state and territory will exercise its constitutional obligation to ensure the health of its citizens by managing its own contact tracing and outbreak management within its borders.
- Each state and territory will be willing to support cross border contact tracing and outbreak management through digitally sharing contact tracing information.
- In a time of need, provision of surge support from other states and territories will be provided, wherever possible, by temporarily recruiting staff to work in the service of the state or territory in need and enabling remote access by signing in to that state or territory's contact tracing system.

RECOMMENDATIONS

The bigger picture

1. Continuous improvement

1.1 All jurisdictions should aspire to continuous improvement and reflect upon, evaluate and externally communicate their performance against the list of 'Characteristics of an Optimal Contact Tracing and Outbreak Management System'.

2. Preventative public health measures

2.1 Maintain the focus on preventative public health measures, including those that were agreed by National Cabinet early in the course of the pandemic.

Constant preparation

3. Workforce and training

3.1 Ensure ongoing investment in the medium to long term in accredited training programs for applied epidemiology and applied public health training.

3.2 The Commonwealth, states and territories should consider increasing the number of public health training positions in all jurisdictions.

3.3 All states and territories should continually invest in training surge workforces to be employed in a reserve capacity.

3.4 Ensure there is capacity for the Commonwealth to mobilise a trained contact tracing surge workforce through the Australian Public Service to assist states and territories with contact tracing should the need arise.

3.5 Continue funding rapid deployment capability to coordinate a standby pool of equipment (including personal protective equipment and transportable laboratory equipment) and senior clinical and public health experts for extreme situations requiring surge capacity anywhere in Australia.

3.6 Undertake forward planning for the pathology laboratory workforce, given the ongoing requirement for high volume testing in the near and medium term.

4. Stress tests

4.1 States and territories should undertake desktop and functional simulation exercises to verify the performance of their contact tracing and outbreak management systems.

4.2 Desktop and functional simulation exercises should be based on four new confirmed cases (not in quarantine) per day per million population (but no fewer than four per day per jurisdiction) for a week or more. This daily case number is consistent with the Framework for National Reopening adopted by National Cabinet.

4.3 Extreme stress testing should be based on up to ten times the standard stress testing numbers.

End to end contact tracing

5. Never fall behind

5.1 An effective contact tracing and case management system will cope with high case numbers. In extreme conditions, the jurisdiction should in the first instance recruit workforce assistance from other jurisdictions and the Commonwealth. If this proves insufficient, it is nevertheless essential to keep up with managing new cases. In order to never fall behind, the extent of contact tracing measures should be reduced on a risk minimisation basis.

6. COVID-19 testing resources and strategies

6.1 Continue to fund COVID-19 pathology tests through the Medicare Benefits Schedule and other funding arrangements.

6.2 Continue to ensure adequate supplies of testing reagents and build stockpiles during quiet times.

6.3 Ensure that pop-up test sites can be rapidly deployed, in under six hours in metropolitan locations, and in under 24 hours in regional locations.

6.4 Pathology laboratories should use diagnostic instruments from multiple vendors to ensure resilience during times of global shortages of reagents.

7. Support for maintaining national standards

7.1 Ensure Commonwealth epidemiological and public health expert support is provided to the Communicable Diseases Network Australia for ongoing work for COVID-19 and other notifiable diseases, including development and maintenance of the Series of National Guidelines.

Data Exchange

8. Technical capability

8.1 Develop a 'Data Exchange' capability to facilitate contact tracing, through the exchange of data between states and territories, and access to contact tracing data from relevant government agencies.

8.2 Data should not be stored in the Data Exchange itself, thereby allowing a simplified, decentralised design with high levels of privacy and security.

8.3 The exchange of data would ideally be as near to real time as is practical and consistent with Commonwealth, state and territory security and privacy requirements.

9. Data sources

9.1 The Data Exchange would access a variety of data sources such as appropriate administrative databases, airline and shipping passenger contact tracing information, other relevant government agency databases, contact tracing databases from other states and territories, and COVID-19 diagnostic test result repositories.

9.2 Evaluate the possibility of the Data Exchange in the medium term accessing the Australian Immunisation Register for relevant vaccine status.

9.3 In all instances data requests must be restricted to data that are relevant to a public health response, such as phone numbers, addresses, case interviews and diagnostic test results.

9.4 Domestic airlines should supply accurate passenger contact tracing information on request, accessible by the Data Exchange. Accuracy would be improved by requiring photo ID checks for all domestic passengers.

9.5 Australian Border Force should work with international airlines and shipping companies, supported by bilateral travel agreements, to provide accurate passenger contact tracing information on request, accessible by the Data Exchange.

10. Implementation

10.1 For efficiency in implementing the Data Exchange:

- Limit the initial implementation to a pilot involving Victoria, NSW, ACT and the Commonwealth.
- Development of the pilot should be based on an indicative scope of technical work developed by these jurisdictions and others that wish to contribute.
- Deployment in other jurisdictions would proceed if an evaluation of this pilot implementation concludes that it is successful.

10.2 Implementation of the Data Exchange should not delay any existing plans for sharing of contact tracing data, such as may be provided by airlines and Australian Border Force.

Outbreak management

11. Identify sources

11.1 At low case numbers, epidemiologists and other public health experts should strive to identify the source of infection for all confirmed cases. Where the source of infection is unknown, detailed upstream mapping of contacts to identify the source of infection should be undertaken.

12. Predictive analytics

12.1 Develop, evaluate and share advanced analytics software for outbreak analysis and predicting risks, to support existing expertise.

Technology

13. Pathology test technologies

13.1 Researchers and public pathology laboratories should continue to invest in developing and validating new COVID-19 specimen collection and diagnostic methods.

13.2 A framework should be developed on the role and use of rapid antigen tests, to support the public health response to COVID-19 and enable tracking of all positive and negative test results by public health authorities.

14. Automation and digital support

14.1 Fully digital and partially automated end to end systems should be implemented within each state and territory to support collection of case information, reporting of COVID-19 test results to the health department, allocation of confirmed cases, contact tracing, digitally issued quarantine directions, case management and outbreak management.

15. Attendance registration

15.1 Recording of contact tracing information of attendees should be a condition of entry to restaurants and other public venues, institutions and workplaces. Electronic data collection should be strongly encouraged, with pen and paper only being used if the former is unavailable.

15.2 Where attendance data are recorded for contact tracing, only the minimum information required for that purpose should be collected. Data collected for contact tracing should only be used for contact tracing purposes, kept securely and permanently deleted after 28 days.

15.3 Contact tracing information must be made available to health authorities in a timely manner, at most within 24 hours of request, to assist contact tracing.

15.4 Where smartphone apps are used, they should have simple “click and enter” functionality to encourage compliance.

15.5 To maximise participation, ensure effective communication of the benefits of attendance registration.

15.6 States and territories should consider using a single smartphone app within their jurisdiction, or require that all smartphone apps adhere to the above requirements.

16. Other technology solutions

16.1 Evaluate consent based systems that can download contact tracing information from smartphones.

16.2 The Commonwealth should lead the development of arrangements between states and territories and payment card providers so that contact tracers from the states and territories will be able to request contact details of persons who have made a transaction at a hotspot venue, noting that privacy rules will apply and in some jurisdictions legislative change may be required.

16.3 Develop, use and share proven web portals and smartphone apps for quarantine monitoring and tracking entry into high risk settings, such as residential aged care homes.

17. COVIDSafe app

17.1 The Commonwealth should continue to enhance the functionality of the COVIDSafe proximity app, particularly with respect to the duration for identifying contacts and enhancing notifications to users on the status and operation of the app.

17.2 The Commonwealth should consult with the states and territories on ways to optimise incorporation of COVIDSafe contact information early in the contact tracing process.

17.3 The Commonwealth should consult with the states and territories on the best means to report usage of the app in contact tracing.

18. Wastewater testing

18.1 The public health, clinical and wastewater sectors should build on existing research and field testing of wastewater detection to validate its role as an early signal of potential outbreaks.

18.2 Determine whether a goal of 50% coverage of the Australian population is practical and useful, with appropriate coverage of urban and rural areas. If so, aim to achieve this level of coverage in the medium term.

18.3 States and territories should publish results regularly.

A conversation with communities

19. Involve communication experts early and throughout

19.1 Integrate and embed communications and media experts in health, emergency, police, customer service and other relevant government departments to ensure that public health messages are pitched appropriately for state wide and local audiences, and vulnerable communities.

19.2 Work with community leaders to ensure that public health messages are culturally and linguistically tailored to each community, and understood and amplified through existing formal and informal networks.

20. Avoidance of confusion

20.1 All messages to affected communities, families and individuals should be evaluated to minimise any risk they could be misinterpreted.

20.2 Consistent messages should be given to all individuals in affected families, and consistent guidance provided to leaders and staff in affected settings, such as workplaces, schools, and places of worship.

20.3 Automated text and web messages provided to people in isolation and quarantine should be offered in their preferred language.

Earning community confidence

21. Reporting confirmed cases

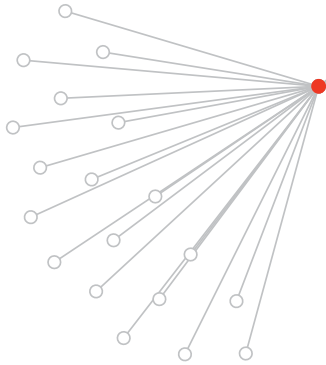
21.1 Confirmed cases identified in quarantine are a sign of a well functioning system that is able to mitigate community exposure and transmission. Confirmed cases identified in the community are cases that are more complex and have to be actively traced and managed. States and territories should publicly report daily on:

- New confirmed cases identified in the community. If zero cases, the number of days since the last confirmed community case.
- New confirmed cases identified in quarantine. If zero cases, the number of days since the last confirmed case.

22. Performance metrics reporting

22.1 The Commonwealth, states and territories should agree and publicly report weekly national performance metrics, including:

- The number of hours from collecting the COVID-19 specimen to notifying all people of their results, with the target being fewer than 24 hours at the 90th percentile.
- The number of hours from collecting the patient's COVID-19 specimen to notifying their close contacts that they must quarantine, with the target being fewer than 48 hours at the 90th percentile.



Enduring investment in public health expertise

Data Exchange

Clear governance

Isolation and quarantine

Surge capacity

Outbreak management

Surveillance

Public communication

Testing

Publicly reported performance metrics

End to end contact tracing

Characteristics of an optimal contact tracing and outbreak management system

Enduring investment in public health expertise

- Local knowledge and community engagement are key to effective contact tracing, thus the role of regional public health units is fundamentally important. Decentralised contact tracing teams have access to centralised technology for case allocation, interviews and outbreak management.
- Where local health districts are of sufficient size, public health units are embedded into local health districts.
- Vulnerable groups within the community are actively identified. Targeted engagement, response planning and implementation of preventative measures are undertaken with the community to help ensure their safety.
- A multidisciplinary public health capability, including public health physicians, expert public health staff and epidemiologists with practical experience, is permanently embedded in Commonwealth, state and territory health departments and health systems.
- There are clear career pathways and succession plans for senior public health experts.
- There are adequate numbers of graduate trainees in the pipeline to meet the needs of states and territories' public health response in the near, medium and long term.
- An ongoing partnership is active between the key decision making committee for health emergencies (Australian Health Protection Principal Committee; AHPPC) and researchers to ensure new knowledge is acted upon in a timely fashion.

Clear governance

- Clearly articulated, non-conflicting leadership roles are well identified in public health emergency legislation and broader emergency management plans.
- Chief Health Officers or equivalent have an appropriate level of authorisation to make directions and oversee public health operations.
- Final decision making authority under the relevant acts rests with senior leaders who have operational and emergency management experience.
- There is a well functioning crisis command centre, in which experts from multiple agencies work collaboratively to coordinate responses.

Surge capacity

- A scaled surge response activates based on case numbers and complexity.
- Permanently employed contact tracing officers and outbreak management teams help train and direct the surge workforce.
- Digital systems allow easy but secure onboarding of the surge workforce from within the state and territory, and from other jurisdictions.
- Desktop simulations and functional simulation exercises are regularly run to ensure that the system can deal with sustained surge and extreme case numbers.
- Surge capacities are planned between jurisdictions to allow for additional support to be provided before a state or territory reaches capacity.
- The surge capacity for COVID-19 RT-PCR tests is at least 3,000 tests per million population per day, consistent with the Framework for National Reopening.

Surveillance

- Wastewater testing, having proven its utility, is used to identify potential outbreaks within appropriately sized catchment areas covering 50% of the Australian population, across rural and urban areas.
- All states and territories have in place an efficient digital system to extract and systematically collect important COVID-19 surveillance data. Systems are flexible, to enable the timely capture of agreed additional surveillance data, and to minimise human effort.
- Continuity of reporting is assured in the event of a substantial rise in case numbers.
- Improvements to COVID-19 specific surveillance are assessed and considered for relevance to other notifiable diseases in the medium to long term.

Testing

- COVID-19 testing strategies are based on testing frameworks developed by public health experts and aligned to national standards, appropriate to the prevalence in the community and the community demographic. The testing framework includes:
  - Capacity to rapidly deploy mobile and pop up test sites.
  - Access to rapid, low volume diagnostic equipment in remote communities.
  - Testing at outbreak sites.
  - Testing for priority populations, including asymptomatic close contacts of confirmed cases.
  - Targeted testing of workforces in high risk settings.

- All patient and basic symptom information is gathered digitally at the place of specimen collection and the time and date of collection is recorded:
  - Demographic data of tested patients is used to optimise COVID-19 testing strategies and ensure that population coverage is as intended.
  - Symptom descriptions and date of onset of symptoms are used to assist subsequent contact tracing.
  - Phone numbers of patients or their guardians are verified before specimens are collected, where possible.
- COVID-19 testing is available free of charge and easy to access:
- All test results are transmitted to the health department immediately after they are verified.
- Notification of test results to patients occurs rapidly.
  - All negative test results are transmitted automatically by text to the patient or guardian.
  - Confirmed cases are rapidly notified by a phone call from an authorised officer or health practitioner and issued a direction to immediately isolate.
  - In times of high daily new case numbers where the contact tracing workforce is unable to meet timeframes to make calls, confirmed cases are notified of a positive test result and directed to isolate through an automated text system, and followed up with a phone call from an authorised officer as soon as possible.
- Rapid whole genome sequencing of the viral genome and serological antibody testing are integrated into upstream contact tracing.

End to end contact tracing

- The overriding intention is to never fall behind.
- Political and departmental leadership are committed to continuous improvement of the contact tracing and outbreak management capabilities in their state or territory.
- Well trained staff, ideally with an understanding of the local area and communities, are available to perform upstream and downstream contact tracing for all confirmed cases.
- Experienced public health experts are employed as team leads and are available for decision making in complex situations.
- There is an effective end to end digital platform for recording cases, and performing contact tracing and case management, with capability for workload prioritisation and automatic case allocation.
- A high degree of end to end automation supports the contact tracing effort, such as daily monitoring and report generation.
- Baseline criteria for classifying close contacts are consistent with the COVID-19 Series of National Guidelines and are expanded as necessary.

- At low case numbers, consideration is given to extending contact tracing to include secondary contacts and casual contacts, and requiring them to quarantine where appropriate.
- Innovation in contact tracing practices is encouraged, evaluated, incorporated into daily practices and shared with other jurisdictions to assist continuous improvement.
- Technology is appropriately leveraged, and shared between jurisdictions, to assist the contact tracing process.
- Access to information from electronic venue attendance registration systems and smartphone apps and the COVIDSafe proximity app is timely.
- Other attendance data is made available to contact tracers when required. These records, subject to all applicable privacy requirements, may include the location and time of financial transactions.

Data Exchange

- A digital 'Data Exchange' capability provides interoperability between state and territory contact tracing systems, the National Incident Room and other government data stores, to assist in contact tracing where cases and contacts have recently crossed borders or contact details are missing.
- No data are stored in the Data Exchange. All information sharing meets regulatory and privacy requirements.
- Contact tracing data are made available in a timely manner from a variety of sources such as airlines and shipping companies, government agency databases, and COVID-19 diagnostic test result registries to support contact tracing.
- The exchange of data is as near to real time as possible and is consistent with Commonwealth, state and territory security and privacy requirements.

Isolation and quarantine

- Confirmed cases are strictly isolated either at home or in a hospital or supervised hotel in line with the currently applicable recommendations in the COVID-19 Series of National Guidelines.
- Authorities monitor home quarantine compliance, and symptom development, in an efficient and friendly way, supported by technology, including intelligent smartphone apps where appropriate.
- Daily health monitoring in quarantine facilities is optionally assisted through wearable health monitors.
- Barriers to quarantine or isolation are identified and addressed. Financial, welfare, clinical and mental health support are offered and provided as appropriate.
- End of quarantine tests are requested and, if refused, quarantine is extended by 10 days.
- When multiple persons from one family are in quarantine or isolation, a single case manager works with all family members.

Outbreak management

- Where outbreaks occur, rapid suppression is achieved by an efficient regime of testing, contact tracing, isolation and outbreak management.
- Every effort is made to go hard and go early.
- Experienced epidemiologists and other public health experts are employed to identify clusters in time and place, by mapping the upstream and downstream infection transmission pathways to link outbreaks and clusters, assisted by interviews from the contact tracing teams, rapid viral genome sequencing, antibody testing, and advanced data analytics software.
- Rapid control measures are instigated while investigation continues. These measures are supported by relevant regulators, such as from health, fair trading, work safety, food authority and local councils, to ensure that businesses and others in the outbreak area have effective mitigation strategies in place.

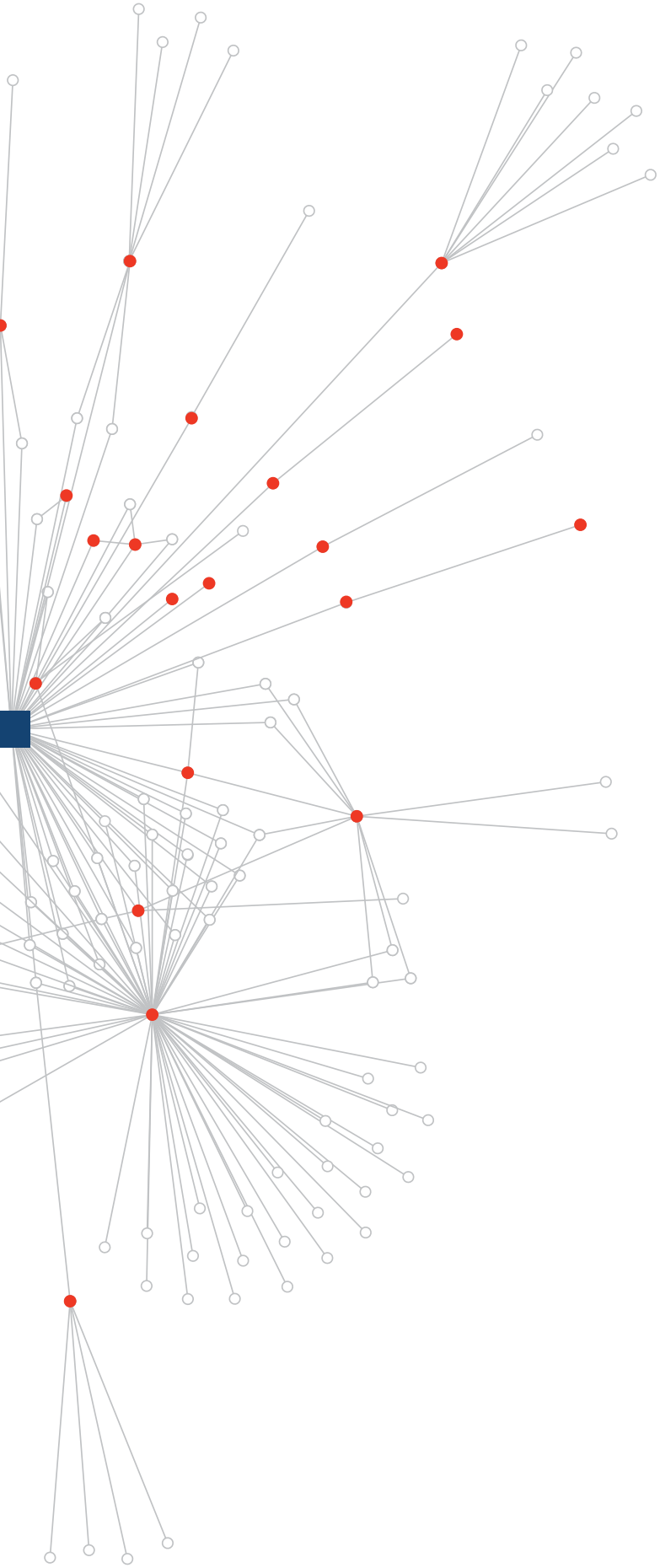
Public communication

- Ongoing communication is understood to be key to preventing community complacency in the absence of an actual outbreak.
- Public health messages are:
  - Consistent, transparent, frequent and easily accessible from official web sites, traditional media and social media.
  - Culturally and linguistically tailored to each community, and where possible, developed and distributed cooperatively with and through community leaders.
  - Appropriately targeted to encourage COVID safe behaviour.
- All non-English messages and resources are updated regularly to ensure they are current. The accuracy of the translations is routinely confirmed.
- Automated messages to people in quarantine are sent in their preferred language.
- Notifications of COVID-19 test results are explicit in reporting the detection or not of the virus in the sample and do not use terms that could be misunderstood, such as 'positive' and 'negative'.

Publicly reported performance metrics

- Each state and territory consistently reports daily case numbers, including:
  - Number of new confirmed cases identified in the community; and
  - Number of new confirmed cases identified in quarantine.
- Nationally agreed performance metrics for each state and territory are publicly reported weekly, including:
  - The number of hours from collecting the COVID-19 specimen to notifying people of their results is fewer than 24 hours at the 90th percentile.
  - The number of hours from collecting the patient's COVID-19 specimen to notifying their close contacts that they must quarantine is fewer than 48 hours at the 90th percentile.[i]

i At least 80% of close contacts have been notified. Cases in quarantine are not relevant to this metric.



CHAPTER 1
CONSTANT PREPARATION

States and territories have primary responsibility for managing communicable disease emergencies. They control most of the functions essential for effective prevention, preparedness, response and recovery, including operational aspects of surveillance, identification, containment and treatment of communicable diseases.

Effective emergency response plans are underpinned by local and national health authorities and operational agencies being in a constant state of preparedness. This includes enduring investment in public health expertise, coordination of public health response, and regularly maintained digital surge support registers and outbreak management plans.

Investment in public health expertise

Australia's public health experts across all states and territories have been instrumental in safely stewarding Australia's response through the COVID-19 pandemic. A highly qualified public health workforce with appropriate training, skills and subject matter expertise is the foundation of an effective public health response.

It is the responsibility of the states and territories to control the operational aspects of surveillance, detection and containment of communicable diseases within their jurisdiction. Having strong public health capability embedded in the health systems, prior to the pandemic, along with a clear understanding of where this expertise lies has proven to be the most effective way to successfully navigate the COVID-19 pandemic.

An effective response relies on multidisciplinary expertise, including: public health physicians, public health nurses, public health officers, epidemiologists, laboratory scientists, medical microbiologists, infection prevention and control consultants, infectious disease specialists, and communications staff.

CASE STUDY – NSW PUBLIC HEALTH UNITS

In NSW, public health units are responsible for protecting the health of people who live, work in or visit the geographical area of a local health district.

The NSW public health units form part of the local health district with central coordination, strategy and guidance provided by NSW Health.

Experienced public health leadership across the local health districts has been identified as a significant strength of the NSW public health system.

There are 12 public health units in NSW, with nine of 15 local health districts having their own public health unit, and the remaining six local health districts each sharing a public health unit across two districts. Public health units are responsible for implementing:

- Surveillance, monitoring and control of communicable diseases.
- Immunisation advice and programs, including the School Vaccination Program.
- Control of environmental health hazards and assessment of environmental health risks.
- Tobacco control and smoke-free environment compliance.
- Public health emergency planning and management.
- Applied epidemiology and public health research.

The regional approach to oversight and coordination is important to ensure strong understanding of local environmental and health protection risks and engagement with the community. Regionalisation of the public health units promotes seamless integration with the local health district and coordination with other government agencies including Councils, Education, and Family and Community Services.

For COVID-19, case interviews and initial close contact tracing are undertaken by the public health units, supported where necessary by NSW Health, with local health districts responsible for case and contact management. Local knowledge provides an opportunity for public health units to link cases that may have been infected in their area.

During the COVID-19 emergency, NSW Health has provided additional surge capacity, along with a central coordination capacity to provide the local health districts with information and guidance for local implementation. If a public health unit is under strain, additional staff and support can be provided from within the local health district, from neighbouring public health units, or from the central public health response team in NSW Health.

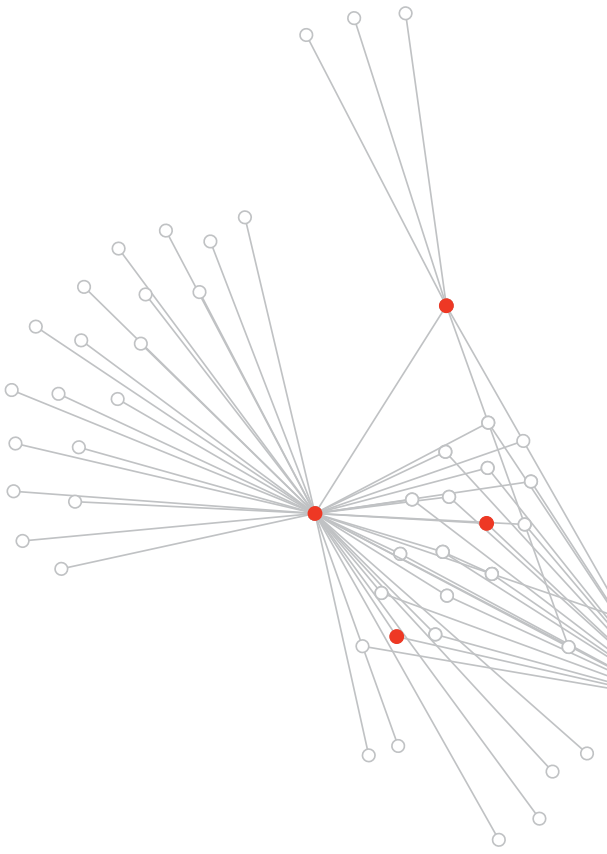
Local public health expertise is essential

Close engagement at a local population level is a critical element of any public health response. In particular, community engagement and local knowledge are fundamental to contact tracing and outbreak management. States and territories, who have invested in a decentralised model, staffed with public health experts, are able to draw on teams embedded in their local communities to manage contact tracing and surveillance.

A decentralised model allows local teams to work independently while still being able to access resources from the central health department and other public health units. For example, in NSW 12 of the 15 local health districts have public health units enabling a more localised approach to contact tracing. Victoria has recently moved to a decentralised approach for regional cases, establishing six regional public health units, and is in the process of establishing suburban units in metropolitan Melbourne.

In a decentralised model, oversight and control reverts to the central health department in the event of an emergency, enabling a central coordination capacity to provide local health districts with information and expectations for locally appropriate implementation. This model also enables twinning of public health units to meet surge demands.

Decentralised contact tracing teams should have access to centralised technology for case allocation, interviews and outbreak management. Whichever model – centralised or decentralised or mix of the two – local knowledge must be balanced with contact tracing expertise to achieve rapid and high quality outcomes.



CASE STUDY – EPIDEMIOLOGY TRAINING PROGRAMS IN AUSTRALIA

There are three complementary workplace-based epidemiology training programs available in Australia. Each contributes a different set of expert skills to build public health capacity and networks at jurisdictional, national or global levels.

Masters of Philosophy in Applied Epidemiology (MAE Program)

The MAE program at the Australian National University is Australia's only Field Epidemiology Training Program, is internationally accredited and has produced over 240 highly skilled applied epidemiologists since 1991. This expertise is a critical resource and has strengthened Australia's capacity to prepare, protect and respond to communicable diseases and other threats.

Graduates have risen to be leaders in the field with senior positions in research institutions, government and international organisations such as the World Health Organization.

NSW Public Health Training Program

The NSW Public Health Training Program has been running for 30 years. It is a three year competency based training program for public health graduates and trains up to 28 full time trainees each year. The program also provides an emergency surge capacity for the NSW health system and trainees can be mobilised at short notice to work on issues of immediate concern.

Trainees undertake a range of population health placements, developing public health competencies and professional networks within the NSW health system. Through this advanced level training program, trainees develop skills in leading outbreak investigations; planning epidemiological studies; conducting public health surveillance, analyses and evaluations; scientific communication and evidence based decision making.

Australasian Faculty of Public Health Medicine Advanced Training Program

The Australasian Faculty of Public Health Medicine Advanced Training Program is a training and continuing education program of the Royal Australasian College of Physicians. It is the pathway for medical doctors to specialise in public health medicine. Public health physicians are trained to take leadership roles, working collaboratively with other members of the public health workforce to solve complex population health issues. They integrate their medical and public health expertise, with a focus on evidence, equity, and advocacy.

The three year training requires clinicians to undertake work based placements to achieve the competencies required of a public health physician.

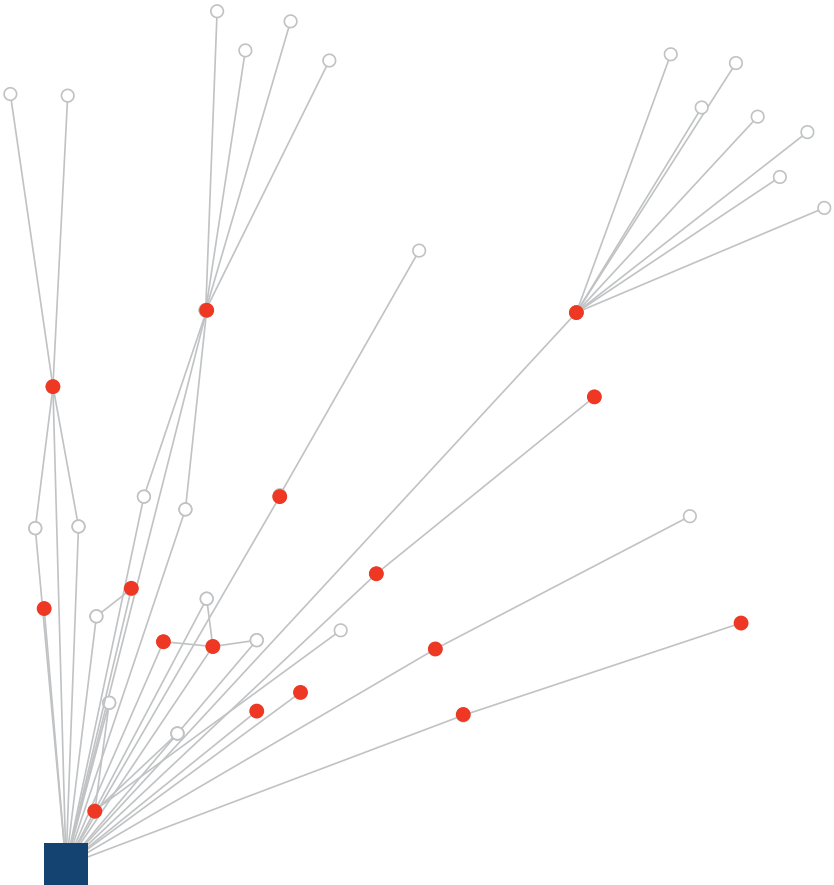
Maintaining a strong public health workforce

A key factor for Australia's continued success will be the ongoing availability of a trained and competent multidisciplinary workforce, with skilled public health physicians, trained public health staff, epidemiologists, and laboratory scientists. It is widely recognised that this critical workforce in Australia is finite and stretched under the current circumstances. The need to expand and develop a cadre of those with relevant expertise and training is recognised in the plan for Australia's Public Health Capacity developed by the AHPPC and agreed by National Cabinet.[1]

In particular, senior public health leaders are integral to a successful response as they have greater understanding and experience in emergency management. To date, the COVID-19 response has been supported by the current public health leadership working extraordinary hours, due to the limited pool of senior public health officials. Training and succession planning is vital for continuity and transference of knowledge.

Australia's existing applied epidemiology and workplace based training programs include the internationally accredited Masters of Applied Epidemiology (MAE) at the Australian National University (ANU), and the work-place based NSW Public Health training program. These programs have provided an important pipeline for a skilled, flexible and sustainable public health workforce. The ANU course has been modelled on the internationally recognised US Centre of Disease Control's Epidemic Intelligence Service program and focuses on learning by doing.[2] In both systems, trainees are positioned within health departments or public health institutes, and their activities are designed to address practical priority public health issues. These programs stress the principle of training through service, and they provide close supervision and mentoring by trained epidemiologists.

The National Critical Care and Trauma Response Centre (NCCTRC) funded by the Commonwealth Government is an essential component of Australia's rapid deployment capability for outbreak management. The NCCTRC training program offers a range of nationally and internationally accredited courses, including the suite of Australian Medical Assistance Teams training packages.[3]



National coordination of public health response

Whilst states and territories have primary responsibility for the management of communicable disease emergencies, national coordination is activated if necessary. Australia's Chief Medical Officer is able to stand up the National Incident Room, which supports the coordination of expertise across the Commonwealth, states and territories and advances guidelines for national consistency.

At the request of Australia's Chief Medical Officer, the Commonwealth Government activated the National Communicable Disease Plan on 25 January 2020.[4] On 27 February 2020, the National Security Committee of Cabinet initiated implementation of the COVID-19 Response Plan designed to guide the Australian health sector response.[i]

The Commonwealth plays an essential role in bringing together leading experts to provide advice to National Cabinet and to develop and refine nationally consistent guidelines for the public health response to COVID-19. The Commonwealth has also taken a leading role in ensuring Australia will have ready access to vaccines for SARS-CoV-2 when they are developed, as well as ensuring national emergency supplies of ventilators and personal protective equipment through the National Medical Stockpile.

Australian Health Protection Principal Committee

Under the COVID-19 Response Plan, the Commonwealth Department of Health is responsible for national coordination of the health sector emergency response, under the direction of the Australian Health Protection Principal Committee (AHPPC).

The AHPPC includes all state and territory Chief Health Officers, or equivalent, and is chaired by Australia's Chief Medical Officer. Other members include the Surgeon-General and Commander of Joint Health, the Chief Nursing and Midwifery Officer, and the Commonwealth Deputy Chief Medical Officers. The AHPPC is supported by a number of standing and time-limited committees and provides advice to National Cabinet. More information about AHPPC and its key supporting committees is found in Table 1.

The Communicable Diseases Network Australia (CDNA) and the Public Health Laboratory Network (PHLN) are two standing committees of AHPPC that have played a central role in the national coordination of the COVID-19 response.

These committees provide the principal mechanism by which states and territories share resources, information, expertise and decision making. For example, CDNA is responsible for the development of the COVID-19 Series of National Guidelines for Public Health Units (COVID-19 SoNG) and the Australian National Disease Surveillance Plan for COVID-19.[5]

PHLN provides strategic advice to AHPPC on testing capability and capacity, recommended testing methods, identification of laboratory gaps, pressures and needs, and plans to ensure optimal use of existing public health pathology laboratory resources for the COVID-19 response.

Adequate resourcing of Australia's national coordinating mechanism is critical to ensuring up to date, consistent and evidence based approaches are available to guide the management of COVID-19 and future public health emergencies.

i The COVID-19 response plan was adapted from the Pandemic Influenza Plan, and was endorsed by AHPPC.

Evidence based decision making

The COVID-19 pandemic has highlighted the need for decision making to be supported by up to date evidence and emerging research findings.

To inform decision making and advice to the state or territory emergency controller, the Chief Health Officer or equivalent in each jurisdiction should have access to updated summaries of the evidence on particular topics. For example, in South Australia, the Chief Public Health Officer is supported by the South Australian Health and Medical Research Institute (SAHMRI), who provide evidence summaries with a rapid turnaround.

At a national level, groups such as the AHPPC, CDNA, the PHLN, and the Infection Control Expert Group have been rapidly developing advice and supporting policies. It is important these groups have access to up to date evidence summaries to support their decision making. Evidence based and peer reviewed summaries have been made rapidly available through the Rapid Research Information Forum (RRIF) and the National COVID-19 Health and Research Advisory Committee.[6,7] Expert decision making bodies such as the AHPPC and CDNA are key in integrating evidence into policy and advice.

Emergency management

Emergency management plans

Emergency management plans should promote the coordination and effective utilisation of resources and capabilities across multiple government agencies and give clear directions on the roles and responsibilities of each agency.

Most states and territories utilised existing emergency management plans for the COVID-19 pandemic. States and territories that have experience dealing with frequent emergencies, especially those covering the north of Australia, were well positioned to handle the pandemic by drawing on existing arrangements set out in their respective emergency management plans.

Integration of the public health emergency response within a broader state emergency response has been critical to the success of states and territories' response to COVID-19. In the event of a public health emergency, states and territories implement AHPPC advice at the jurisdictional level, generally led by the health department. Most states have mobilised existing state coordination centres to assist with the coordination and management of the emergency response.

A clear chain of command and clear responsibilities are essential to effective preparedness and support quick mobilisation, integration and efficient use of resources, should an incident occur. In addition, a state coordination centre is established to coordinate the operational management of the emergency response.

All states and territories have a crisis control centre or equivalent. A crucial element of a well functioning control centre is to have embedded liaison officers from other government agencies. This helps to ensure a well coordinated response across all sectors of government. Inclusion of personnel from the Police and the Australian Defence Force can be particularly important.

Table 1. Australian Health Protection Principal Committee and supporting committees

Committee	Key functions relevant to communicable disease emergency	Summary of membership
Australian Health Protection Principal Committee (AHPPC)	Coordinate national emergency operational activity. Promote alignment of state and territory strategic plans. Coordinate national response.	Australia's Chief Medical Officer State and territory Chief Health Officers (or equivalent) Clinical experts Commonwealth Government representatives
Communicable Disease Network Australia (CDNA)	Leads national action on how the public health system can monitor, prevent and control notifiable communicable diseases by providing evidence based advice to AHPPC. Develops and coordinates national surveillance programs for communicable diseases including: policy, strategy, and advice on the prevention and control of communicable diseases, coordinates the investigation and control of multi-jurisdictional outbreaks and works with a range of national and international partners to prevent and control communicable diseases. Responsible for developing a series of national guidelines (SoNGs) for dealing with communicable disease.	Communicable disease experts from each state and territory (normally Deputy Chief Health Officer level) Clinical experts Commonwealth Government representatives
Public Health Laboratory Network (PHLN)	Advises AHPPC on national laboratory capacity and capability. Develops plans to ensure optimal use of existing pathology laboratory resources for the COVID-19 response. Monitors the public health laboratory system to identify any gaps and pressures, and provides advice on testing strategies for communicable disease surveillance and national outbreaks.	Pathology and medical laboratory science experts from each state and territory

Committee	Key functions relevant to communicable disease emergency	Summary of membership
National Health Emergency Management Standing Committee	Addresses the operational aspects of disaster medicine and health emergency management including the deployment of Australian Medical Assistance Teams.	Commonwealth Government representatives State and territory government representatives
Environmental Health Standing Committee	Provides agreed environmental health policy and implementation of the National Environmental Health Strategy.	Commonwealth Government representatives State and territory government representatives New Zealand Ministry of Health representatives
Infection Control Expert Group **(time limited)**	Advises AHPPC and its other standing committees on infection prevention and control issues. Provides expert advice and information to support best practice related to infection prevention and control in community, hospital and other institutional settings.	Practising doctors, nurses and researchers with extensive experience and expertise in their fields.
Aged Care Advisory Group **(time limited)**	Advises AHPPC about aged-care policy related to COVID-19 bringing together expertise about aged care, infection control, emergency preparedness and public health response.	Brings together expertise about aged care, infection control, emergency preparedness, and public health response.
Aboriginal and Torres Strait Islander Advisory Group on COVID-19 **(time limited)**	Liaises with AHPPC and its standing committees. Provides advice to the Commonwealth Department of Health.	National Aboriginal Community Controlled Health Organisation and jurisdictional affiliates. State and territory representatives and Commonwealth Government representatives.

Clear governance

An effective, resilient response requires coordinated governance from the top. This starts with the early formation of a high level committee, such as a State Emergency Management Committee or Crisis Cabinet, meeting daily during the worst of the pandemic. These committees are generally comprised of the Premier, Ministers, Secretaries and other senior public servants across relevant departments and emergency agencies critical to coordinating a whole of government response. Coordination across multiple departments and agencies including First Ministers departments, health departments, Emergency Services, Treasury and service delivery agencies has been integral in responding effectively to COVID-19.

As problems are identified, the state emergency management agencies should have clear understandings of priorities, operational roles and accountabilities. For example, when establishing health quarantine hotels and police quarantine hotels, specific priorities and roles for the health departments and police agencies should be assigned.

State emergencies declared in response to the COVID-19 pandemic have required health departments to assume the role of the lead agency, or the 'combat agency'. The health departments are operating within the constructs of each state and territory's state of emergency governance structure.

In response to COVID-19, most states and territories declared a public health emergency followed by a broader state emergency, based on existing legislation (Table 2). In general, the declaration of a State of Emergency or State of Disaster (Victoria) enacted additional emergency powers for Police Commissioners, Chief Health Officers, Health Ministers or equivalents alongside existing public health legislation. This has mostly been an effective mechanism, however due to the extended duration of the pandemic some jurisdictions have had to extend the emergency period a number of times. For example, South Australia has extended their major emergency declaration eight times since it was first declared in March 2020.

The Commonwealth declared a human biosecurity emergency under the *Biosecurity Act 2015* on 18 March 2020. This declaration provided the Health Minister with the ability to set requirements and give directions as necessary to manage the COVID-19 pandemic on a national scale. This is the first time such an emergency has been declared since the commencement of the *Biosecurity Act 2015*, and its use has been guided by the advice of the AHPPC, the Chief Human Biosecurity Officer and the CDNA.

The power to issue public health directions differs between states and territories. In most instances, health emergency powers are delegated to the Chief Health Officer, or equivalent, and the Health Minister. However, in some instances, it was recognised that the existing legislation did not provide the Chief Health Officer with adequate authority. For example, on 18 March 2020, the Queensland Parliament passed amendments to the *Public Health Act 2005* to strengthen the powers of the Chief Health Officer and emergency officers. Additionally, Victoria was required to operate under a State of Emergency or State of Disaster to enable the Chief Health Officer to issue necessary orders.

Within the health system, clear lines of accountability for the public health response and the broader pandemic health system response is critical. This is best achieved with the Chief Health Officer, or equivalent, in states and territories leading the public health response, and the Director General or Secretary of health departments leading the pandemic health system response. Furthermore, collaboration and joint reporting to the Health Minister ensures a well coordinated health system approach.

National Incident Room

The National Incident Room (NIR) is the Commonwealth Government's emergency operations centre for health emergencies. The NIR is an operational response capability located within the Office of Health Protection in the Commonwealth Department of Health. The NIR supports Australia's Chief Medical Officer and the Commonwealth Government to coordinate the national health sector emergency response to COVID-19 by organising response operations between:

- Commonwealth, and state and territory, government health authorities
- Other Commonwealth operations centres
- Australia and the international health community.

The NIR provides public health and other technical support to the AHPPC and its subcommittees to support the development and refinement of nationally consistent public health advice.

It is also responsible for undertaking duties in relation to Australia's National Focal Point, as designated by the International Health Regulations (2005).[8]

The NIR has also distributed personal protective equipment held by the National Medical Stockpile, and funds the National Critical Care and Trauma Response Centre (NCCTRC) in Darwin. The NCCTRC has been essential in assisting states and territories through the deployment of Australian Medical Assistance Teams (AUSMAT).

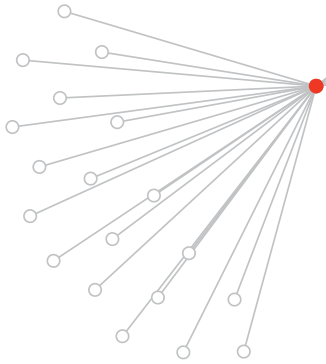


Table 2: State and territory legislative and governance arrangements

Jurisdiction	Legislative Framework	Additional Legislation and Emergency Powers	Emergency Lead	Disaster Management Plan
Commonwealth	*Biosecurity Act 2015* *National Health Security Act 2007*	Governor General declared a biosecurity emergency on 18 March, providing powers to the Minister for Health to make emergency requirements and directions Emergency period extended for three months on 15 May and 4 September.	Australian Health Protection Principal Committee chaired by Australia's Chief Medical Officer	Australian Health Sector Emergency Response Plan for Novel Coronavirus[9]
NSW	*Public Health Act 2010*	The NSW Health Minister has broad standing powers.	State Emergency Operations Centre led by the Police Commissioner	NSW State Emergency Management Plan[10]
Victoria	*Public Health and Wellbeing Act 2008* *Emergency Management Act 1986* *Health Services Act 1988*	State of Emergency declared on 16 March, providing extraordinary powers to the Chief Health Officer. State of Disaster was declared on 2 August, providing police greater powers to enforce public health directions. The Secretary of DHHS also has broad powers to direct health services	State Control Team led by Emergency Management Commissioner	State Health Emergency Response Plan[11] COVID-19 Pandemic Plan for the Victorian Health Sector[12]
Queensland	*Public Health Act 2005* *Disaster Management Act 2003*	Public Health emergency declared on 29 January and currently extended until 31 December, providing emergency powers to the Chief Health Officer. Amendments to the *Public Health Act 2005* pass Parliament 18 March to strengthen the powers of the Chief Health Officer. Disaster situation declared on 22 March under *Disaster Management Act 2003*, and extended to 31 December 2020.	State Health Emergency Coordination Centre led by the Chief Health Officer Queensland Disaster Management Cabinet Committee (specific purpose Cabinet subcommittee)	Queensland State Disaster Management Plan[13] Queensland Whole of Government Pandemic Plan[14] Queensland Health Pandemic Influenza Plan[15] in conjunction with the Queensland Health Disaster and Emergency Incident Plan[16]
Western Australia	*Emergency Management Act 2005* *Public Health Act 2016*	State of Emergency declared on 15 March 2020. Public Health State of Emergency declared on 16 March 2020.	State Health Incident Coordination Centre led by the Incident Controller (Deputy Chief Health Officer) appointed by the Hazard Management Agency.	Western Australia Government Pandemic Plan[17] State Hazard Plan – Human Biosecurity[18] State Emergency Management Plan[19]

Jurisdiction	Legislative Framework	Additional Legislation and Emergency Powers	Emergency Lead	Disaster Management Plan
South Australia	*South Australian Public Health Act 2011* *Emergency Management Act 2004*	Declaration of a Public Health Emergency was made under the South Australian Public Health Act on 15 March for a period of 14 days (now ceased). Declaration of a Major Emergency was made under the *Emergency Management Act 2004* on 22 March. Major Emergency Declaration was extended for 28 days on 4 April, 2 May, 30 May, 27 June, 25 July, 22 August, 19 September and 17 October.	SA Health is the Control Agency. The State Control Centre - SA Health is led by the State Controller which is currently the Chief Public Health Officer	State Emergency Management Plan[20] Public Health Emergency Management Plan[21] Health Viral Respiratory Disease Pandemic Response Plan[22]
Tasmania	*Public Health Act 1997* *Emergency Management Act 2006*	Public Health Emergency declared on 17 March and Declaration of State of Emergency on 19 March (expired on 25 October), provided wide range of emergency powers to the Director of Public Health. Even with the expiry of the State of Emergency the State Controller can exercise most powers under the Act.	State Emergency Management Controller / State Controller and Director of Public Health have governance responsibility for the directions they issue.	Tasmanian Emergency Management Arrangements[23] COVID-19 Case and outbreak management framework for Tasmanian settings[24]
ACT	*Public Health Act 1997*	Public Health (Emergency) Declaration was made on 16 March. Provided broad powers to the Chief Health Officer. Public Health (Emergency) Declaration was extended for 90 days on 19 August.	Public Health, Protection and Regulation Division led by the Chief Health Officer	ACT Emergency Plan[25]
Northern Territory	*Public and Environmental Health Act 2011*	Public Health Emergency declared on 18 March. Provided broad ranging emergency powers to the Chief Health Officer. *Emergency Legislation Amendment Act 2020* commenced on 26 March amending the *Public and Environmental Health Act 2011* to allow the duration of a public health emergency declaration to be indefinitely extended by periods of up to 90 days. Extension of public health emergency on 23 March (5 days), 28 March (90 days), 26 June (90 days) and 24 September (90 days).	The Chief Health Officer makes directions and advises the Security and Emergency Management Subcommittee of Cabinet, who in turn direct the Territory Emergency Management Council jointly led by the Commissioner for Police (Territory Emergency Controller) and the CEO Department of the Chief Minister and Cabinet (Territory Recovery Coordinator)	Territory Emergency Plan[26]

CASE STUDY – SOUTH AUSTRALIA SURGE PLAN

South Australia identified very early in the COVID-19 pandemic that the contact tracing workforce would be a key limiting factor in their public health system's ability to respond to a substantial increase in cases.

A large outbreak would potentially see various areas within government competing for the same human resources to support the multifaceted COVID-19 response efforts.

South Australia engaged an external consultant to support a coordinated assessment of the entire workforce requirement across all COVID-19 response work streams to identify workforce pressure points. This included challenging existing planning assumptions and the way work was done, in various situations. For contact tracing, this approach has enabled system capacity to be expanded to a point where 100 new cases per day (approximately 55 cases per million citizens), and their contacts, can be managed for sustained periods.

The Department of Health has provided comprehensive training for its surge contact tracing workforce. In addition to their standing contact tracing taskforce, employees with a strong background in human sciences have been identified and provided with three weeks face to face training. This includes one week training in the classroom and two weeks on the job, where the students 'learn, do, and teach'. A one day refresher is provided every two weeks to ensure maintenance of the skillset. A further tier of surge workforce has also been trained from across the South Australian public service and is preparing for mobilisation.

Active preparedness

Surge and outbreak management plans

State and territory health departments have developed a number of outbreak response plans to assist with the COVID-19 pandemic. A successful outbreak management plan should:

- prevent ongoing transmission
- preserve business continuity
- identify sources to prevent future transmission.

Rapid outbreak response plans are essential to enable a swift and well considered public health action. This includes overarching state or territory plans, and plans that are tailored to manage outbreaks in a broad range of settings, including in high risk settings such as aged care facilities.

Most states and territories have developed tiered outbreak response and surge plans for use in the event of increasing numbers of cases and degrees of complexity.

These tiered plans are designed to help jurisdictions to effectively mobilise a surge contact tracing workforce as necessary. Some states and territories have an identified space that is ready for swift occupation by a surge workforce in the event of an outbreak. An important component of a surge or outbreak plan is consideration of how the finite senior public health leadership would be distributed in the event of multiple concurrent outbreaks.

For the purpose of this review, surge is defined as four new confirmed cases (not in quarantine) per day per million population, but no fewer than four per day per jurisdiction. Super surge is defined as up to 40 new confirmed cases (not in quarantine) per day per million population.

Surge testing

In addition to surge plans for contact tracing workforces, states and territories have surge response plans in place for healthcare systems and testing requirements. For example, South Australia has a clearly articulated surge plan for testing, including number of tests required per day and the number of test sites and the workforce capacity to support the testing needs. Some states are training significant numbers of personnel to be able to undertake specimen collection if there was a broad outbreak.

Surge test rates are partly limited by workforce capacity and test instruments, but also by the availability of reagents. Diversification of testing platforms and reducing reliance on a few proprietary reagents and cartridges, as well as movement to open source platforms compatible with a variety of manufacturers' reagents should be an important part of surge testing plans. Further, rapid access to 'pools' of trained scientists and technicians should be considered at both state and national levels.

COVID safety plans

COVID prevention and response plans are also increasingly in place in businesses, educational institutions, venues and government buildings. Part of the plan includes shifting operations to enable business to operate in a COVID safe environment. Queensland has expended significant effort to help businesses adopt COVID safety plans. There is recognition that these plans should enable as much business continuity as possible in the event of an outbreak or cluster.

Precautions are also being taken across critical industries, such as segregating workforce rosters to mitigate the risk of a single case or outbreak impacting the entire workforce.

CASE STUDY – TASMANIAN RESPONSE AND PREPARATION IN RESIDENTIAL AGED CARE FACILITIES

Early in the pandemic, the Tasmanian Department of Premier and Cabinet identified the need for close collaboration with residential aged care facilities.

Regular meetings with peak bodies and members were established in March 2020 and continue on a weekly or fortnightly schedule. These meetings are chaired by the Department of Premier and Cabinet and supported by the Tasmanian Department of Health, the Commonwealth Department of Health and other key stakeholders. This engagement established necessary foundational relationships between government and the sector, which have been strengthened over time through the comprehensive outbreak preparation processes.

In August 2020, the Aged Care Emergency Response Centre was established. The centre has embedded public health expertise to stand up a response and recovery function in the event of an outbreak in a residential aged care facility. Strong working relationships with the sector are fundamental to enhance existing planning and preparedness. Key activities include:

- Orientating nurses to undertake health system support visits to residential aged care facilities, utilising a self assessment tool completed by staff in advance. The information gathered by the assessment tool shapes robust discussions on strengths and gaps in the facilities Outbreak Management Plan and other areas of concern. The facilities receive a summary of their preparedness, with options for additional support for improvement, focusing on PPE, education and training and clinical models of care in an outbreak.
- Working in partnership with Primary Health Tasmania to develop clinical models of care for outbreak management in aged care. This includes regional consultation with residential aged care facilities, general practitioners, Public Health and the Tasmanian Health Service.
- Developing a 'Building Capability Framework in infection, prevention and control' to enhance skills and knowledge of the workforce.
- Collaborating with the Commonwealth to establish Tasmania's surge workforce capability and the triggers for escalation. This includes identification of available support from the State as a component of local surge workforce planning.
- Commenced a program of scenario exercises with residential aged care facilities.

No one size fits all

There is a broad set of principles to be applied during outbreak investigation and management in high risk settings, outlined in the CDNA COVID-19 SoNG. A number of specific plans have also been developed including plans for residential aged care facilities, correctional and detention facilities, and remote Aboriginal and Torres Strait Islander communities. In addition, states and territories have developed specific plans suited to their unique populations and geography.

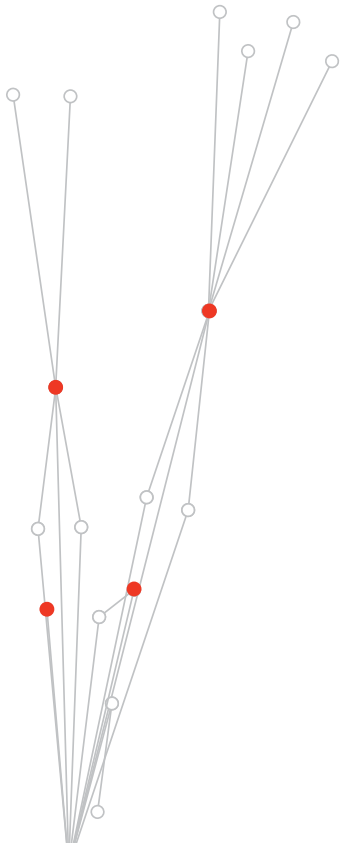
Specific outbreak response plans for high risk settings have been developed in line with challenges that may be unique to each jurisdiction. These include plans for cargo ships, remote industrial sites and many others.

Further, individual state and territory outbreak plans have embedded nuances. For example, in South Australia, the plan for residential aged care facilities includes mobilisation of a specific extraction team to safely and quickly move confirmed cases to a designated hospital.

In Queensland, preparation and planning has been undertaken for potential concurrent disasters. This would include circumstances where a substantial outbreak of COVID-19 occurs simultaneously with an adverse weather event.

The Northern Territory has drawn on existing relationships with Aboriginal leaders and communities, to develop a specific disaster management plan for Central and Top End Services to handle COVID-19. The plan recognises the geographic and cultural barriers in remote areas and highlights the importance of on the ground contact tracing and case management processes led by local Aboriginal health practitioners. This involves extensive practical training of remote health care workers in contact tracing and case management.

The Commonwealth has developed a number of COVID-19 management plans for specific subpopulations, particularly those at higher risk of morbidity and mortality, and for rapid spread of disease. Specific surveillance and epidemiological considerations for Aboriginal and Torres Strait Islander populations are included in the Management Plan for Aboriginal and Torres Strait Islander Populations, the Remote Framework, and the CDNA National Guidance for remote Aboriginal and Torres Strait Islander communities for COVID-19.[27,28,29] The Commonwealth has also developed a COVID-19 management and operational plan for people with disability.[30]



Surge workforce

The COVID-19 pandemic has required an unprecedented rapid upscale of contact tracing capacity. For all states and territories, the primary responsibility for ensuring sufficient numbers of appropriately skilled staff to support contact tracing lies within their respective health departments.

During high new daily case numbers, jurisdictions are required to surge their workforce to support an increasing contact tracing workload. In NSW, initial surge workforce for public health units is provided from within the local health district. This provides the advantage of local knowledge and understanding of the community already embedded within the surge workforce. Having a contextualised knowledge of the area and people is particularly important for contact tracing in remote Aboriginal and Torres Strait Islander communities. Currently more than 160 people are available throughout regional centres in the Northern Territory, ready to provide contact tracing support.

Where local public health workforce capacity is exhausted, surge workforce reserves can be accessed through other public sector departments or agencies. For example, staff from other government departments, including the Commonwealth public service, or universities and medical research institutes, can be brought under the supervisory umbrella of the health department. In NSW, employees from large employers such as Qantas, or retired health workers were also seconded into the NSW Department of Health to assist with contact tracing.

In Victoria, surge workforce was enlisted through contracted providers, such as healthdirect, who provided surge support for contact tracing and non contact tracing roles. Surge support through contracted providers allowed existing health department experts to focus on complex aspects of contact tracing. However, this model presents a challenge to give contracted providers direct access to jurisdictional database systems to enter contact tracing data.

When support from other states and territories or from the Commonwealth has been enlisted, the enlisted staff should be formally seconded to work in the services of the health department in need, using the contact tracing digital system or paper based forms of that health department.

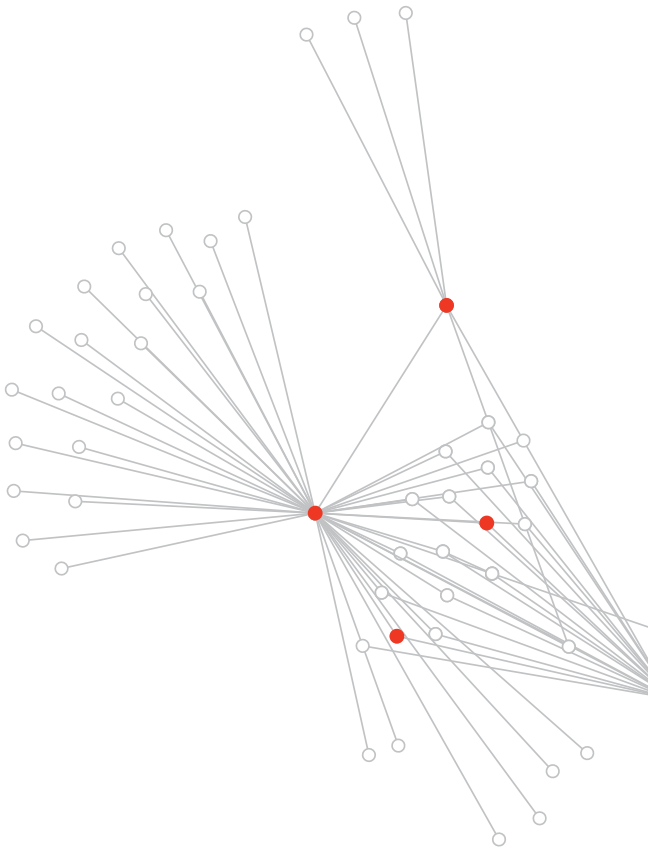
There is a willingness for states, territories and the Commonwealth to provide interjurisdictional contact tracing and outbreak support, as evidenced during the Victorian outbreak. As each state and territory has a standing and surge contact tracing workforce that could be called upon by any jurisdiction, we should be confident that there is a national standing surge capacity. Ideally, this will be tested at surge and super surge levels.

Training a surge workforce

Surge support staff must be well trained. In some jurisdictions, surge staff receive several weeks of training and ongoing mentoring. In preparation for outbreaks where cross jurisdictional surge is required, it may be of benefit to identify ways to quickly train, acquire logins, and on board contact tracing staff from other states or territories to a jurisdiction's digital systems.

Having enough team leaders is an important consideration, and challenge, when scaling up the contact tracing workforce. Optimal surge preparedness includes leadership training for the experienced standing workforce, who will be elevated to team leaders when surge staff are called upon. Western Australia has planned their surge workforce around 'pods' of contact tracing teams of a constant size. In the event of high new daily case numbers, the number of 'pods' are increased to support the increased workforce needs, each with an experienced team leader with public health expertise.

Experienced epidemiologists, public health physicians and nurses, and contact tracers with fundamental training in public health, are essential for an optimal contact tracing and outbreak management system. These positions require years of training and applied experience unattainable through short term training. In the event of high new daily case numbers, states and territories should have the capacity to load share across intrajurisdictional public health units. Surge support for leadership positions may also require assistance from other states and territories. The National Critical Care and Trauma Response Centre have expertise in rapid deployment of medical teams, and could be leveraged in a coordinating role for the interjurisdictional surge of public health leadership.



CASE STUDY – DOMESTIC DEPLOYMENT OF AUSTRALIAN MEDICAL ASSISTANCE TEAMS

The Commonwealth funded National Critical Care and Trauma Response Centre is a key component of Australia's disaster and emergency medical preparedness and response capability.

A key role of the National Critical Care and Trauma Response Centre is the coordination and delivery of the Australian Medical Assistance Team Teams (AUSMAT) program.

The AUSMAT program is a capable, flexible and autonomous asset configured to manage complex health emergencies. AUSMAT members are selected from all states and territories and are considered some of the best clinicians and logisticians Australia has to offer. AUSMAT provides hybrid deployment teams of both public health and acute care medical expertise. In addition, to direct patient care, AUSMAT can also offer immunisation providers, logistics teams, surveillance and epidemiology teams, and public health emergency operation teams.

AUSMAT's capacity to quickly and effectively respond to emergencies is complemented by the National Critical Care and Trauma Centre's operational capability to maintain a constant state of readiness by being equipped, prepared and ready to respond swiftly upon request by the Commonwealth.

Since October 2019, AUSMAT has played a critical role in Australia's response to COVID-19, through supporting the management of:

- The outbreak on board the German cruise ship MS Artania in Western Australia, involving 441 passengers and crew of whom 81 tested positive for COVID-19.
- The outbreak in Tasmania's north west through providing clinical leadership and essential emergency care services.
- Victoria's aged care COVID-19 outbreak through completing 169 visits to 75 aged care facilities to assess existing personal protective equipment and infection control procedures and boost infection prevention and control measures in the facilities.
- COVID-19 quarantine facilities on Christmas Island, Howard Springs and in the Northern Territory.

The National Critical Care and Trauma Centre also specialises in delivering COVID-19 Rapid Response Team Training. The interactive training includes fundamentals of outbreak response in reference to isolation and quarantine of multiple individuals (cohorting), infection prevention and control, and personal protective equipment.

Emergency response exercises

Conducting drills and simulation exercises is the most effective way to test and evaluate emergency preparedness plans. There are a variety of ways to test emergency preparedness plans, including orientation exercises, stress tests, desktop exercises, drills, and functional simulation exercises.

In the absence of new cases outside of quarantine, jurisdictions such as Western Australia, Northern Territory, ACT, South Australia and Tasmania have been in continuous preparation mode. In addition, states with a low number of cases such as Queensland and NSW have been constantly stress testing systems against actual outbreaks when they occur, allowing them to be better prepared for the future. Until recently, Victoria has been continuously refining their system while dealing with ongoing outbreaks.

Some states and territories are also actively running desktop simulations, and functional simulation exercises to test their capacity to deal with outbreaks, including multiple simultaneous outbreaks. In some instances, functional simulation exercises using actors and increasingly complex outbreak scenarios with rising new case numbers have been used to stress test outbreak management plans.

The Commonwealth Department of Health has also led a number of emergency response exercises, including exercises designed to practise the powers under the *Biosecurity Act 2015,* promote familiarisation with policies and identify gaps. These exercises involve key Commonwealth Government agencies and state and territory partners.

For example, 'Exercise EmergenSea Detour' explored the differences between responding to cruise ship outbreaks of listed versus non listed human diseases. This desktop exercise tested key processes such as pre-arrival reporting, AHPPC involvement, re-routing of ships, and Biosecurity and Human Biosecurity Officer assessments. It also stress tested challenges such as resource provision and the medivac of passengers.

To complement the collaborations at the Commonwealth level, parallel exercises are held regularly with state and territory officers who are appointed, under the Biosecurity Act, as Chief Health Biosecurity Officers (CHBO). Internal CHBO exercises are held regularly and are designed to practise the powers under the Biosecurity Act, to promote familiarisation with policies and procedures, and identify gaps. These desktop exercises are attended by the CHBOs from each state and territory.

In addition, the Commonwealth has funded the National Critical Care and Trauma Centre based in Darwin. The centre is internationally recognised for its excellence in training and disaster response simulation exercises.

In the future, functional simulations at local, state and national levels based at the 'surge' and 'super surge' levels will be an important mechanism to verify the performance of contact tracing and outbreak management systems.

Surveillance

Surveillance is the ongoing, systematic collection, analysis and interpretation of health related data. This used to inform public health measures for the control of communicable diseases. COVID-19 surveillance supports public health measures through timely reporting and description of cases and clusters, testing patterns, and disease severity. This key epidemiological information is needed to inform public health actions at the local, state and territory, and national levels.

The Australian National Disease Surveillance Plan for COVID-19 (COVID-19 Surveillance Plan) describes a national approach to disease surveillance for COVID-19.[31] Surveillance in Australia occurs in partnerships between the Commonwealth, states and territories, health research institutions, clinicians, public and private laboratories, and other health sector stakeholders. National reporting against components of the plan are reliant on states and territories collecting

and sharing data with the Commonwealth. Enhancing and expanding existing automated reporting systems would further minimise human effort in collecting and extracting relevant data, and ensure continuity of reporting in the event of a substantial rise in case numbers.

CDNA is responsible for the COVID-19 Surveillance Plan, with each new iteration of the plan developed in conjunction with states and territories. The COVID-19 Surveillance Plan is updated to support responses proportionate to the level of risk over time, geographic regions and for different population groups.

A number of disease surveillance approaches are adopted in the COVID-19 Surveillance Plan, including:

- Case based reporting from states and territory communicable disease control groups.
- Active case finding through targeted testing to provide confidence that cases will be detected as control measures evolve.
- Surveillance to collect data on the prevalence of respiratory symptoms in the community and enhanced data on clinical presentation.
- Antibody surveillance to understand previous infection at a population level.
- Molecular epidemiology utilising genomic data to characterise circulating virus and patterns of disease transmission, and assist in the investigation of outbreaks and clusters.

National Notifiable Diseases Surveillance System

The National Notifiable Diseases Surveillance System (NNDSS) was established in 1990 under the auspices of the CDNA. NNDSS coordinates the national surveillance of more than 65 communicable diseases or disease groups, and supports Australia's national case based reporting surveillance approach by integrating core reporting requirements from state and territory public health units. This system is used to report nationally on all new diagnoses of infection with SARS-CoV-2, and is supported by a number of other systems that monitor important aspects of COVID-19 surveillance and management such as disease severity, extent of testing for SARS-CoV-2 in the community, outbreaks in particular settings, and timeliness of contact tracing activities.

De-identified notification data are supplied to the Commonwealth Department of Health on a daily basis from all states and territories. Notification data includes a unique record reference number, state or territory identifier, disease code, date of onset of symptoms, date of notification to the relevant health authority, sex, age, Indigenous status and postcode of residence, as well as enhanced fields that are collected for some diseases, including COVID-19. For COVID-19, these enhanced fields are used to understand source of infection and co-morbidities, with further relevant additional fields able to be incorporated to inform the epidemic picture. Ideally, all enhanced data fields should be endorsed through the National Surveillance Committee, a subcommittee of CDNA.

The NNDSS data are collated and used for analysis, publication on the official NNDSS website (updated daily), and in the Commonwealth Department of Health peer reviewed journal Communicable Diseases Intelligence.[32] The NNDSS is the key mechanism through which government, the public and researchers can access nationally collated data on cases of notifiable conditions, including COVID-19. For COVID-19, analyses from NNDSS are used to inform epidemiological trend analyses and reporting. Additionally, data from NNDSS are also presented on the COVID-19 situation and case numbers website and across various Commonwealth app platforms.[33]

The Commonwealth Department of Health is working to modernise existing outdated systems through the development of a new National Interoperable Notifiable Disease Surveillance System (NINDSS). The Department has released an approach to market to engage a provider with the capability to provide a secure cloud based Software as a Service (SaaS) solution, for the NINDSS project with the completion of a minimum viable product delivered by 30 June 2021.[34] The new solution will replace and decommission current outdated Commonwealth systems, migrating and securing all existing data before expanding to offer services, including contact tracing capability, to jurisdictions. The NINDSS will also provide a means for all jurisdictions to provide regular data uploads, as seamlessly as possible and in real time, and be available to replace state systems as it suits them.

Wastewater testing

In addition to surveillance methods in the COVID-19 Surveillance Plan, a number of states and territories are actively considering novel surveillance mechanisms, including testing of wastewater to support their enhanced surveillance strategies.

Development of wastewater-based epidemiology techniques for the detection of SARS-CoV-2 is an active area of research, with some states and territories piloting wastewater surveillance programs for COVID-19.[35] Water Research Australia is leading a collaborative project across much of Australia to integrate reliable results of sewage testing for the SARS-CoV-2 virus with health data for COVID-19 on a national basis. The Collaboration on Sewage Surveillance of SARS-CoV-2 (ColoSSoS) Project will track and monitor the presence of SARS-CoV-2 and its persistence in the Australian sewerage network, providing information about where the virus is present in the population.

Implementation of wastewater surveillance programs in a low prevalence environment can identify regions that may require increased community testing. A positive RT-PCR result from a wastewater sample would need to be considered carefully alongside other information. It may provide an early warning that the virus has been introduced into an area, allowing a more targeted testing and public health response. Wastewater surveillance could also be used to screen international flights, freight ships, and cruise ships on arrival when international travel resumes.

As an emerging surveillance system for SARS-CoV-2 in Australia, wastewater testing for SARS-CoV-2 should be properly evaluated.[36] Limitations of wastewater testing include lack of confidence in equating a negative test result to the absence of SARS-CoV-2 in a community. As methods for sample concentration are enhanced, the ability to detect low levels of SARS-CoV-2 in wastewater is likely to improve over time. Initial estimates suggest that the sensitivity of wastewater surveillance is approximately one confirmed case per 10,000 to 20,000 people. A more accurate figure will be known when current analyses are completed.

Further work through collaborations between water experts and public health authorities could lead to increased confidence in the use of wastewater testing to identify potential outbreaks. Specifically, public health, clinical and wastewater sectors should build on existing research and field testing of wastewater detection to determine whether a goal of 50% coverage of the Australian population is practical.

CASE STUDY – QUEENSLAND WASTEWATER SURVEILLANCE

Queensland Health partnered with researchers from the University of Queensland and CSIRO to pilot a wastewater surveillance program for SARS-CoV-2.

Monitoring took place in 27 wastewater treatment plants across Queensland representing approximately 50% of Queensland's population. The aim of the program was to complement Queensland Health's broader surveillance and management of the COVID-19 pandemic.

The 13 week pilot commenced in late July 2020 and concluded on 26 October 2020. Samples were collected weekly and analysed at the CSIRO Brisbane laboratory.

During this time SARS-CoV-2 was detected in 40 wastewater samples, with one or more detected at 20 of the 27 sites. Genomic sequencing was carried out on 25% of the detections and all results were confirmed.

Queensland has made a decision to fund an expanded program to look for evidence of SARS-CoV-2 re-emergence in Queensland's population, until 30 June 2021. Planning is underway for the identification of sites.

CASE STUDY – WASTEWATER TESTING ON REPATRIATION FLIGHTS

Qantas has partnered with researchers from the University of Queensland and CSIRO to pilot a wastewater surveillance program on repatriation flights.

The program builds on methods published in the Journal of Travel Medicine in July 2020.[i]

Samples are collected from aircraft after landing, on outgoing legs and incoming (repatriation) legs of the journey. Improved sampling technologies are being used for collection, concentration, extraction and analysis of virus fragments.

In October 2020, a repatriation flight from India landed in Darwin with 183 passengers (including 62 children) on board. All passengers older than 12 tested negative two days prior to boarding the flight. However, five passengers, including two toddlers, tested positive on day one of quarantine at the Howard Springs quarantine facility.

Wastewater samples collected from the aircraft upon landing in Darwin tested positive for SARS CoV-2 (samples were collected within approximately 70 hours of passengers' pre flight tests). Wastewater samples taken on the outgoing flight all tested negative.

The study will continue for an initial tranche of eight flights, each with approximately 175 passengers, from London, New Delhi and Johannesburg.

The application of wastewater based epidemiology, coupled with other forms of data, including point of care and clinical testing, and well coordinated open reporting, could provide public health officials with an additional means of assessing the presence or absence of COVID-19 infections among incoming tourists and citizens when routine international flights resume.

i Journal of Travel Medicine, 2020, 1–11. Detection of SARS-CoV-2 RNA in commercial passenger aircraft and cruise ship wastewater: a surveillance tool for assessing the presence of COVID-19 infected travellers, doi: 10.1093/jtm/taaa116 (April May Qantas flights).

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CHAPTER 2
END TO END CONTACT TRACING

Never fall behind

The ability to detect and isolate cases of COVID-19 and quarantine their close contacts is central to preventing ongoing community transmission of COVID-19 in Australia.

Testing

COVID-19 testing framework

A high rate of targeted testing is the cornerstone of protecting the public during a pandemic, and essential to providing confidence that cases will be detected as control measures are adjusted. Nationally, testing for COVID-19 is based on the epidemiological and clinical criteria described in the CDNA COVID-19 SoNG.[1]

The CDNA Testing Framework for COVID-19, developed as a companion to the Australian National Disease Surveillance Plan for COVID-19, lays out the primary approach for identifying people with active SARS-CoV-2 infection. This approach includes testing people with clinical symptoms first, followed by groups that are likely to reveal the presence of undetected community transmission.

Large scale non-clinically indicated testing of asymptomatic people is not recommended for Australia's low incidence of COVID-19.[2] However, PHLN notes that there is a role for asymptomatic testing in specific contexts for disease control and surveillance. This may include during an outbreak in a high risk setting where there is evidence of a risk of spread and ongoing chains of infection.

In some circumstances, states and territories implement their own testing regimens beyond this national testing framework. PHLN advises Australia's testing strategies should be targeted to strike the right balance between maintaining epidemic control and protecting the sustainability of laboratory capacity.[3]

COVID-19 RT-PCR test

COVID-19 diagnostic tests detect the presence of the SARS-CoV-2 virus in a specimen sample. Currently, detection of the SARS-CoV-2 nucleic acid – RNA – in a specimen sample by Reverse Transcriptase Polymerase Chain Reaction (RT-PCR) remains the gold standard early detection diagnostic test. Rapid antigen tests are an emerging diagnostic testing method, and are discussed in Chapter 5.

Testing across most states and territories is supported by a mixture of public and private pathology laboratories, equipped with high throughput nucleic acid extraction platforms and PCR machines. The COVID-19 pandemic has significantly increased demand on laboratory throughput and reagents required for RT-PCR testing. Overreliance on a small number of overseas suppliers for laboratory reagents and consumables across states and territories presents a risk.

Most states and territories also have some capacity to undertake a limited number of rapid diagnostic tests in remote and special clinically relevant locations, using highly sensitive point of care RT-PCR systems such as the Cepheid GeneXpert platforms. However, broader use of these instruments is currently limited by availability of customised testing cartridges manufactured overseas.

Specimen collection

Specimen collection is generally conducted across the community at dedicated testing clinics, or in a hospital setting. Most states and territories have also incorporated pop up and mobile specimen collection sites to support outbreak management. Approximately 150 General Practice led Respiratory Clinics have also been established by the Commonwealth to support assessment and testing for people with mild to moderate respiratory symptoms. Traditionally, specimen collection is undertaken using a nasopharyngeal swab to collect a respiratory sample. This technique is invasive, and PHLN continues to monitor emerging literature with regard to the performance of saliva collection as an alternative specimen for RT-PCR tests.[4]

Pathology labs are increasingly able to transmit COVID-19 results to health departments electronically, who then notify patients of their negative results by text message. Rapid turnaround of tests from specimen collection to notification of test results (negative results and confirmed cases) is critical to ensure the efficiency and effectiveness of the contact tracing process. Rapid notification of confirmed cases will ensure downstream transmission risk is mitigated as quickly as possible.

Importantly, notification of negative results within 24 hours is likely to increase testing compliance across a population.

Contact tracing

Contact tracing is one of many tools that has been used to successfully curtail COVID-19 in multiple countries. This has been achieved through manual contact tracing systems in some instances, and automated technology in others.[5]

The contact tracing process has not been as effective in some countries, such as the United Kingdom and the United States of America, due to under resourcing and relaxation of physical distancing measures while there was ongoing community transmission. In addition, delays in testing and obtaining results also hindered the process.[6] This highlights the importance of our review encouraging states and territories to aspire to achieve the goal of specimen collection to notification within 24 hours. When tracking, tracing, and isolating, every hour counts.

It is important to note that strong contact tracing capability is one component of what should be a multifaceted public health response to cases of COVID-19.

The primary goal of contact tracing is to halt further transmission of the virus when a case is identified. Contact tracing has two purposes: to identify close contacts (downstream contact tracing) and to identify potential sources of infection (upstream contact tracing).

The first, and always necessary purpose, is to identify exposed contacts of the confirmed case who may be incubating the virus, and notify the close contacts that they must immediately quarantine. The term ‘contact tracing’ usually refers to ‘downstream contact tracing’ which is the identification of close contacts and directing them to quarantine and inhibit further spread of the virus.

The second purpose of contact tracing is to identify how the confirmed case might have contracted the virus. This is known as ‘identification of potential source contacts’ or ‘upstream’ contact tracing. It is undertaken by expert analysts and is crucially important in order to map connections between various cases, outbreaks, and clusters and to identify any alternative chains of transmission. Upstream contact tracing usually extends 14 days prior to the date of first symptoms. Modelling indicates that upstream contact tracing is an effective and efficient strategy to identify clusters and prevent transmission of SARS-CoV-2.[7,8]

In certain circumstances, upstream contact tracing may not be possible, this includes where:

- Daily new case numbers are very high and the contact tracing workforce is under strain. By not performing upstream contact tracing, this will enable staff to concentrate efforts on immediate downstream contact tracing.
- There is evidence of substantial community transmission. If a confirmed case could have acquired their infection from anywhere within the community, then broader public health action is likely to be required to suppress ongoing chains of transmission, and upstream contact tracing may not be an efficient use of finite public health resources.

'Close contacts' refer to people who have been in contact with a confirmed case and require quarantine. This is based on whether the confirmed case is likely to have been infectious at the time of contact and the duration and type of exposure.

CDNA currently define a close contact as:

- Face to face contact in any setting with a confirmed or probable case, for greater than 15 minutes cumulative duration over the course of a week, in the period extending from 48 hours before onset of symptoms in the confirmed or probable case, or
- Sharing of a closed space with a confirmed or probable case for a prolonged period (e.g. more than 2 hours) in the period extending from 48 hours before onset of symptoms in the confirmed or probable case.[9]

Where contact tracing capacity allows, and public health discretion indicates it may be of use, contact tracing may be extended to include identification and quarantine of household contacts or close contacts of close contacts, known as secondary contacts.

Alongside contact and case definitions, guidance on other aspects of public health response including contact and case management is provided in the CDNA COVID-19 SoNG. Guidance in the COVID-19 SoNG is regarded as the minimum standard, with public health units taking more stringent or risk averse approaches where they have cause. It is important these guidelines align with the rapidly evolving evidence base.

In contact tracing, having a contextualised knowledge of the area, people and resultant approach is a key to success. This is particularly applicable in remote Aboriginal and Torres Strait Islander communities. Modelling indicates that in these communities, different strategies of contact tracing and management, such as identifying and quarantining extended household members of a confirmed case, may be more useful than history based strategies.[10]

In Tasmania, strong relationships between the central public health unit and personnel (e.g. local government officials and police officers) in regional emergency coordination centres helps to provide local knowledge for contact tracing.

Contact tracing, particularly upstream contact tracing, is not straightforward and requires a great deal of contextualised information. A critical piece of information is the confirmed case's date of symptom onset, which is needed to determine the confirmed case's infectious period. This can be exceedingly difficult to determine, considering that COVID-19 may manifest as a mild and non specific symptom such as fatigue. Contact tracers in some jurisdictions receive a lot of training specifically on identifying symptom onset. Any claims by a case that they are asymptomatic would be treated with caution by experienced contact tracers.

The operating mantra of contact tracing should be to never fall behind. An effective contact tracing and case management system will cope with high case numbers. In extreme surge conditions, the jurisdiction should in the first instance surge with their own human resources and recruit workforce assistance from other jurisdictions and the Commonwealth. If this proves insufficient, it is nevertheless essential to keep up with managing new cases. In order to never fall behind, measures such as, but not limited to, the following should be considered:

- Use risk based prioritisation algorithms to allocate confirmed case interviews.
- Use text messages to replace phone calls for initial notification to close contacts that they must quarantine.
- Reduce the number of days prior to symptom onset that close contact information is sought, i.e. ceasing upstream contact tracing.
- Forgo optional tracing of secondary contacts.
- Forgo the necessity to reach 100% of close contacts. Stop the interview if the last few contacts are difficult to identify. Move onto the next case.
- Ask cases to notify their own close contacts in the first instance, with follow up from authorities when feasible.

Contact tracing is largely dependent on the recall of the case being interviewed. The expertise of the officer conducting the interview and their ability to prompt the case's memory during the interview is also key. In some public health units, contact tracing and the clinical aspects of case management are integrated. This means that the first contact with a case is by a clinician, with the view to build trust, facilitate openness, and subsequently increase quality of information received during the case interview.

Proximity apps such as COVIDSafe can help with identifying contacts, although the rate of novel contacts identified is currently low. Attendance recording is also important for finding potential close contacts, including through attendance apps. There is also potential to use specialised smartphone download systems to identify locations at which the case or close contact has spent time. These contact tracing assistance tools are described in Chapter 5. There is scarce evidence on the effectiveness of digital or automated contact tracing.[11]

Efficiency is enhanced if contact tracers follow digital interview forms and record the responses directly into computer systems rather than rely on paper based forms and subsequent data entry. A fully digital contact tracing system dramatically improves the efficiency of contact tracing but is dependent on well trained contact tracers and expert public health oversight in important interpretive phases such as complex cases, difficult interviews, cluster analysis and outbreak responses.

Some states and territories with low or no case numbers do not have frequent opportunities for contact tracing staff to practice case interviews and utilise their skillset for real cases. A couple of jurisdictions noted that providing support to Victoria during the state's outbreak was a good opportunity for their contact tracing staff to practice and refine their skills.

It is important that jurisdictions are able to uniquely identify individuals as a case or contact. Domestically this could be achieved through a combination of name, date of birth, address and phone number.

Isolation and quarantine

The effectiveness of contact tracing depends on achieving high isolation and quarantine compliance.[12] Contact tracing that extends to secondary contacts can reduce the growth rate of an outbreak, but comes at the cost of quarantining a large proportion of the population.

Terminology on isolation and quarantine is inconsistently used outside of public health. The requirements of quarantine and isolation are fundamentally similar but the duration of quarantine and isolation differ.

Isolation refers to the restrictions placed on confirmed cases, and those who are suspected to have the disease based on a combination of symptoms and an epidemiological factor.[i]

Quarantine refers to the restrictions placed on a person who has an epidemiological link and may potentially be incubating the virus, such as a returning international traveller, a close contact, or in some cases a secondary contact of a confirmed case.

The duration of quarantine is currently 14 days (the upper length of the incubation period) from the last close contact with a confirmed case, or since leaving a high risk geographical area as defined by whichever jurisdiction a person is entering. The duration of isolation is a relatively complex determination based on symptom onset, duration and severity – detailed advice is available in the COVID-19 SoNG.

Confirmed cases are either isolated in hospitals, quarantine or hotels, or the person's usual facility or residence if a risk assessment deems that is suitable. The status of hotel quarantine has recently been reviewed.[13]

Confirmed cases are generally offered a variety of support including clinical, mental health, and conditional financial and welfare support to assist them during their isolation or quarantine.

It can be difficult to achieve full segregation from other household members when an individual needs to isolate or quarantine, particularly if it is a small residence with multiple occupants. If physical distancing is not practical or patients are considered high risk, alternative locations for quarantine or isolation, such as hotel quarantine, can be arranged.

Some states and territories, such as the Northern Territory and the ACT have also mobilised welfare teams who can assist with addressing impediments to preventing people from properly quarantining and isolating at their place of choice.

A variety of techniques are used to monitor self isolation and self quarantine and include:

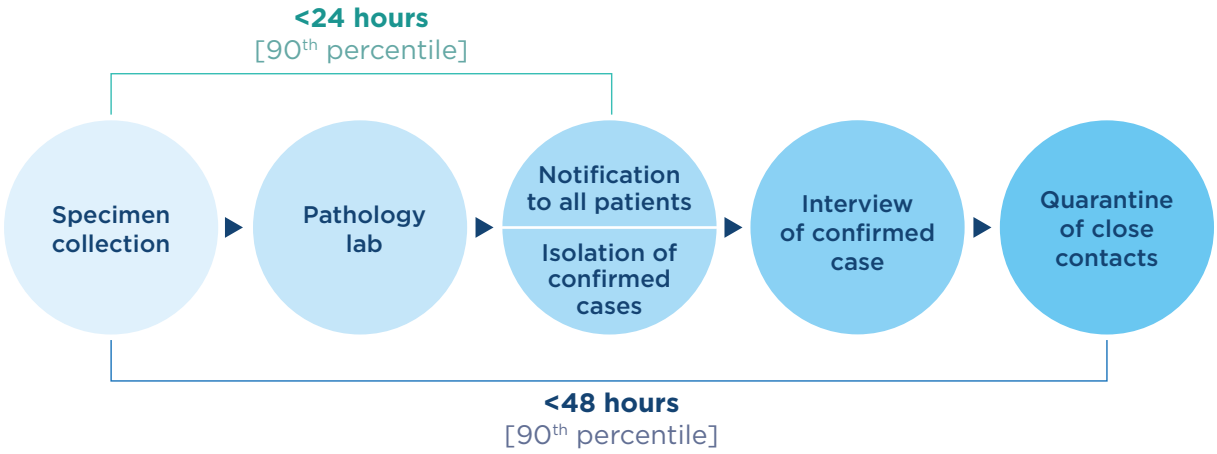
- Calls from health department staff.
- Daily text messages to remind the subject about their obligations to remain in isolation or quarantine.
- Required visits to web sites to inform the health department about symptoms and wellbeing
- Police, the Australian Defence Force or other authorised officers check by phone calls or door knocks.
- Specialised smartphone software such as G2G NOW used in Western Australia. Refer to Chapter 5 for further information.

i As defined in the COVID-19 SoNG.

End of quarantine day 10–12 specimen collection for COVID-19 testing is not usually compulsory, but if not taken, often requires the case to quarantine for an additional 10 days.

In some jurisdictions, secondary contacts are increasingly being asked to quarantine when case numbers are very low and the risk tolerance of public health authorities has shifted. This creates a significant economic burden on individuals and communities, as it is similar to a targeted small lockdown within a specified local area. For example, if on average each case has 10 close contacts and each close contact has 10 secondary contacts, a single case leads to 100 persons being asked to self quarantine, which can have financial, emotional and health impacts on the person and affect the mobility of their household members for 14 days.

Performance targets for end to end contact tracing



Time between symptom onset and testing, level of contact tracing coverage and the speed of contact tracing are critical determinants in controlling virus transmission. Delays in any step of the sequence of symptom onset, getting tested, receiving the results and identifying and quarantining contacts can have a significant impact on the transmission potential of SARS-CoV-2.[14]

A systematic review of the available evidence has found that the effectiveness of contact tracing is maximised when the time from symptom onset to isolation occurs within two to three days and around 80% of close contacts are quarantined.[15,16]

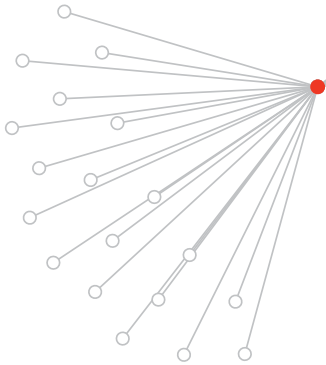
The following performance targets to enhance the effectiveness of the end to end contact tracing process should be adopted:

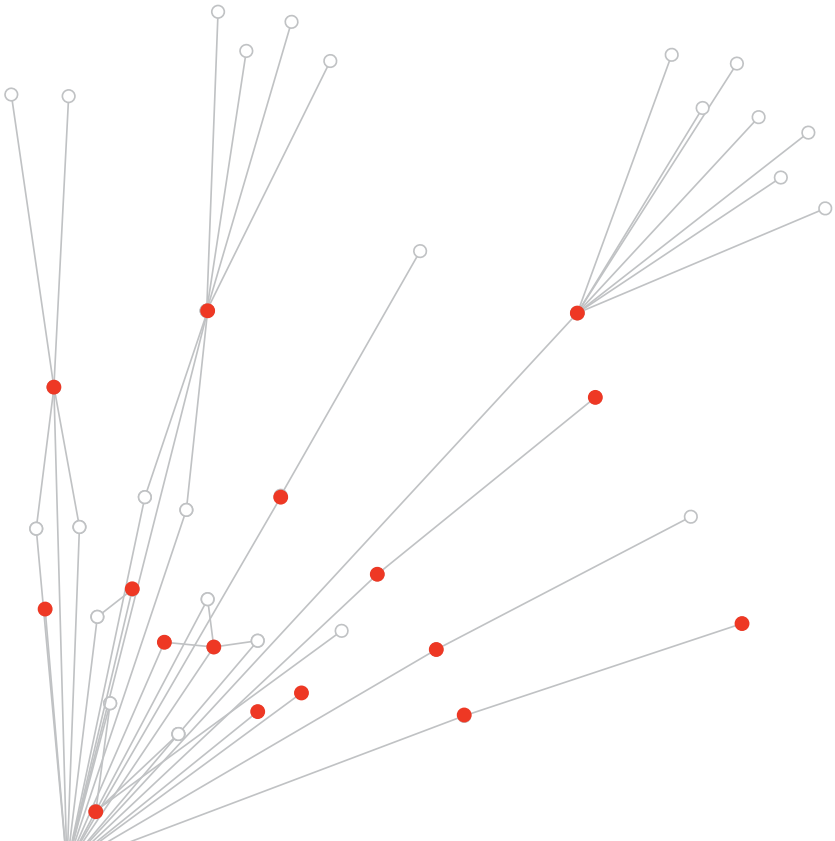
- The number of hours from specimen collection to notifying all people of their results, with the target being fewer than 24 hours.
- The number of hours from the patient's specimen collection to notifying their close contacts that they must quarantine, with the target being fewer than 48 hours.

It is recommended that these two performance targets are reported at the 90th percentile, in recognition of geographical constraints and other unique circumstances that are likely to impact on these targets at a local and jurisdictional level. When there are very low confirmed case numbers, such as fewer than 10, then biostatistics advice should inform the best way to report the results.

Adoption and monitoring of these performance targets will require time stamps, in addition to date stamps, to be noted at the time of specimen collection. This would be best enabled through digital test tracking capability.

Monitoring particular elements of the end to end contact tracing process is important, as it can help identify where there are delays or bottlenecks in the system. The CDNA Australian National Disease Surveillance Plan for COVID-19 describes specific indicators for reporting on contact tracing processes. This surveillance plan and associated indicators are currently under revision.





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CHAPTER 3
OUTBREAK INVESTIGATION AND MANAGEMENT

Go hard, go early

An outbreak is generally defined as two or more confirmed cases, who do not reside in the same household, where illness is associated with a common source such as an event or within a community. For investigation purposes, all jurisdictions define an outbreak in a high-risk setting, e.g. a residential aged care facility, as a single case.

Outbreak management is a sophisticated process. Preparation and public health expertise are key to keeping case numbers low and managing outbreaks. Some outbreaks are managed by multi-agency teams. As with contact tracing, outbreak investigation and management is assisted by local knowledge within the team, particularly in regional areas.

Through the extensive interview process with the cases, close contacts are identified and directed to quarantine. In simple cases, the contacts are family and friends.

In more complex cases, such as a venue having been visited by a confirmed case, incident management plans are developed for the venues to ensure that visitors are contacted directly or contacted via community messaging. This, plus thorough venue sanitisation and review of their COVID safety plans, makes it possible for the venues to be re-opened quickly and for the community to have confidence in the re-opening. In high risk settings, same day outbreak management mobilisation is essential, with an experienced team mobilised from the public health unit.

For most organisations – whether a school, a business or venue – there is benefit to a 'rapid in, rapid out' approach during an outbreak: early, fast and decisive action (rapid in) allows a quick exit (rapid out) by the authorities. This allows many normal operations to resume as soon as possible, minimising the negative impact on an organisation's products or services. Of course, for some organisations such as hospitals, complete closure during an outbreak may not be an option.

Preparation by government, businesses and communities is vital. As in any crisis response, actions will be executed more swiftly and effectively when all parties are prepared: they know their roles, the required actions, and how to carry them out. Up front communication, dialogue and planning is a hallmark of effective preparation. Prevention and clear responsibilities for actions across different parties allows for more rapid and effective local responses.

Immediate case isolation, detailed case interviews, and quarantine of close contacts helps prevent further spread downstream from the case. However, to eliminate an outbreak or cluster, it is often necessary to trace and confirm the upstream source of infection of the current case. The source case or cases may have been asymptomatic and not previously identified. Once identified, further downstream contact tracing from that source can help to prevent further infection. The upstream contact tracing process may be repeated multiple times if generations of cases have not been identified.

CASE STUDY – NSW OUTBREAK AND CLUSTER INVESTIGATION

Within the NSW Health system, public health units with public health expertise and local knowledge conduct detailed case investigation and coordinate outbreak management.

Where there is a cluster or outbreak, an experienced public health team, pop-up testing clinics and local communications can be mobilised from the local health district within hours.

Linking the chains of transmission between cases and clusters may be difficult, often requiring detailed investigation of a case's potential source of infection. This process is sometimes referred to as 'upstream' contact tracing and is routine practice in NSW when the source is not immediately identifiable.

To complement the epidemiological investigation, results from viral genome sequencing are available within 48 hours. These results are combined with information from serological antibody tests, which can be rapidly performed via a high throughput immunofluorescence assay.

This information is collated and expertly interpreted by epidemiologists to understand how and when the infection was transmitted.

Where a new case or cluster is identified within the community, NSW Health can swiftly target communications and increase local access to testing in specific geographical areas. All close and identified casual contacts are contacted and provided public health advice. All close contacts are asked to get tested immediately and to perform quarantine. People who work in or attend high risk settings and who are household contacts of a close contact are also quarantined for 24 to 48 hours until the close contact's test results are known.

Upstream contact tracing and analysing chains of transmission is difficult. It may require a combination of:

- Detailed interview with the current case or cases, conducted by qualified and experienced contact tracing personnel.
- Whole genome sequencing of viral genomes to identify linkages between cases, outbreaks and clusters.
- Antibody testing of upstream contacts to find the source of infection for the current case.
- Epidemiologists and public health personnel with a deep understanding of transmission dynamics to investigate and map the interconnections between cases.
- Local knowledge to help identify links between locations, community groups or events of interest.

To assist epidemiologists, the results from whole genome sequencing of the viral genome and antibody testing should ideally be available within 48 hours. This is common practice in NSW.

To date, the upstream contact tracing, outbreak and cluster investigation in most states and territories is conducted by highly trained epidemiologists, public health physicians or nurses. Software to provide advanced analytics and assist with linking cases is under development in Victoria.

COVID-Net: A national understanding of transmission

COVID-Net is a network of epidemiologists embedded in each jurisdictional health department. The National Incident Room at the Commonwealth Government Department of Health coordinates the network, and has made funding available for jurisdictions to employ an epidemiologist to participate in network activities. The purpose of COVID-Net is to understand SARS-CoV-2 transmission though investigation of clusters and outbreaks of COVID-19 and provide national surveillance information for public health action and policy development. The main objectives of COVID-Net are to conduct:

1. Surveillance of clusters and outbreaks occurring in each jurisdiction reported weekly.
2. National investigations into multi jurisdictional outbreaks of COVID-19.
3. Nationally coordinated investigations into transmission of SARS-CoV-2 in high risk settings, e.g. on airplanes and in health care settings.

Genomic analysis and SARS-CoV-2

SARS-CoV-2 genomic analysis can enable enhanced disease control by permitting precise and accurate national and international pathogen characterisation and comparisons. Increasingly, SARS-CoV-2 genomics is being used to enhance surveillance and investigate COVID-19 clusters and transmission of the virus across Australia, resulting in better informed public health decision making.

NSW and Victoria are currently routinely using whole genome sequencing of viral genomes to track and confirm the source of infection, with Victoria aiming to perform sequencing for almost every identified case. These larger states also have the capacity to undertake genomic analysis for the smaller states and territories, though some jurisdictions are developing the capability to analyse genomic data in-house, in particular South Australia and Western Australia. Some states and territories are able to undertake viral genomic sequencing within 48–72 hours of sample collection. There is a longer turnaround time for whole genome sequencing of viral genomes in other states and territories; ideally these jurisdictions would also be able to complete the process within three to five days.

CASE STUDY – WESTERN AUSTRALIA VESSEL OUTBREAK RESPONSE

Western Australia has gained a wealth of experience in COVID-19 outbreaks on board vessels and, to date, has managed these vessel outbreaks successfully, demonstrating how this can be done nationally.

Each vessel outbreak has presented different challenges, from a cruise ship with large numbers of vulnerable people on board, to a bulk carrier that required outbreak management at anchorage. The various experiences have highlighted that vessel outbreak management needs to be individually tailored to the unique situation and circumstance of the vessel, its crew and the port.

Western Australia Health's experience has shown the need for a proactive and strategic approach to the risk of COVID-19 on marine vessels, with continuous engagement with key stakeholders to ensure systems are in place to mitigate risk and respond to outbreaks.

Each port is considered individually, as the logistics of outbreak management vary greatly between ports. Robust governance structures, clear communication and active cooperation between the multiagency outbreak management team is required. Although successful to date, Western Australia are continually reviewing their protocols to ensure that a risk based approach is used to assess each situation and guide the management of vessel outbreaks.

CHAPTER 4
DATA EXCHANGE

The development of a 'Data Exchange' would provide a new interoperability capability between existing state and territory based contact tracing systems and relevant government agency data systems in the near term. The Data Exchange will enhance Australia's capability to rapidly trace contacts of cases across state and territory borders and provide more timely access to high value data sets for contact tracing.

The Data Exchange would allow contact tracing teams to search, request, share and transfer case and contact tracing data between states and territories. Contact tracing teams would also be able to quickly access airline and shipping passenger contact tracing information for international and domestic travel, registries of test results, and contact details from relevant government data systems. The Data Exchange would only transfer data relevant to contact tracing, such as phone numbers, addresses and test results.

Design assumptions

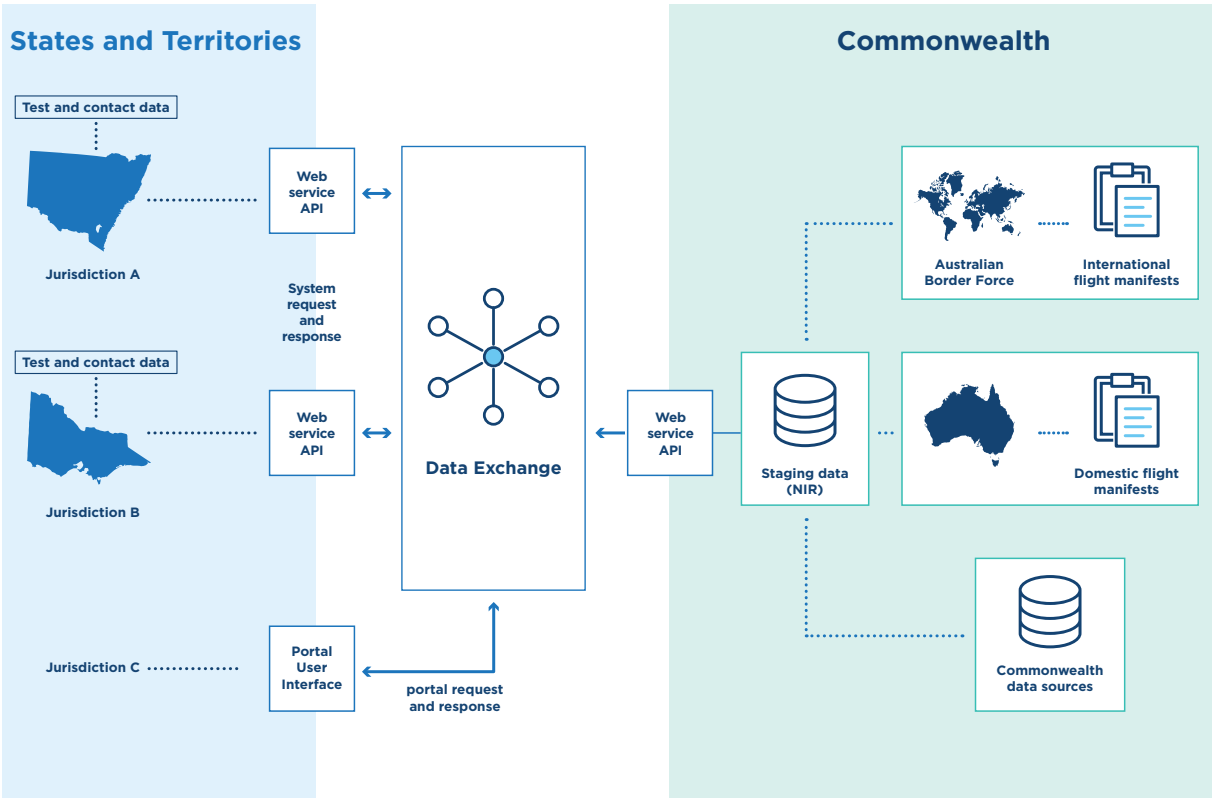
The Data Exchange would be predicated on a number of important design assumptions, including:

- Each state and territory will continue to operate its own contact tracing system.
- The Data Exchange will not hold contact data, modify contact data nor summarise contact data. It will act as a pipeline or a switchboard routing data between each jurisdiction's contact tracing system and from government data sources.
- Each jurisdiction agrees to provide technical expertise to connect their contact tracing system (using an application programming interface, API) to the Data Exchange.
- Where it is not practical to implement automated requests in a state system, officials of a jurisdiction's contact tracing system will be able to independently login to the Data Exchange using a centrally provided user interface.
- The Data Exchange itself will not support surge assistance. Instead the state, territory or Commonwealth staff providing assistance will be established as authorised users of the state or territory contact tracing system to which they are providing assistance.

Functional overview

The Data Exchange would be expected to be delivered using a modern Software-as-a-Service architecture using cloud based infrastructure. High level system components of the Data Exchange would include:

- The Data Exchange manages and logs requests and responses between jurisdiction based contact tracing systems and government data sources.
- Decentralised data storage model with no contact tracing data stored in the Data Exchange. Data are not synchronised between systems and data sources. Only the Data Exchange event data relating to request and response metadata are stored.
- APIs to control the query request and response connections between the Data Exchange, each contact tracing system and government agencies. The APIs will meet the Whole of Government National API design standards.
- Agreed syntax for API queries and a mapping of minimum core data between contact tracing systems.
- Loose coupling of data transfers using an asynchronous API messaging architecture to maintain contact tracing system and data store autonomy and flexibility.
- Notification of failure to receive responses within a specified time frame.



Key uses of the Data Exchange

The following use cases have been identified by the review team in consultation with the states and territories. They have been prioritised based on their utility to contact tracing teams and the importance of delivering the capability in a short time frame. Providing jurisdictions access to international and domestic travel information is the highest value use case. The quality of contact tracing details that can be accessed from airlines will be further enhanced through the newly implemented Australian Traveller Declaration by Australian Border Force.

It is expected that the implementation of the Data Exchange will follow a stage gate approach with the highest value and most achievable scenarios delivered first. Benefits of the Data Exchange will be evaluated before proceeding to the next phase.

Victoria, NSW and the ACT have indicated a willingness to be involved in implementing the Data Exchange. For efficiency, the initial implementation should be limited to a pilot involving Victoria, NSW, the ACT and the Commonwealth. Development of the pilot should be based on an indicative scope of technical work developed by these jurisdictions and other interested jurisdictions, and would only proceed through the stage-gate process following an evaluation of the pilot implementation.

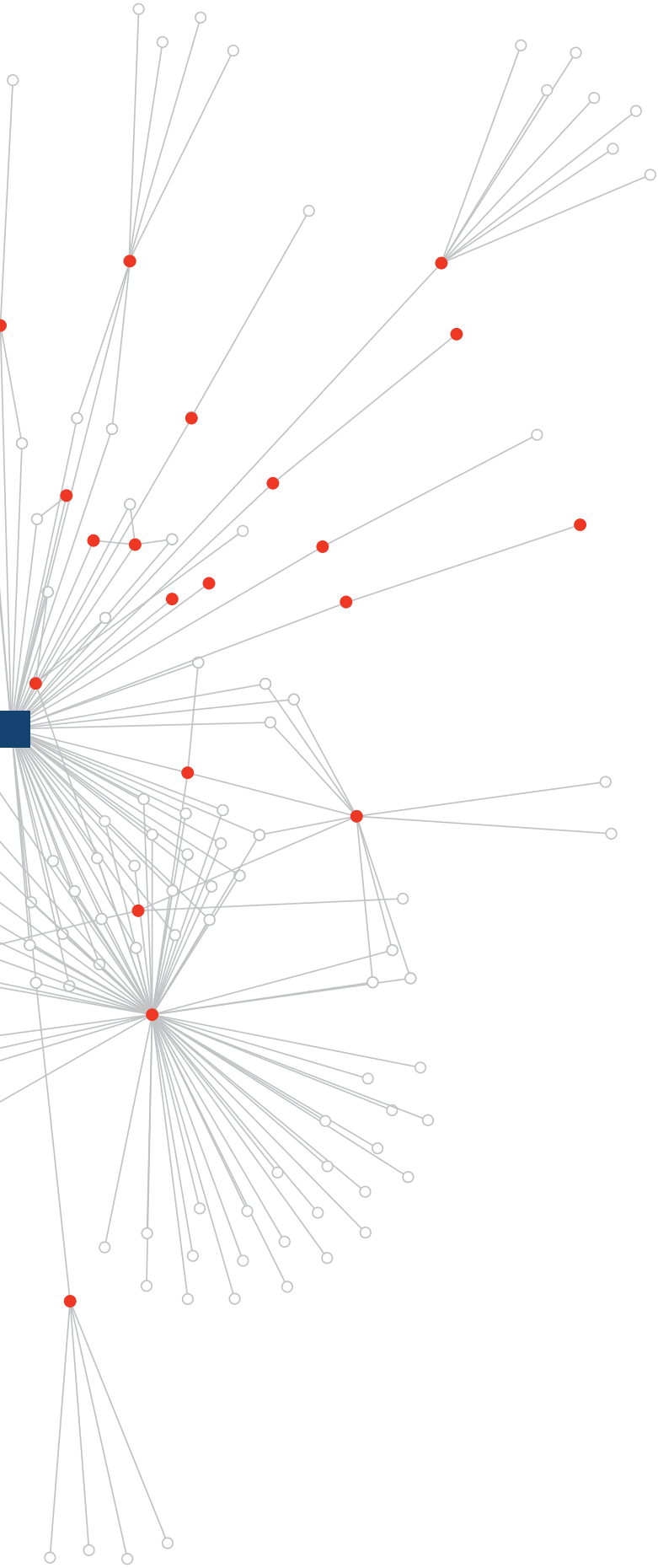
High priority uses for the Data Exchange

Use case		Utility	Immediacy	Priority
1.	**Enable faster contact tracing**			
1.1	Contact trace an international arrival accessing passenger manifest and contact details data	High	Medium term	**Medium**
1.2	Contact trace a domestic passenger accessing passenger manifest data	High	Near term	**High**
1.3	Confirm the international travel history of a domestic traveller	High	Medium term	**Medium**
1.4	Request contact details for a close contact from Commonwealth agency data sources	High	Near term	**High**
1.5	Request close contact data from another state or territory	High	Near term	**High**
1.6	Request close contact data from venue attendance registries	High	Near term	**High**
2.	**Coordination of contact tracing across states and territories**			
2.1	Request testing history for a close contact from another state	High	Medium term	**Medium**
2.2	Transfer a close contact to another state for ongoing contact tracing	High	Near term	**High**
2.3	Receive updates on a transferred close contact	Medium	Medium term	**Medium**
2.4	Notify the National Focal Point of a close contact who has departed Australia on an international flight	Low	Long term	**Low**

Legal and privacy

Given the design assumption that the Data Exchange service will not hold any data in the system, it is envisaged that privacy requirements can be met through the development of agreements with the state, territory and Commonwealth data owners. There will be no need to synchronise copies of data and risk, as a cyber attack target will be minimised.

Currently, under the *National Health Security Act*, Australia's National Focal Point in the Commonwealth Department of Health oversees the sharing of personal data between states and territories, airlines, other Commonwealth agencies and other countries. A public health need, such as contact tracing for COVID-19, will be required to be demonstrated to share these personal data.



CHAPTER 5
TECHNOLOGY

Click and enter

Existing and emerging technologies have the capacity to significantly strengthen state and territory contact tracing and outbreak management capabilities by automating processes to manage large case numbers.

Technologies that complement the traditional contact tracing, surveillance and outbreak management capabilities can be classified into four broad categories:

- Testing technologies.
- Digital contact tracing tools.
- Advanced data analytics to support outbreak management.
- Digital technologies to support isolation and quarantine management.

The technologies described below complement the broader public health response, but should not be seen as a substitute for public health expertise.

Testing technologies

Detection of viral nucleic acid through the SARS-CoV-2 RT-PCR test remains the gold standard test for diagnosing COVID-19 infection. However, there are emerging supplementary and novel testing technologies for COVID-19. A PHLN working group, including CDNA members, is continuously monitoring these emerging technologies, and assessing their potential application in the Australian context.

Rapid antigen tests, genomic sequencing, and serological antibody testing are examples of other testing methods being utilised, or being given consideration, in the response to COVID-19.

Rapid antigen tests

Antigens are substances that stimulate an immune response in the body, such as proteins on the surface of a virus. For the SARS-CoV-2 virus, the antigen detected is the 'spike' protein that is required for the virus to enter into human cells.

Rapid point of care antigen tests have been developed for the early detection of SARS-CoV-2 virus in a specimen sample without the need for specialised and costly equipment. Rapid antigen tests offer turnaround of results within 15–30 minutes, are available at a lower cost compared to RT-PCR tests, and could be part of a surveillance strategy for high risk workforces and congregate settings. However, these tests are less sensitive than the RT-PCR test for COVID-19 diagnosis, with considerable variability between the rapid antigen tests on the market.

Moreover, the clinical performance of rapid antigen diagnostic tests largely depends on the circumstances in which they are used. These tests perform best when the patient is tested in the early stages of infection with SARS-CoV-2 when viral load is generally the highest. They may be useful as a screening test in high risk settings in which repeat testing could quickly identify someone with a SARS-CoV-2 infection to inform infection prevention and control measures.[1] Adoption of rapid antigen testing in a broader testing framework will also require careful consideration of how to manage and confirm negative and positive results.

Rapid antigen tests require a nasopharyngeal swab taken by a health care professional. PHLN and CDNA's Joint Statement on SARS-CoV-2 Rapid Antigen Tests has advised that rapid antigen tests should only be used with medical oversight under public health direction in specific settings.[2] Analytical and epidemiological factors affect the test's predictive value, leading to a high rate of false positive results, particularly when the prevalence of COVID-19 is low. For these reasons, PHLN and CDNA currently discourage the use of these tests in the general population. However, jurisdictions could consider forward planning for the potential use of rapid antigen tests in the event of further outbreaks and community transmission.

Genomic sequencing

Genomic sequencing is the highly accurate determination of the sequence of building blocks, known as nucleotides, from which the gene is constructed. In the context of this report, the genome being sequenced is the viral genome – not the human genome of the patient – and the type of genome is the viral RNA.

Whole genome sequencing of the approximately 30,000 RNA nucleotides that comprise the SARS-CoV-2 genome can be used to reveal the genetic makeup of the virus and discriminate between mutation patterns from different samples.

The SARS-CoV-2 RNA mutates frequently in ways that make very little difference to its infectivity but are sufficient to allow scientists to precisely distinguish various mutated strains. By tracking these mutations, viral genomics enables precise and powerful infectious disease surveillance.

By comparing SARS-CoV-2 genomes sequenced from multiple COVID-19 cases, clusters of COVID-19 and transmission of SARS-CoV-2 can be identified. The likely source of infection and routes of transmission can be monitored by the emergence of genetic variants over time and throughout communities. Whole genome sequencing can also be used to indicate whether the infection was acquired overseas, or locally from a known or unknown contact.[3]

Increasingly, SARS-CoV-2 genomic sequencing is being used to enhance surveillance and outbreak investigations across Australia. In the future, with sequencing results returned in two or three days, SARS-CoV-2 genomic sequencing may help identify genetic factors that impact susceptibility and disease severity, selecting effective targets for potential vaccines, and identifying drug resistant strains.

Serological antibody testing

Serological tests detect specific antibodies produced in the blood in response to an infection. For COVID-19, serological tests rely on the detection of anti-SARS-CoV-2 antibodies. Detection of these antibodies indicates previous exposure to the virus, and potential immunity.[4,5]

Serological tests rely on blood being drawn by a health care professional either from a vein or finger prick. All blood specimens should be regarded as potentially infectious.

Importantly, due to the time delay associated with the production of antibodies following infection by SARS-CoV-2 virus, serological testing should not be considered an alternative to RT-PCR for early detection and diagnosis.

Serological testing may be used for:

- Assistance with outbreak management, in situations where suspected cases return a negative COVID-19 RT-PCR test.
- Epidemiological investigation studies to define the degree of population infection, but not in low prevalence communities like Australia.
- Surveillance of frontline healthcare workers.
- Estimating the timing of infection to help define the likely infectious period of a patient.

Digital contact tracing tools

Digital test trackers

The largely decentralised nature of specimen collection coupled with the centralised model for pathology services in most states and territories mean there are inherent delays between sampling, sending samples to labs, waiting for results, and follow up.

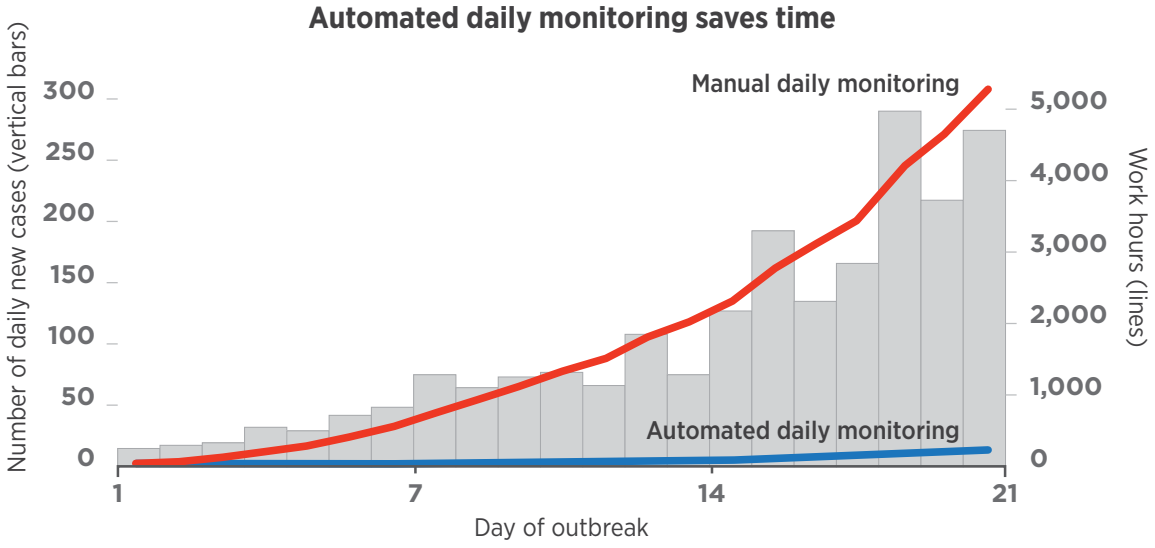
Currently, patient test records are a mix of paper pathology forms and digital records, with paper forms being digitised at the pathology labs, adding delays and introducing the potential for error. Digitally gathering patient information at the site of specimen collection allows much of the manual processing of testing to be automated, and has the potential to link with downstream digital contact and case management tools.

Digital case management

The use of technology to assist with contact tracing and case management is mixed across states and territories. However, all states and territories have been improving their systems and capabilities over recent months. In many jurisdictions, interviews are recorded on paper forms and subsequently entered into a database. In most states and territories, newly confirmed cases are manually assigned to contact tracing staff, with some daily monitoring activities also conducted manually. This model can quickly be overwhelmed during high case numbers, and can lead to situations where confirmed cases are not followed up, or instead are called multiple times by different interviewers for their initial contact tracing call.

To varying degrees, states and territories have digital data management and reporting in place based on third party database platforms configured to meet each system's broad epidemiological event surveillance requirements. At the start of the pandemic, no jurisdiction had a system in place designed to respond efficiently to high case numbers.

Automation, where possible, of contact tracing and case management can significantly reduce workload, particularly during periods of high case numbers. When case numbers rise, the workload associated with daily monitoring activities (e.g. manually sending a text message or an email) rises rapidly. Automating this process can significantly reduce the elapsed time to notify close contacts and provide more efficient daily management of confirmed cases and close contacts in isolation and quarantine, respectively. Importantly, this automation will decrease the burden on the public health workforce which can then concentrate its efforts and expertise on outbreak management.



CASE STUDY – THE VICTORIAN TEST TRACKER

In the midst of the second outbreak, Victoria rolled out 'Test Tracker' to digitise information and data collected at the point of COVID-19 specimen collection to improve accuracy. Test Tracker is being used in all large volume pop up testing sites across Victoria.

The Test Tracker technology replaces the manual process of gathering key information from an individual when they present for a COVID-19 test, thereby reducing error caused delays and complications in contacting cases when handwritten forms are used.

When a person presents for testing they are provided a unique code (QR code) which is linked to their COVID-19 specimen and personal details collected on site. Once the specimen is tested the result is linked to the unique code and provided to the Department of Health and Human Services. If the sample is negative, the person receives an automated text message. If the sample tests positive for the presence of SARS-CoV-2, an official contacts the confirmed case to notify them to isolate, conducts a case interview and commences contact tracing. Through this process, Test Tracker has saved valuable hours in notification of confirmed cases and contact tracing.

In addition to contact details, the digital form also collects data on language spoken at home, country of birth and occupation.

This additional data has proved important for the Department of Health and Human Services in conducting effective case interviews and contact tracing, enabling measures such as ensuring an interpreter is present before a case interview begins.

The digitisation of the data has also allowed Victoria to monitor testing levels in different cohorts, such as geographic location (based on home address), occupation, and industries and cultural groups. This has allowed Victoria to undertake targeted 'call to testing', through directed community engagement, working with community leaders and local health care services, as well as engaging with industry to bolster testing levels in underrepresented cohorts.

Test Tracker already plays an important part in Victoria's end to end contact tracing system, with the aim of having 85% of COVID-19 tests in digital format by the end of the year. Test Tracker also provides future opportunities to extend beyond COVID-19 and create a practical legacy across pathology services.

Most jurisdictions are in the process of implementing end to end case and contact management platforms. For example, South Australia, Victoria and Western Australia have each independently implemented a customer relationship management platform for their case and contact management process. In close development with local public health experts, these digital platforms are being used to better streamline the workflow through automation, where possible, and the use of digital surveys to help prioritise interviews with high risk cases and contacts.

Text messaging capabilities built into these platforms can be used to inform close contacts of their status and provide directions to quarantine, with follow up calls from health officers at the earliest practical time. This, and the use of text messages, web portals and smartphone apps for daily follow up during quarantine, can save hours of work for health officers per contact.

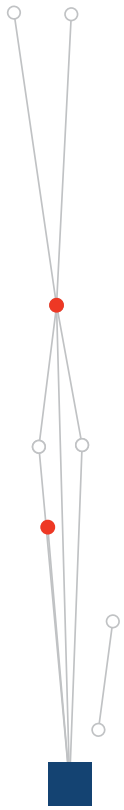
If case numbers surge to extreme levels, automated text messages can replace the usual practice of having a health officer call confirmed cases to notify them of their results, direct them to isolate and provide them with essential advice and support. If this capability were to be used, a health officer would follow up with a call as soon possible to the person, and the public should be well informed that text messages are being used for these notifications.

In addition, where case numbers are low and resources permit, a variety of daily monitoring options could be considered, based on the preferences of the case or contact. For example, in NSW, this can include web based video calling. In Western Australia, a smartphone app called G2G Now assists with daily monitoring. It is discussed further below.

Technology is not a substitute for public health expertise

Importantly, whilst a fully digital contact tracing system can dramatically improve the efficiency of contact tracing, it will never replace the need for well trained contact tracers and expert public health oversight. This is particularly relevant where there are critically important interpretive requirements such as difficult interviews, cluster analyses and outbreak responses.

Moreover, it is important to recognise there is likely to remain a proportion of the population, and regions of the country, where the use of technology will be limited.



CASE STUDY – ACT CHECK IN CBR

ACT Health has developed the CHECK IN CBR smartphone app – a contactless, secure and convenient way for customers to sign in at a Canberra venue.

In line with current ACT public health directions, non essential businesses and venues are required to ask all customers for their first name and phone number and record these details along with the date and time they attended the venue.

The CHECK IN CBR app enables venue operators to easily comply with these directions and the app enables individuals to check in to venues with ease. The data collected using the app is stored securely and directly with ACT Health for 28 days in the event contact tracing is needed due to a confirmed case of COVID-19 in the community.

The app allows contact tracers immediate access to information about who was in a venue at a specific time. This greatly speeds up the contact tracing process, removing the need to contact venues for information, and bypassing traditional, error prone, paper based processes.

Importantly, the simplicity of the information requested, the security of data and the ability of the app to remember individuals' details once entered is likely to lead to a higher adoption rate of the app and use at venues.

ACT Health has offered to share the app with other states and territories to support their contact tracing capabilities.

Attendance apps

Contact tracing is greatly facilitated by attendees recording their presence at places that might become hotspots, such as cafes and restaurants, work, schools, universities, medical clinics, hospitals and sporting and entertainment venues.

Paper based recording of names and phone numbers is increasingly being replaced by innovative smartphone apps or web based portals that enable contactless registration of attendance at venues – places that allow routine and unmanaged public access. One jurisdiction is considering equipping staff at venues with an app for scanning attendees' drivers licenses. The more common and actively used approach is for venue attendees to use apps, which generally scan a two dimensional pattern called a QR code posted at the venue entrance. The QR pattern encodes a globally unique number that identifies the specific venue.

A proliferation of third party attendance apps are being marketed to businesses across Australia. In addition to the disadvantage of not having a centralised database for contact tracers to interrogate the data, many of these apps are requesting unnecessary information from customers that adds significantly to the time taken to register, and is sometimes used for marketing purposes. Further, because of the multiplicity of applications, customers find themselves entering the same information repeatedly if they visit different venues. These repetitive and in some cases unnecessary burdens on customers are likely to result in lower overall compliance with attendance recording.

The utility of an attendance app in supporting state and territory contact tracing capabilities depends on wide adoption and use of the apps, accuracy of the information being obtained, and the availability of the attendance data to contact tracers. Important characteristics of attendance apps include:

- The information provided to the app is limited to the individual's name and phone number or email address.
- During setup, the app verifies the phone number or email address to ensure accuracy of the information being obtained.
- The time and date, and the name and location of the venue are stored automatically.
- The app remembers an individual's information so that any 'check ins' are as simple as clicking on the app and pointing the phone camera at the venue QR code.
- The data from the app is stored centrally and available for interrogation by contact tracing professionals, with little or no delay.

Within a jurisdiction, adoption of a simple, effective, and centralised app such as ACT Health's CHECK IN CBR app will be important for realising the full potential of digital attendance recording in assisting contact tracing efforts across Australia.

Where non centralised check in apps are used, they should conform to the characteristics described above.

CASE STUDY – WESTERN AUSTRALIA G2G NOW

G2G Now is an initiative developed by the Western Australia Police Force to help police to support people subject to self quarantine directions.

This voluntary app allows people in self quarantine to prove their compliance quickly and easily by performing in app check ins rather than receiving physical checks by the police.

The G2G Now app uses facial recognition and phone location data to ensure people in quarantine remain at their registered address throughout their mandated quarantine period. The app is directly linked to the G2G PASS.

Check in requests are sent to individuals' phones at different times during their quarantine period. Individuals may receive no requests, or multiple requests on any given day. Individuals are given five minutes to check in, and if they do not check in, a second request will be sent. If they fail to check in again they will receive a call from a police officer.

Each check in or health update checks their location against their registered quarantine address.

The G2G Now app also requires individuals to complete daily health questionnaires and register COVID-19 tests and their results.

COVIDSafe proximity tracing app

The COVIDSafe app developed by the Commonwealth Government is an example of a proximity tracing app. An important distinction between proximity tracing apps and attendance apps is that COVIDSafe does not keep a record of a person's location. Instead, COVIDSafe uses Bluetooth technology to look for other devices that have the app installed, and records contact when it occurs, through a digital handshake. It securely logs the other user's encrypted reference code, the date and time, Bluetooth signal strength and proximity of the contact to the user's phone. The COVIDSafe app stores these reference codes on the phone for 21 days, and automatically deletes contacts older than 21 days.

Aide-mémoire tools

Efficient contact tracing relies on the accurate memory recall of the confirmed case or close contact being interviewed by the contact tracers. In some cases, the smartphone that most people carry with them contains useful information that, like a diary, can prompt their memories.

For example, police in South Australia, with the consent of the case being interviewed, use a dedicated product called CARE to extract contact tracing information from interviewee smartphones. This information includes data such as GPS coordinates and time stamps of photos. Similar tools are used by the police in other jurisdictions, also with consent.

Advanced data analytics to support outbreak management

Some jurisdictions are exploring the use of advanced data analytics software to assist with outbreak management and predictive identification of locations of concern. Structured and unstructured data from many sources will be aggregated and analysed to identify patterns and relationships between confirmed cases, close contacts and places (e.g. workplaces, venues and postcodes).

Advanced analytics has the potential to increase productivity and efficiency by reducing the time spent on collating, processing, and linking cases. Already publicly available information such as internet search term frequencies, social media topics and Google and Apple map patterns could assist with predicting outbreak locations where people could then be offered increased access to testing.

Predictive analytics also has the potential to augment case and contact interviews – for example, by looking for features of cases and contacts that predict veracity and completeness of information. This function could in some cases flag a need to widen the net to secondary and tertiary contacts, and also provide information on where those nets should be cast such as homes, workplaces, and recreational facilities.

Digital technologies to support daily monitoring

The need to isolate confirmed cases and quarantine contacts presents a number of planning and implementation challenges, including the requirement for significant resources to monitor the health status and compliance of those in quarantine. Quarantining, whether at home or in a hotel, is undeniably taxing on individuals, and appropriate levels of welfare assistance and clinical care, along with mental health monitoring and supports are essential. In addition, compliance with quarantine requirements, usually through the support of local police, is resource intensive. The requirements for these specialised and finite resources will only increase as movement across state borders, and potentially incoming international arrivals, opens up. In most states and territories, health monitoring and quarantine compliance is monitored through a mixture of periodic telephone calls, facilitated with in home visits, with an increase in the number of in home visits based on assessment of risk.

Automated monitoring of quarantine compliance

Increasingly, technological solutions are being harnessed to dramatically improve the efficiency of the workforce and save many hours of manual processing, allowing valuable personnel to be deployed where most needed.

Automated quarantine compliance technologies, such as the G2G Now app developed by the Western Australia Police Force, provide a mechanism for people who are required to quarantine to prove their compliance with a quarantine direction. Importantly, these technologies are opt in systems, and people can still choose to be monitored through phone calls, and in person visits. Daily health questionnaires can also be managed through the same app.

Clinical management in quarantine

Technologies can also be used to monitor the health and wellbeing of those people in quarantine. For example, in the Northern Territory, the National Critical Care and Trauma Response Centre is piloting the use of wearable devices for remote monitoring of people's physiological parameters. The device is worn by individuals all day and night and allows health care teams located nearby in a telehealth control room to remotely monitor patient physiological measurements including blood pressure, heart rate and oxygen saturation. Face to face visits occur where needed, and patients still receive daily visits from a welfare support team, however remote real time physiological monitoring allows clinical care teams to provide care to a larger number of patients.

Digital travel exemptions

For tracking movement permits in special cases, such as entering vulnerable communities, or truck driver routes, digital solutions such as the G2G Pass can be very efficient by providing an electronic licensing system for COVID-19 travel restrictions.

These electronic passes can also be used so individuals can be fast tracked through border checks, saving time and improving efficiency. Relevant controls are in place to ensure data are only accessed by authorised officers within the relevant jurisdiction.

The Commonwealth Department of Home Affairs has replaced the paper based COVID-19 declaration card with the Australian Travel Declaration (ATD). The ATD is based on voluntary submission of contact details and information to support quarantine arrangements for international travellers. Work is underway to automate the flow of information from the ATD to states and territories.

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CHAPTER 6
A CONVERSATION WITH COMMUNITIES

Efficient contact tracing and outbreak management are necessary but not sufficient to successfully live with COVID-19. Preventative measures such as attention to personal hygiene, social distancing, early testing at the first sign of symptoms, and voluntary quarantine when symptomatic will continue to be essential components of the first line of defence against COVID-19.

People have a right to know what is expected of them and how the pandemic and the response is unfolding. Therefore, a substantial commitment to a broad spectrum of public communication activities is required across government. This messaging may need to be strengthened in times of adjustment, particularly when restrictions are tightened. It is important to have communications and media experts integrated and embedded in health, emergency, police, customer service (NSW) and other relevant government agencies to ensure public health messages are consistent and pitched appropriately for Australia wide, state wide and local audiences.

Ongoing strong, consistent and culturally accessible and appropriate messaging through community engagement is vital to building and maintaining public awareness, trust, acceptance and confidence. Regular and proactive communication and engagement with the public, specifically with at risk populations, can also help alleviate confusion and avoid misunderstandings.

Education is needed to improve community understanding and health literacy, particularly with regards to infection prevention and control. The community must be encouraged to take personal responsibility and understand the impacts of their behaviour.

Consistency

It is important that as we move towards a COVID normal society the public remains vigilant. This is most likely if messages from the Commonwealth, state and territory public health and political leadership are consistent. Currently, there are inconsistencies in the messaging around getting tested between the jurisdictions. For example, the Commonwealth advice is “if you have cold or flu like symptoms you should seek medical advice about having a test for COVID-19”. However, in other jurisdictions the advice is that “anyone with mild COVID-19 symptoms should get tested”. This inconsistency could create a barrier to some individuals getting tested, while also delaying the time it takes for an individual to get tested from symptom onset. Similarly, there is inconsistent advice about what people should do while awaiting test results and when they should resume usual activities.

There are also inconsistencies in key terms used by government and the media, including the use of the terms ‘community transmission’, ‘mystery cases’, ‘physical distancing’ and ‘social distancing’.

Where possible, states and territories should review their use of messaging around new cases, community transmission and mystery cases. There is currently not an agreed definition and these terms are being used differently in each state and territory. The review has adopted usage of terms to describe confirmed cases as ‘those identified in the community’ and ‘those identified in quarantine’. Further details can be found in Chapter 7 – Earning community confidence.

The term social distancing has become a commonly used term by governments and media and is used interchangeably with the term physical distancing. However, these terms can have different interpretations. Consistent use of ‘physical distancing of at least 1.5 meters’ would promote community understanding and practice.

When a person is notified of their COVID-19 test result, usually via a text message, it is important to clearly articulate the result to avoid confusion. Explicitly reporting detection of the virus, or no detection of the virus, in the test sample is preferred. The use of terms such as 'positive' and 'negative' can be misunderstood as a 'good result' or a 'bad result'.

As part of contact tracing and case management, it is important consistent information and directions are given to all individuals in isolation and quarantine, including their immediate family and household. As part of an optimal end to end contact tracing and case management system this is optimised by allocating a single case manager to each household.

Consistency in messaging is vital across all community settings. During an outbreak clear, concise and consistent messages to affected settings such as workplaces, school and places of worship is important. This is optimised through ensuring communications and media experts are integrated and embedded in all government agencies, including health, emergency, police and, customer service (NSW), and ensuring all agencies are collaborating to present one voice.

In addition to consistency, it is important states and territories are checking to ensure public health messages are understood and not being misinterpreted. For example, South Australia has adapted their weekly state wide population health survey to include questions on understanding and adherence to COVID Safe messages. This includes questions on actions people are taking to protect against COVID-19 and reasons for not getting tested if symptomatic.

Working with community leaders

Australia has a diverse population, thus it is important that messaging is tailored for our various community groups, including people from culturally and linguistically diverse backgrounds. Inclusion of community leaders in supporting and implementing public health measures is key to an effective response.

Working with community leaders has proved very important in states and territories with remote Aboriginal and Torres Strait Islander communities and also metropolitan areas with culturally and linguistically diverse communities. During the first wave, Aboriginal and Torres Strait Islander leaders called on governments to provide additional protection to remote communities, which was provided at a Commonwealth level through the Biosecurity Determination limiting travel to remote areas. States and territories with remote communities have invested extensive resources to assist communities and build trust and rapport to support them to protect and then reopen communities safely.

As an example, Queensland has committed to a co-ownership approach with local Aboriginal and Torres Strait Islander communities, drawing expertise from Aboriginal and Torres Strait Islander Community Controlled Health Organisations, the Queensland Department of Aboriginal and Torres Strait Islander Partnerships and the National Indigenous Australians Agency as well as working directly with mayors and CEOs of discrete and remote Aboriginal and Torres Strait Islander Communities. Through this approach, Queensland have provided support to communities, including targeted testing and targeted scenario planning for the unique circumstances of remote communities.

It is also important to engage with cultural and religious leaders in metropolitan areas, especially areas with large culturally and linguistically diverse populations. Community leaders in diverse cultural settings can help ensure key messages around physical distancing, hygiene, tightening restrictions and the importance of getting tested. In some communities there is stigma attached to contracting COVID-19 and getting tested. Cultural leaders can assist to break down these barriers. For example, in Melbourne cultural leaders helped to reduce stigma and bolster testing in underrepresented cultural groups.

Translation of key messages and resources

Ensuring all Australians can understand key messages around COVID-19 is vitally important in keeping the community safe by ensuring people adhere to public directions. With more than 300 different languages spoken in Australian homes, it is important that key messages are translated into appropriate languages and tailored to communities.

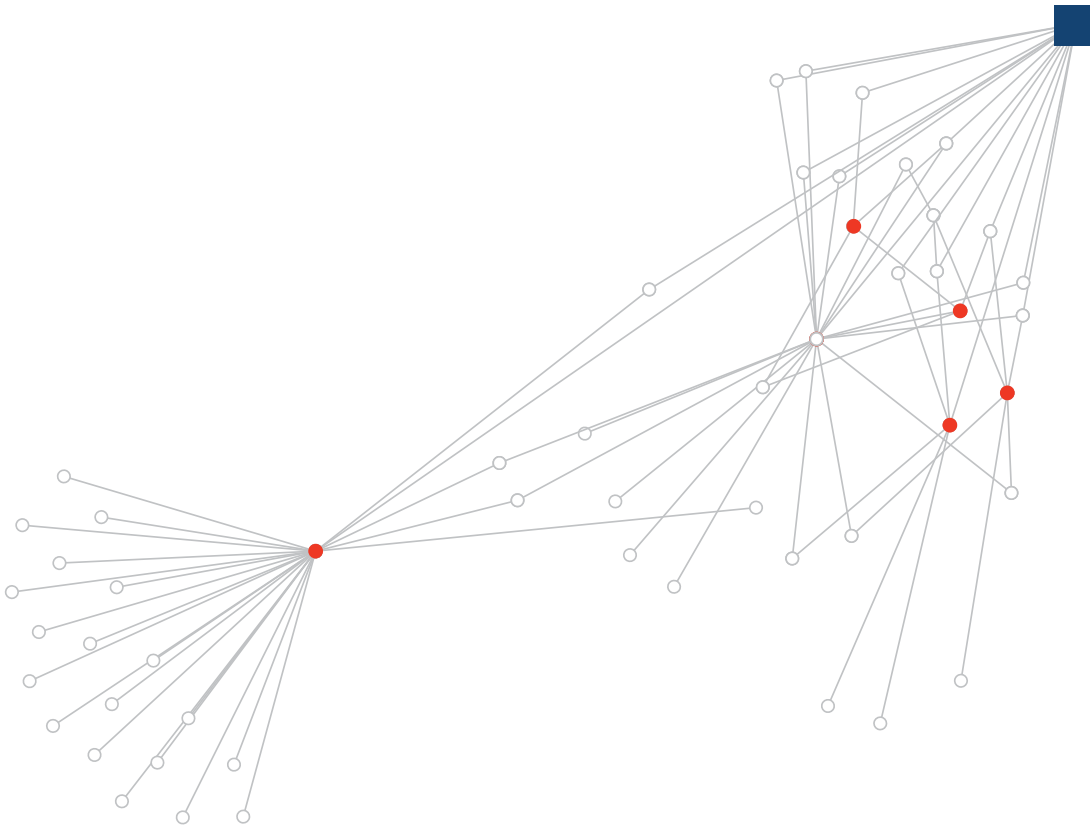
There are a number of translated materials on Commonwealth, state and territory designated COVID-19 webpages. The number and quality of these translated materials has improved greatly since March 2020, however it is an area that should undergo continued review and refinement.

It is imperative that translated messages are updated regularly to reflect any changes in the original English messages.

Further, the accuracy of the translations should be verified by reverse translation back into English to ensure the messages are concise and comprehensible.

As part of ongoing case management, most states are utilising automated daily text messages to monitor people in isolation and quarantine to remind about their obligations to remain in isolation or quarantine. Messages are generally sent in English, but contact tracing systems built on modern software applications can easily send these messages in preferred languages.

In addition, collecting information on language spoken at home alongside other contact details and symptom information at the point of COVID-19 specimen collection would enable the automated result notification to be sent in a person's preferred language. This would help ensure people understand their test result, especially when COVID-19 virus is detected, to ensure the patient understands the need to isolate and await a case interview.



CASE STUDY – NORTHERN TERRITORY ENGAGEMENT WITH ABORIGINAL COMMUNITIES

Early in the pandemic the Northern Territory committed to inclusive engagement with Aboriginal communities.

The Northern Territory commenced regular meetings with a Regional Remote Taskforce with key stakeholders to ensure information sharing and a continued collaborative response to COVID-19 across the Northern Territory.

Weekly meetings were held by the Top End Primary Health Care Team with remote area communities and newsletters were distributed fortnightly to provide culturally sensitive information and key messages. Tailored training was delivered in communities on personal protective equipment use, outbreak management and ways to prevent transmission of COVID-19.

The Northern Territory has committed to a principles based approach to ensure all citizens have access to, and clearly understand, key messages regarding COVID-19. The key principles for Aboriginal communities include:

- Keep practising physical distancing – stay three steps away from people you don't see very often.
- Wash your hands with soap and water regularly.
- Make sure you cough or sneeze into your elbow or a tissue.
- Try not to touch your eyes, mouth or nose.
- Monitor yourself for symptoms of coronavirus (COVID-19) and contact your health clinic if you start to feel sick.

Audio, video and printed files with health messages for COVID-19, focused on the key principles, were developed in Aboriginal languages and have been rolled out across the Northern Territory to cover the major language groups. These are easily located on the Northern Territory COVID-19 website.

A number of 'no sound' video resources have also been released to support the key principles and eliminate any possible language barriers. The videos are targeted at Aboriginal people, and utilise Indigenous actors and localised familiar settings.

In addition, the Northern Territory has developed a specific disaster management plan for the Central and Top End services to handle COVID-19. This involved extensive training of remote health care workers, including Aboriginal Health Practitioners, to undertake contact tracing and case management on the ground.

CHAPTER 7
EARNING COMMUNITY CONFIDENCE

Reopening borders and keeping them open will depend on each state and territory being confident in the preventative and surveillance measures, outbreak management and contact tracing capabilities of all the other states and territories. However, we also need strong community confidence that all levels of government are doing everything required to both protect the community and ensure the economy can thrive.

Real time, simple, consistent and accessible reporting by all states and territories will assist in building this confidence.

Reporting confirmed cases

New confirmed cases of COVID-19 are reported daily by each state and territory and announced by the Premier, the Chief Minister, the Minister for Health or the Chief Health Officer (or equivalent) and published on the respective COVID-19 state and territory government websites. New confirmed cases generally include all cases, including those in the community and those already in home or hotel quarantine.

Grouping cases occurring in the community with those occurring in quarantine can send the wrong message to the community.

New confirmed cases identified in the community represent cases which may have been infectious until they were tested for COVID-19. These cases may be from an unknown source or linked to a known cluster and, either way, require close contacts to be identified. These cases are significant as they require extensive resources and can indicate an unidentified community outbreak.

New confirmed cases identified in quarantine represent cases which have already been directed to quarantine prior to becoming a confirmed case. This includes people who have returned from overseas and are in hotel quarantine and people who have been identified as a close contact and are also in home or hotel quarantine. With effective quarantine, these cases are not a risk to the community, especially if they were in quarantine prior to their onset of symptoms or infectious period. Confirmed cases in quarantine demonstrate a well managed testing and contact tracing system. Identification of a confirmed case in quarantine is the mark of a successfully operating system and should be celebrated rather than feared.

To improve public awareness and understanding of cases, these two categories should never be combined. It is recommended that states and territories, and the Commonwealth through consolidation, clearly distinguish the two categories in daily reporting. The review recommends the following reporting metrics:

- Number of new confirmed cases identified in the community, or if zero cases, the number of days since the last confirmed community case, and
- Number of new confirmed cases identified in quarantine.

Public Reporting (example)

Reporting performance metrics

Real time, simple and accessible performance metrics are not being consistently reported across the country. To improve community awareness of the success, or otherwise, of the testing and contact tracing system, it is recommended that states and territories publish key testing performance metrics.

The Common Operating Picture (COP) is published weekly on the Commonwealth Department of Health website and provides a comparison of state and territory performance against a number of metrics, as agreed by National Cabinet. Even though publicly available, the COP has not been designed as an easily understood set of metrics for community engagement, but rather a detailed report to inform public health experts and government leadership.

As discussed earlier in this report, in order to minimise community transmission, states and territories should ensure all close contacts are quarantined within 48 hours, from the time of a case's specimen collection. States and territories should publish these metrics regularly. This should include reporting on:

- The number of hours from specimen collection to notifying all people of their results, with the target being fewer than 24 hours at the 90th percentile.
- The number of hours from the patient's specimen collection to notifying their close contacts that they must quarantine, with the target being fewer than 48 hours at the 90th percentile.

Achieving the first of the two metrics above is, important because if the time from testing to reporting results is too long, the second metric will be unachievable.

In addition, reporting results within 24 hours has a second, very important benefit. Symptomatic patients who have a test are required to self isolate until they receive their results. It is reasonable to expect patients to fulfil that requirement if they know they will get their results within 24 hours. However, it is less reasonable to expect patients to fulfil that requirement if it takes several days for patients to receive test results.

Targeting testing for the community

As Australia moves out of the second wave it is important the community does not become complacent. Maintaining high levels of testing will continue to be an important means of monitoring spread of the virus and identifying cases in the community. However, simply increasing the number of tests being undertaken will not be effective if testing is not targeted.

To optimise testing levels it is important states and territories have a targeted testing strategy. This includes identifying high risk populations and also under represented cohorts. Increasing community awareness, improving access to testing sites and removing barriers to testing can help motivate people to get tested. Many states are doing this already, and these measures are an integral part of their COVID-19 management plans.

For example, through collection of non-medical information at testing sites, Victoria is able to undertake targeted 'call to testing' programs, including community engagement, working with community leaders and local health care services, and engaging with industry to bolster testing levels in underrepresented cohorts.

Community awareness of the testing strategy in a state or territory including ongoing surveillance will help the public feel assured and have confidence in their state or territory's ability to keep numbers low and stamp out transmission of the virus in the community.

Ongoing surveillance strategies such as the wastewater testing pilots being undertaken across Australia will also be an important part of assuring the public that governments are being vigilant and are prepared to respond early to detect and prevent potential second or third waves of the pandemic. They must be messaged carefully to avoid public complacency and reliance on these supporting strategies.

Open borders

The goal for Australia is to have an open society and a fully active economy supported by a rapid contact tracing and outbreak management system. A major step to achieve this goal is to open the internal borders within Australia by Christmas 2020 and keep them open.

At National Cabinet on 23 October 2020 the Commonwealth, states and territories, with the exception of Western Australia, agreed in principle to a new 'Framework for National Reopening'. The framework sets a pathway for the removal of domestic border restrictions where it is safe to do so, and with free movement of people and freight consistent with National Cabinet's strategy of suppression with a goal of no community transmission.

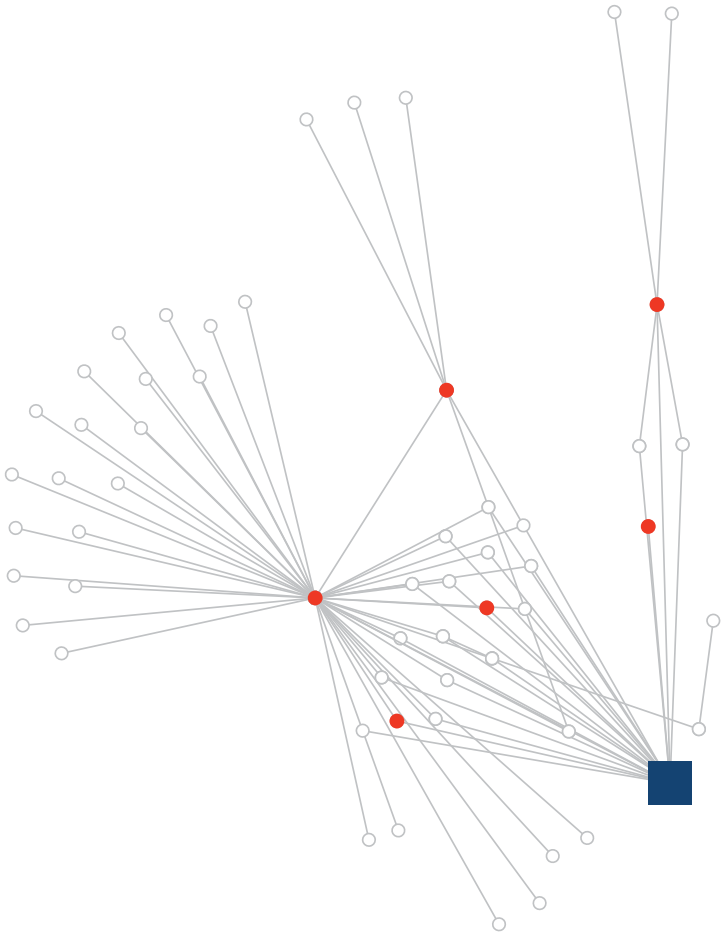
The framework identifies three steps to the future COVID normal:

Step 1 – Limiting group interactions and only allowing movement between areas of no community transmission.

Step 2 – Larger gatherings, more movement, the removal of domestic borders and movement allowed between areas of no community transmission.

Step 3 – COVID normal. Gatherings limited by physical distancing requirements, and free movement across Australia.

Many factors inform progress from Step 1 to Step 2 to Step 3. These include the preventative measures in place, the efficiency of the testing, contact tracing and outbreak management systems, the confidence of state and territory public health officials in the pandemic capabilities of the other states and territories, and the confidence of the public. Australia is doing well, and the measures recommended in this review should bolster confidence and achievement of the vision.



GLOSSARY

AHPPC: Australian Health Protection Principal Committee

The Australian Health Protection Principal Committee is the key decision making committee for health emergencies. It is comprised of all state and territory Chief Health Officers, is chaired by the Australian Chief Medical Officer and provides advice to National Cabinet.

CDNA: Communicable Diseases Network Australia

The Communicable Diseases Network Australia provides national public health co-ordination and leadership, and support for the prevention and control of communicable diseases. CDNA is a sub-committee of the Australian Health Protection Principal Committee (AHPPC).

CDNA meets fortnightly to share and evaluate the latest information and developments in communicable diseases surveillance with a view to providing a high quality surveillance of communicable and notifiable diseases, including HIV, sexually transmissible infections, vaccine preventable diseases, arboviruses, zoonotic and enteric diseases.

Contact tracing

Contact tracing is the process of identifying assessing, and managing people who have been exposed to a disease to prevent onward transmission. When systematically applied, contact tracing will break the chains of transmission of COVID-19 and is an essential public health tool for controlling the virus.

Downstream contact tracing occurs when the contact tracing officer is trying to identify who has potentially been exposed to a confirmed case during their infectious period to ensure contacts immediately go into quarantine and do not spread the infection further.

Upstream contact tracing occurs when the contact tracing officer is trying to determine the source of a case. The use of whole genome sequencing, which can demonstrate links between cases, is effective in these scenarios. Serological antibody testing can be of value for upstream contacts of cases where there is no epidemiological link to identify the source of infection.

Contacts

A **close contact** is defined as a person who:

- Has face to face contact in any setting with a confirmed or probable case for 15 minutes or more. This is cumulative over the course of one week. It starts from 48 hours before the onset of symptoms in the confirmed or probable case, OR
- Has shared a closed space with a confirmed or probable case for a prolonged period (e.g. more than two hours). This is in the period extending from 48 hours before onset of symptoms in the confirmed or probable case.

A **secondary contact** is defined as a person who has had face to face contact for more than 15 minutes (cumulative over one week) with someone who is a close contact; or shared a closed space with a close contact for more than two hours (cumulative over one week). Both exposures will have occurred at least 48 hours after the close contact was exposed to the positive case. A secondary contact may also be determined by the Chief Health Officer when there is reasonable evidence of exposure to a possible human source or an exposure site.

A **casual contact** is defined as a person who has had exposure to an infectious confirmed case of COVID-19 where the exposure was face to face for a period of less than 15 minutes or in a closed space for a period of less than two hours.

COVID-19

Coronavirus disease 2019. The name of the disease caused by the virus SARS-CoV-2, as agreed by the World Health Organization, the World Organisation for Animal Health and the Food and Agriculture Organization of the United Nations.

COVID normal

As defined in the Framework for National Reopening, occurs when all indicators on the Common Operating Picture are green for 14 days, and the following activities occur:[i]

Work: People should return to the workplace, unless otherwise advised by public health advice.

Gatherings: People should maintain physical distancing of 1.5 metres and stay at home and get tested if unwell. Some density limits will remain for events and large venues.

Travel: Interstate travel is open and there are no domestic border restrictions in place. International travel partnerships and pilot programs are in place. Quarantine free international travel between New Zealand and other low risk international partners.

Confirmed COVID-19 case

A person who:

- Tests positive to a validated specific COVID-19 RT-PCR test; or
- The virus grows in cell culture from a swab, with RT-PCR confirmation using a validated method; or
- Has higher levels of COVID-19 neutralising or IgG antibodies detected in the blood after a second test.

Community and quarantine cases

New **confirmed cases identified in the community** represent cases which have been active in the community until they are tested for COVID-19. These cases are usually infected from unknown source or from a known cluster and require contact tracing of close contacts.

New **confirmed cases identified in quarantine** represent cases who have already been directed to quarantine prior to becoming a confirmed case. This includes people who have returned from overseas and people who have been identified as a close contact and are in home quarantine or hotel quarantine.

COVID-19 Safety plan

COVID-19 Safety Plans are usually checklists that provide clear directions on how businesses and organisations should fulfil their obligations to minimise risk of transmission of COVID-19 on their premises.

i https://www.health.gov.au/sites/default/files/documents/2020/10/framework-for-national-reopening-october-2020.pdf

COVID-19 test

Tests for COVID-19 aim to detect the causative virus, SARS-CoV-2, or an immune response to SARS-CoV-2.[i]

The three main types of COVID-19 tests are:

- Nucleic acid detection tests to detect viral RNA
- Rapid antigen tests – to detect antigen viral proteins on the surface of the virus
- Serology tests – to detect IgM or IgG antibodies against the virus

While rapid antigen tests can provide a result within 15–30 minutes, they are less sensitive than an RT-PCR test, which is still the gold standard in COVID-19 diagnosis.

Data Exchange

Provides a new interoperability capability between state and territory based contact tracing systems and relevant government data stores. This Data Exchange would allow contact tracing teams to search, request, share and transfer case and contact tracing data between states, and to request contact tracing data from government agencies.

Epidemiological link

Occurs when there is;

- Contact between two people involving a plausible mode of transmission at a time when one of them is likely to be infectious and the other has an illness that started within the incubation period after this contact, and
- At least one case in the chain of epidemiologically linked cases is laboratory confirmed.

Healthcare worker

Healthcare workers are people in contact with patients or the patient space – for example, doctors, nurses and cleaners who enter the patient's room or cubicle as well as frontline administrative staff.

Isolation and quarantine

A person with COVID-19 or suspected to have it must enter mandatory isolation. A person enters quarantine when they are well but may have been in contact with someone with COVID-19. Either way, both are required to isolate from other people to prevent the spread of the virus. The period is usually 14 days from when they may have been in contact with the virus. Generally they:

- Must not leave home or the isolation location, except in an emergency or to get essential medical care
- Must not go into public places including work and shops
- Must not let any other person into the home unless the person
  - lives with them and cannot live somewhere else
  - is providing medical care for them
  - is entering for an emergency

i https://www.tga.gov.au/covid-19-testing-australia-information-health-professionals

NNDSS

The National Notifiable Disease Surveillance System supports Australia's national case based reporting surveillance approach by integrating state and territory communicable disease data. This system is used to report nationally on all new diagnoses of COVID-19 infection and is supplemented by specialised reporting.

NINDSS

The National Interoperable Notifiable Disease Surveillance is a Commonwealth Department of Health project aimed to modernise and integrate Australia's capability in communicable disease surveillance, outbreak management and interoperability. It is scheduled to begin in June 2021.

Physical distancing

Physical distancing in public means people:

- Keep 1.5 metres away from others wherever possible
- Avoid physical greetings such as handshaking, hugs and kisses
- Practise extra care if they are using public transport
- Avoid crowds
- Avoid large public gatherings
- Practise good hygiene
- Stay at home if they have any cold or flu symptoms, seek medical advice and get tested for COVID-19

SARS-CoV-2

Severe acute respiratory syndrome coronavirus 2. The formal name of the virus that causes COVID-19, as determined by the International Committee on Taxonomy of Viruses.

SoNG – Series of National Guidelines

The Series of National Guidelines have been developed in consultation for the Communicable Diseases Network Australia (CDNA) and endorsed by the Australian Health Protection Principal Committee (AHPPC). Their purpose is to provide nationally consistent advice and guidance to public health units in responding to notifiable disease events. These guidelines capture the knowledge of experienced professionals, built on past research efforts, and provide advice on best practices based upon the best available evidence at the time of guideline completion.

Specimen collection

Refers to the collection of samples from a patient to be tested for COVID-19, and includes; nasopharyngeal swab, throat swab and blood.

Surveillance

There are four main objectives of surveillance for COVID-19:

- To rapidly identify, isolate and manage cases.
- To identify, quarantine and provide information to contacts.
- To rapidly identify and manage clusters and outbreaks.
- To describe the epidemiology of COVID-19 in Australia including:
  - the progression of the epidemic in time, person and place,
  - transmission dynamics,
  - special risk groups.

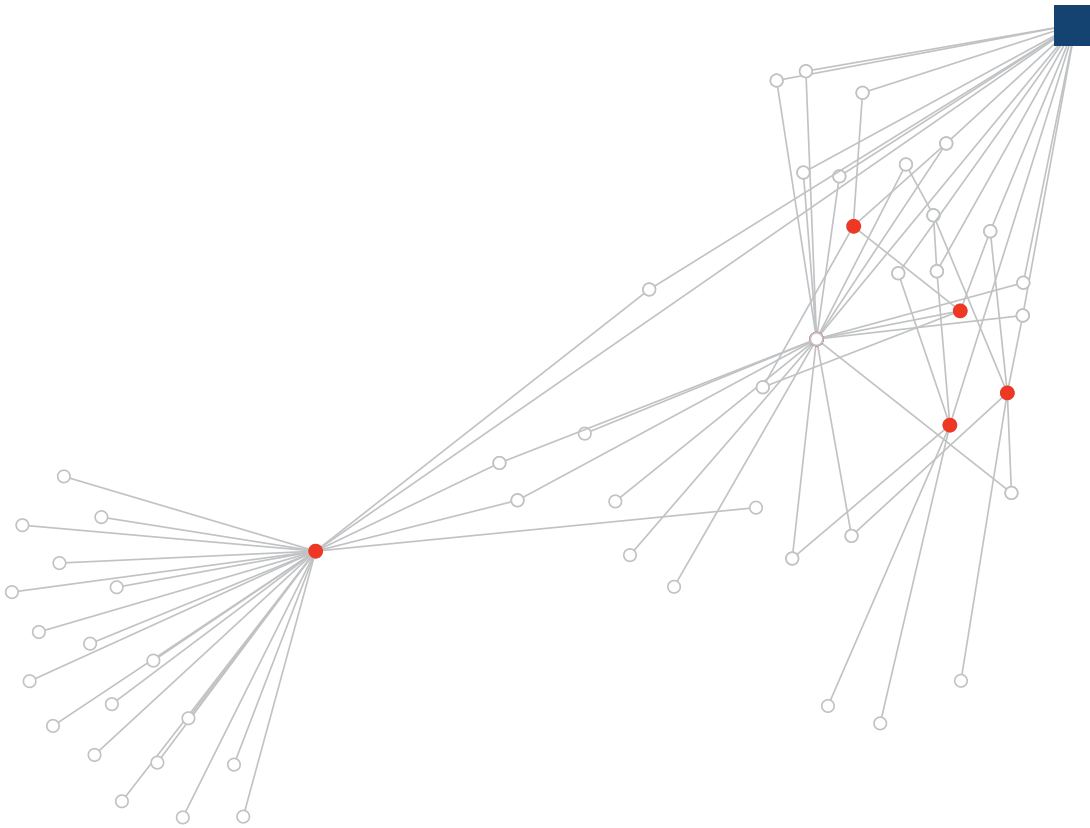
Timeframes

For the purpose of this report, the following timeframes are defined below.

Near term: Until the end of 2020

Medium term: During 2021

Long term: 2022 and beyond



MEMBERS

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Australia's Chief Scientist

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Leigh cofounded and was the CEO of Aconex, the world's most widely used cloud collaboration platform for managing construction projects. Leigh is the Chair of LaunchVic, the Victorian Government startup agency, and cofounder and Chair of Second Quarter Ventures. He is also a Director of SEEK Ltd, Buildxact, Salta Properties and the Burnet Institute.

Dr Tarun Weeramanthri
Dr Tarun Weeramanthri is an independent public health physician and newly elected President of the Public Health Association of Australia. He has served previously as Chief Health Officer in both Western Australia and the Northern Territory.

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- Phil Gaetjens and Alison Frame, Department of the Prime Minister and Cabinet
- Michael Pezzullo and Cath Patterson, Department of Home Affairs

State and Territory Health Department representatives

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Individuals

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